



ANN ARBOR/WASHTENAW

2030

DISTRICT®



ACCELERATING TO ZERO FASTER TOGETHER

2023 PROGRESS REPORT

Message from Board Secretary

2023 Accelerating to Zero – Faster Together!

With just 7 years to achieve a 50%-65% reduction in energy and water use as well as reducing transportation emissions by 50%-65%, we are accelerating our progress. I am proud of the work that the Ann Arbor/Washtenaw (A2/W) 2030 District is doing to educate our community, while measuring and supporting the reduction of building related carbon emissions.

This progress report details significant accomplishments of this 2030 District in 2023, such as:

- Doubling building member participation and facilitating direct energy and water data entry into Energy Star Portfolio Manager.
- Providing \$45,000 in energy management grant funds.
- Conducting our 2nd transportation survey and substantially increasing participation.
- Working with the City of Ann Arbor on grant proposals and assisting commercial and multi-family members with meeting the benchmarking ordinance.
- Launching a municipal outreach program to all municipalities in Washtenaw County.
- Celebrating the success of our members by highlighting projects that improve efficiency and the addition of renewables and demonstrating progress on carbon neutrality is a priority for every building sector and economically viable.
- Welcoming the Elks, NEW and Washtenaw Alano Club into membership, A2/Washtenaw 2030D continues to include underrepresented members of our community in our work.
- Continuing a third year of Implementing the A²ZERO Plan Lunch & Learn Series with AIA Huron Valley and Washtenaw Contractors Association with nearly 200 registrants.
- Advocating for the Zero Code in the Energy Code adoption process at the State of Michigan.
- Transitioning to Washtenaw 2030 District to support Resilient Washtenaw, the county's climate action plan.

The Federal Inflation Reduction Act funding is starting to roll out and we look forward to more funding being available for emission reductions from Federal, State, and local sources in 2024.

Sincerely,

A handwritten signature in black ink, reading "Jan K. Calhoun". The signature is written in a cursive, flowing style with a long horizontal line extending from the end of the name.

Washtenaw 2030 District Board of Directors

The Washtenaw 2030 District is a Michigan Non-Profit (501 c3 status pending). Our Board of Directors elected in January of 2024, is made up of a cross section of our membership.



Murray Rosenthal
President

HoW Green Team Leader
Genesis of Ann Arbor



Jan Culbertson
Secretary

FAIA



Irwin Weingarten

Treasurer
QR Management



Tamika Banks

Director
DTE Energy



Jason Fee

Director

Washtenaw County



Larry Deck

Director

Walk Bike Washtenaw



Oscar Notz

Director

Washtenaw
Contractors Association



Kevin McNeely

Director

Multi-family Facilitator
McNeely Building Group



Thea Yagerlener

Director

City of Ann Arbor



Troy Lundquist

Director

The Ride



Katie Landeta

Director

MAVD

Thank you 2023 Leadership Council Members

Our Leadership Council has volunteered their time and expertise to support our efforts. Many have continued serving with the new organization, and a few have moved on to other roles. Best wishes to: **Neal Waring**, JLL and **Jody Humphries**, Washtenaw Contractors Association, And thank you to **Dave Low** and the 2030 Districts Network for their role as our fiduciary organization.

Staff

Karen Thurman, MCD: Data/Communications Manager

Ben Rose: Americorp VISTA Member

Lissa Spitz: Program Manager

Peter Woolf: Volunteer Data Director

Consulting Team

Bob Tinker, Tinker Energy, Energy Auditor

Chuck Hookham, PE, Arbor Consulting, Solar Technical Assistance

Caleb Kline, PE, Inclination Engineering, Commissioning & Decarbonization Planning

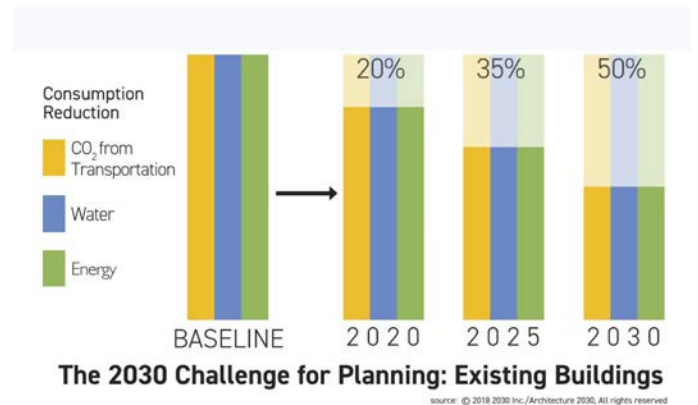
WHAT ARE 2030 DISTRICTS?



2030 Districts Network, created by Architecture 2030, are unique private/public partnerships committed to reducing energy use, water use, and transportation emissions. Together, districts benchmark, develop, and implement creative strategies, best practices, and verification methods for measuring progress towards a common goal of meeting the 2030 Challenge for Planning and ultimately achieving carbon neutrality no later than 2040. Locally, the Ann Arbor / Washtenaw 2030 District (A2/W 2030D) serves all of Washtenaw County supporting Ann Arbor's A²ZERO plan to achieve community-wide carbon neutrality by 2030 and Resilient Washtenaw, the county's plan to achieve community-wide carbon neutrality by 2035.

THE 2030 NETWORK

Currently 24 districts in total span across the United States and Canada, together making up the 2030 Districts Network, a registered 501(c)(3) non-profit organization in the U.S. Its mission is to develop and sustain local 2030 Districts and partners in achieving the 2030 Challenge Goals, outlined in the 2030 Challenge for Planning. New districts are emerging across the country, locally we expect to have a new district - Lansing - join the Michigan Districts.



THE 2030 CHALLENGE FOR PLANNING

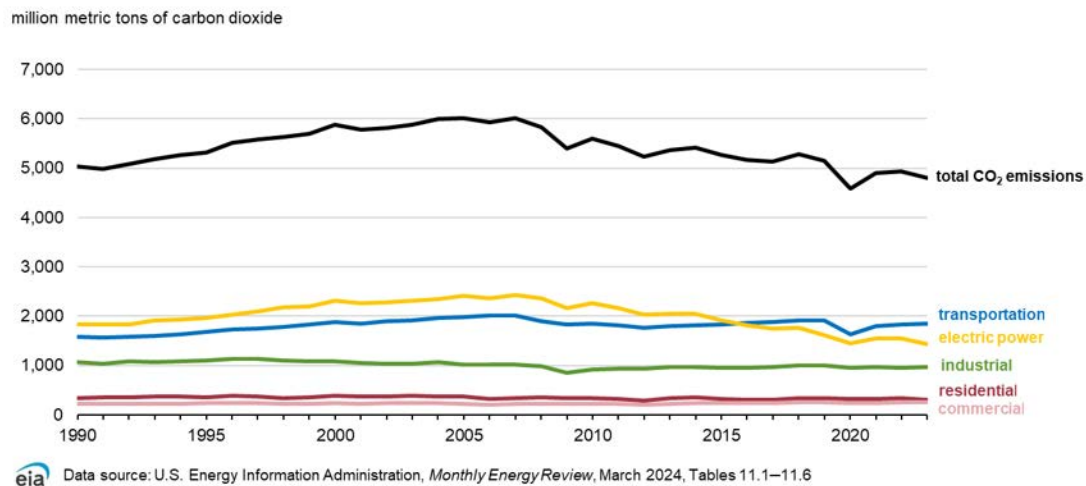
The A2/W 2030 District follows the 2030 Challenge for Planning for existing buildings, a series of building performance targets adopted by the 2030 Districts Network to address energy consumption, water consumption, and transportation emissions in the building sector. For existing buildings, the targets are the same for all three metrics: a 20% reduction from baseline by 2020, with incremental targets reaching a 50% reduction by 2030. The baselines are calculated by the following methods:

- Energy: 2003 Commercial Building Energy Consumption Survey (CBECS)
- Water: 2012-2015 City of Ann Arbor Water Use Data and National ESPM 2019 Median WUI as a check.
- Transportation: 2019 Transportation Survey (pre-covid numbers)

CLIMATE & EMISSIONS UPDATE

U.S. energy-related CO₂ emissions declined by 3%, or 134 million metric tons (MMmt), in 2023. Most of this decrease occurred in the electric power sector. However, emissions will need to fall at least three times as fast for the rest of the decade if the country wants to meet its climate goals.

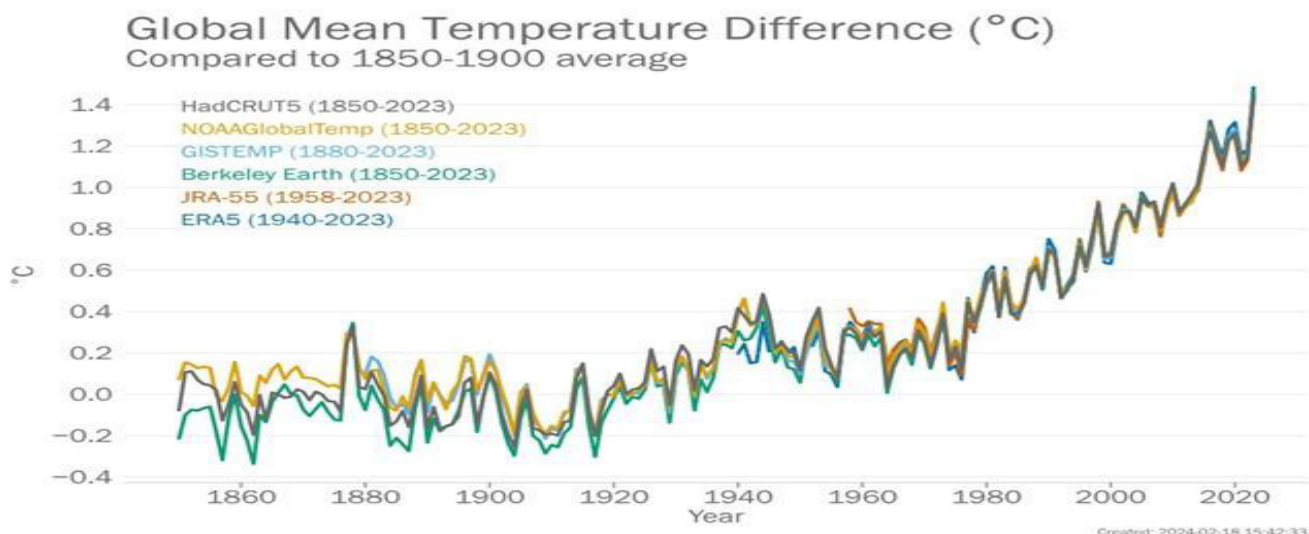
Figure 1. U.S. energy-related CO₂ emissions by sector, 1990–2023



[link to graph](#)

WE ARE FEELING THE HEAT!

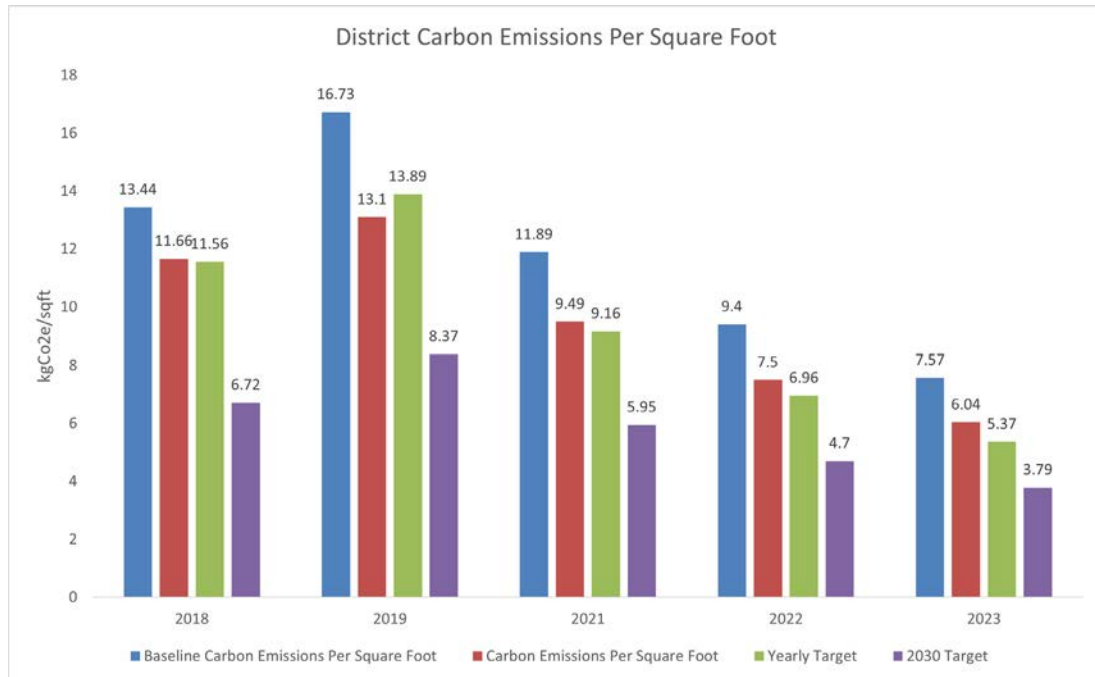
“The 2023 (temperature) increase is the third-largest in the past decade, likely a result of an ongoing increase of fossil fuel CO₂ emissions, coupled with increased fire emissions possibly as a result of the transition from La Nina to El Nino,” said Xin Lan, a CIRES scientist who leads GML’s effort to synthesize data from the [NOAA Global Greenhouse Gas Reference Network](#) for tracking [global greenhouse gas trends](#).



[link to graph](#)

LOCAL EMISSIONS

Locally, our 2023 district benchmarking reveals that we have reduced GHG emissions by 20% since 2003, short of our target of 29%. District properties have a HUGE opportunity to reduce emissions both through efficiency and deploying renewable energy. Accelerating our efficiency and renewable energy deployment is imperative to meet carbon neutrality goals.



WHERE WE ARE HEADING

We are amid a climate emergency and the gravity of the consequences will be determined by the timeliness of our actions. In partnership with A²ZERO and Resilient Washtenaw, the following strategies are key actions needed to achieve the deep reductions in carbon emissions within the next decade.

POLICY AND ADVOCACY

Ann Arbor/Washtenaw 2030 District recognizes that a favorable business and regulatory environment will help members achieve the [A²ZERO Carbon Neutrality Plan](#) and [Resilient Washtenaw](#), Washtenaw County's Climate Action Plan. A2/W 2030D will continue to advocate for both market-based solutions and positive public policies at the local and state level.

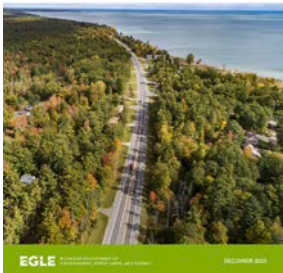
Specifically, A2/W 2030D supports:

- Ordinances & legislation supporting a Circular Economy
- Adopting the 2021 IECC with the Zero Code Renewable Energy Appendix in Michigan
- Powering our electric grid with 100% renewables no later than 2040
- Electrification of our transportation sector and building the needed infrastructure
- Local benchmarking and transparency ordinances
- Policies to encourage the use non-motorized & public transportation
- Ordinances that strengthen Complete Neighborhood concepts
- Performance based incentives
- An equitable transition to Carbon Neutrality

ACCELERATING TO ZERO – FASTER TOGETHER!

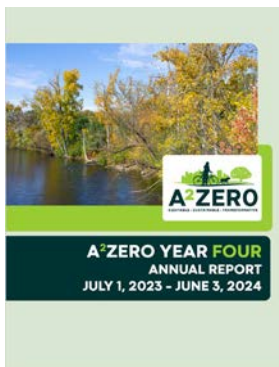
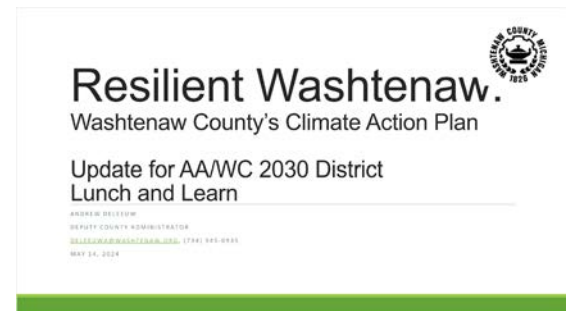
The Ann Arbor / Washtenaw 2030 District is making great strides to heal our planet. However, just as we are only 1 district in a network of 24, we also exist alongside many other working groups. Together, these groups are all aiming to accomplish similar goals and reach net-zero carbon emissions.

MI HEALTHY CLIMATE PLAN
2023 Report



Michigan
[My Healthy Climate Plan 2023 Report](#)

Washtenaw
[Resilient Washtenaw Update in May Lunch & Learn](#)



Ann Arbor
[Year 4 Annual Report](#)

University of Michigan
[Planet Blue Climate Action Annual Report 2023](#)



DISTRICT GOALS



ENERGY

Decarbonize the Built Environment through:

- Expand the district to include Washtenaw County, beginning with Cities, Villages and Townships in collaboration with Resilient Washtenaw
- Work with members to benchmark buildings in conjunction with and ahead of the A2 Benchmarking Ordinance implementation dates
- Work with members to establish both long- and short-term targets, aligning necessary upgrades with capital improvement cycles.
- Support and expand the HoW Green Team
- Support and expand the Multi-family Best Practice Group
- Engage additional municipalities across Washtenaw County
- Engage Restaurant & Bar members in collaboration with the Sustainable Food Business Coalition
- Continue Energy Audit and Assessment Programs and publish case studies
- Develop green leasing and tenant engagement programs
- Expand on-site and off-site renewables through education, outreach, and technical support
- Expand on the Implementing A²ZERO Educational Series with additional deep dives to explore the specific decarbonization strategies and technologies including:
 - ◇ Heat Pump technology and Geo-exchange Systems
 - ◇ Wastewater Heat Recovery Systems
 - ◇ SMART building systems
 - ◇ Distributed Energy Response Management Systems (DERMS)
 - ◇ Recognize buildings and tenants making substantial progress.





WATER

Reduce, Reuse and Recognize

- Work with members to benchmark buildings in conjunction with and ahead of the A2 Benchmarking Ordinance implementation dates.
- Work with members to establish both long- and short-term targets, aligning necessary upgrades with capital improvement cycles.
- Promote Stormwater and Rainwater Harvesting & Reuse technologies
- Promote native landscapes to reduce or eliminate irrigation
- Promote Greywater Reuse technologies
- Recognize buildings and tenants making substantial progress.



Source: Ann Arbor Downtown Development Authority

TRANSPORTATION

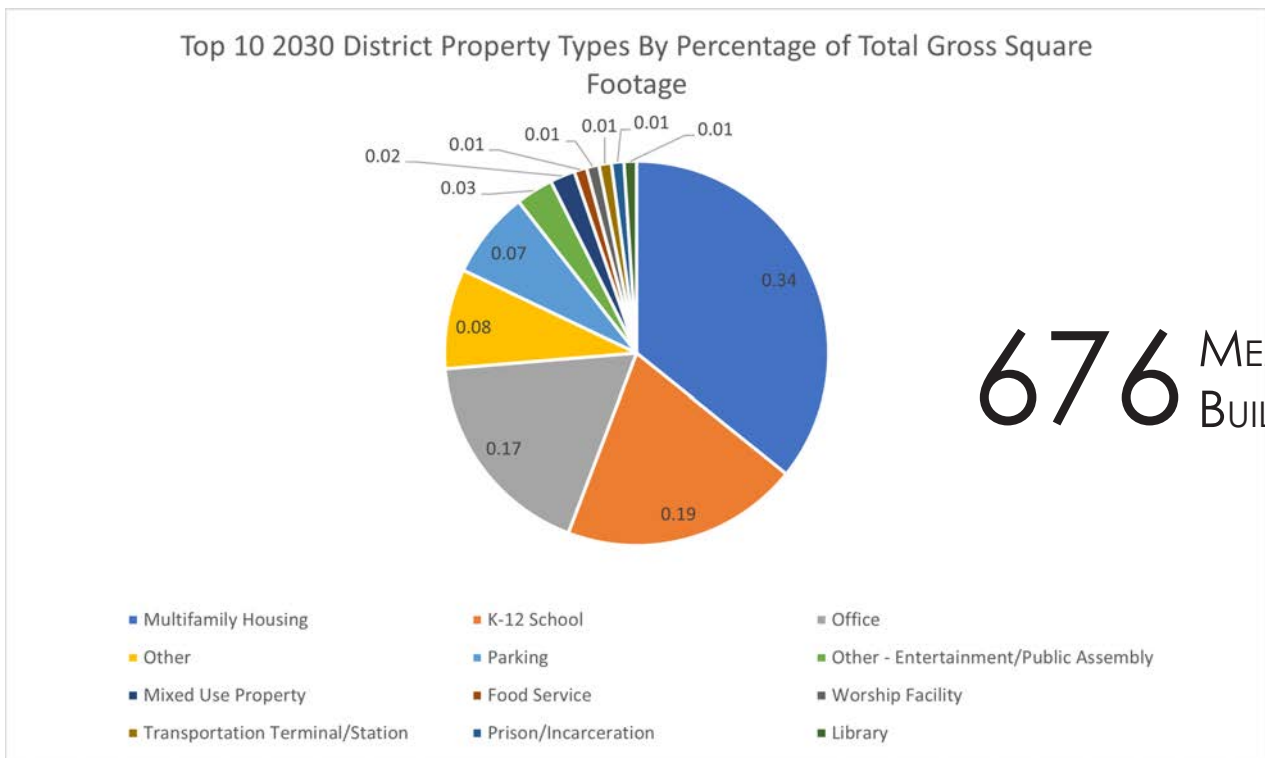
Engage, Transition, Recognize

- Expand participation in the A2/W 2030D transportation survey in January 2025.
- Promote electrification of fleets.
- Promote work from home policies.
- Promote the addition of EV charging stations.
- Support and promote walking & biking.
- Develop a tenant and employee engagement strategies to support reducing vehicle miles traveled by 50%
- Recognize buildings and tenants making substantial progress.

DISTRICT STATISTICS

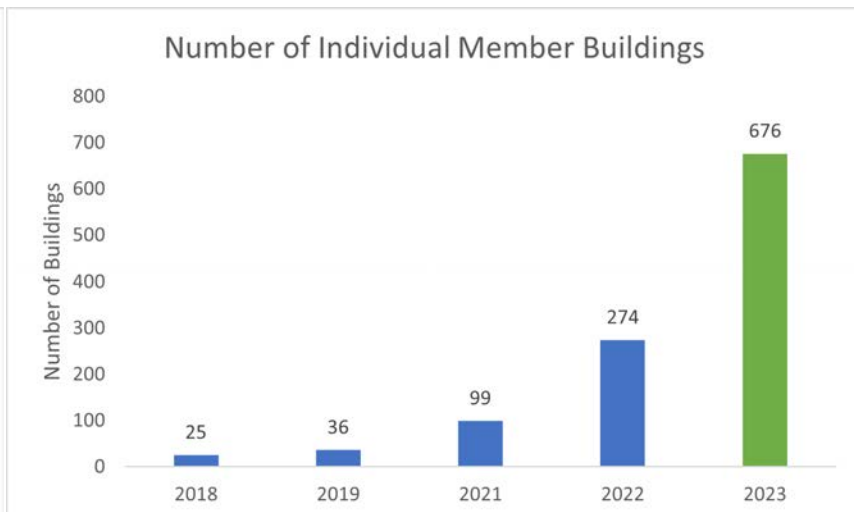
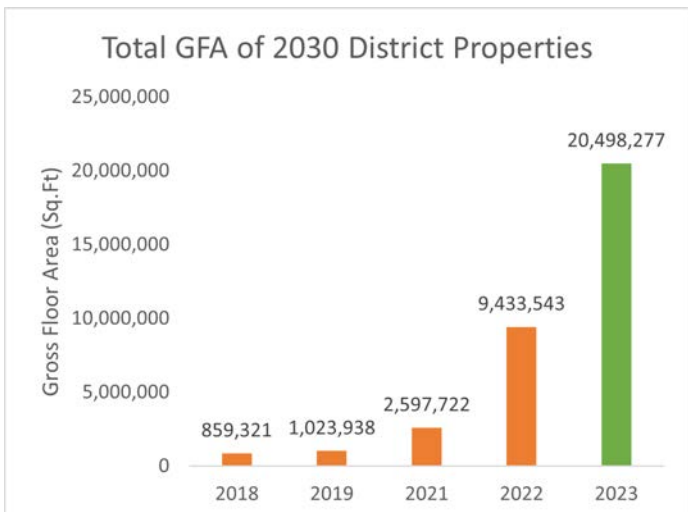
As of December 31, 2023 the district has 676 buildings, totaling over 20 M SF. We have grown in square footage by 112.8%. The mix of properties benchmarking in the district is primarily multifamily, office and k-12 schools. This year the overall percentage of office area has increased from 43% to 64%, multifamily has decreased from 76% to 69%. This change is reflected in the reduction in baseline EUI and WUI because offices typically use less energy and water per square foot than multifamily.

DISTRICT PROPERTY TYPES



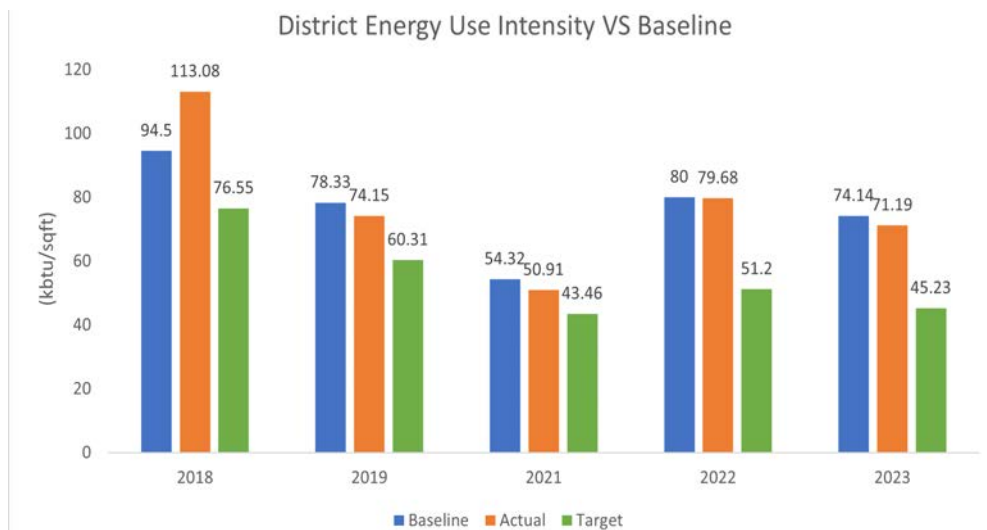
676 MEMBER BUILDINGS

20 Million TOTAL GROSS SQUARE FEET FROM MEMBER BUILDINGS



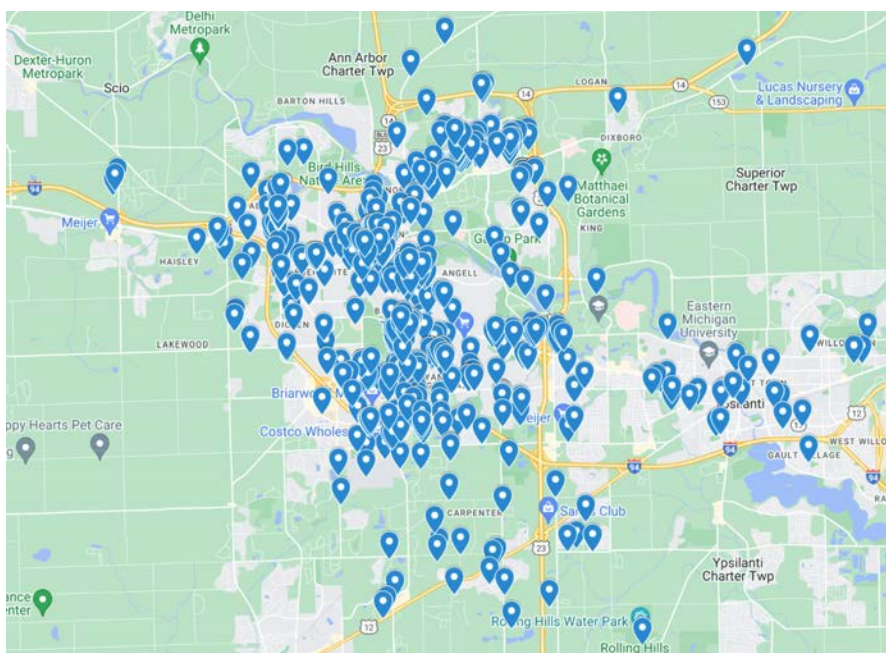
ENERGY BENCHMARKING

A2/W 2030 DISTRICT ENERGY AND GHG BENCHMARKING



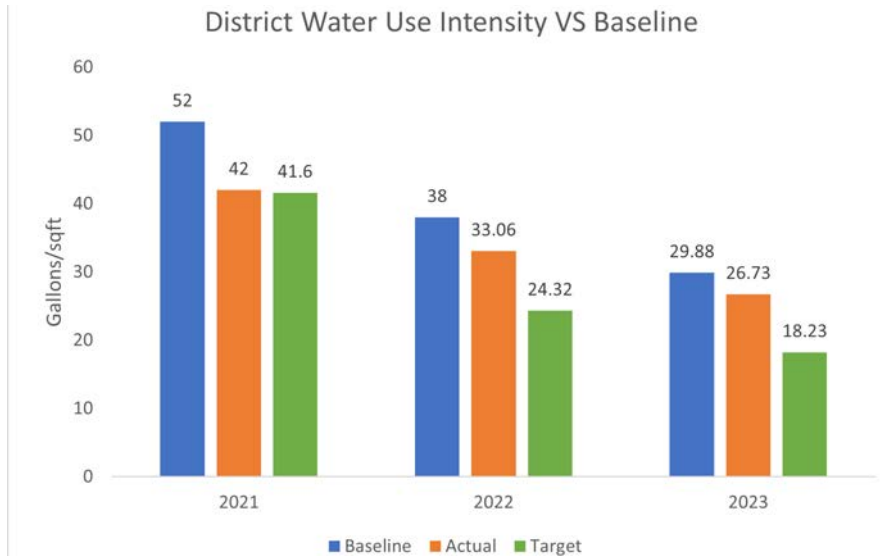
The district has benchmarked building energy use since 2018, skipping 2020 because of the pandemic. The square footage of properties in the district has doubled since 2022 and the building use make up has changed. The 2003 baseline EUI is calculated by building use and area, thus, depending upon the use and square footage of the district buildings reporting, the 2003 district baseline and resulting target changes each year. Of note is the EUI of many office buildings has reduced sense pre-pandemic years, reflecting the lower occupancy rates and remote work options. The 2023 EUI is just below the 2003 baseline indicating that our buildings have a lot of efficiency opportunity. We need to accelerate both our efficiency and transition to renewable power efforts.

DISTRICT MAP OF BUILDINGS

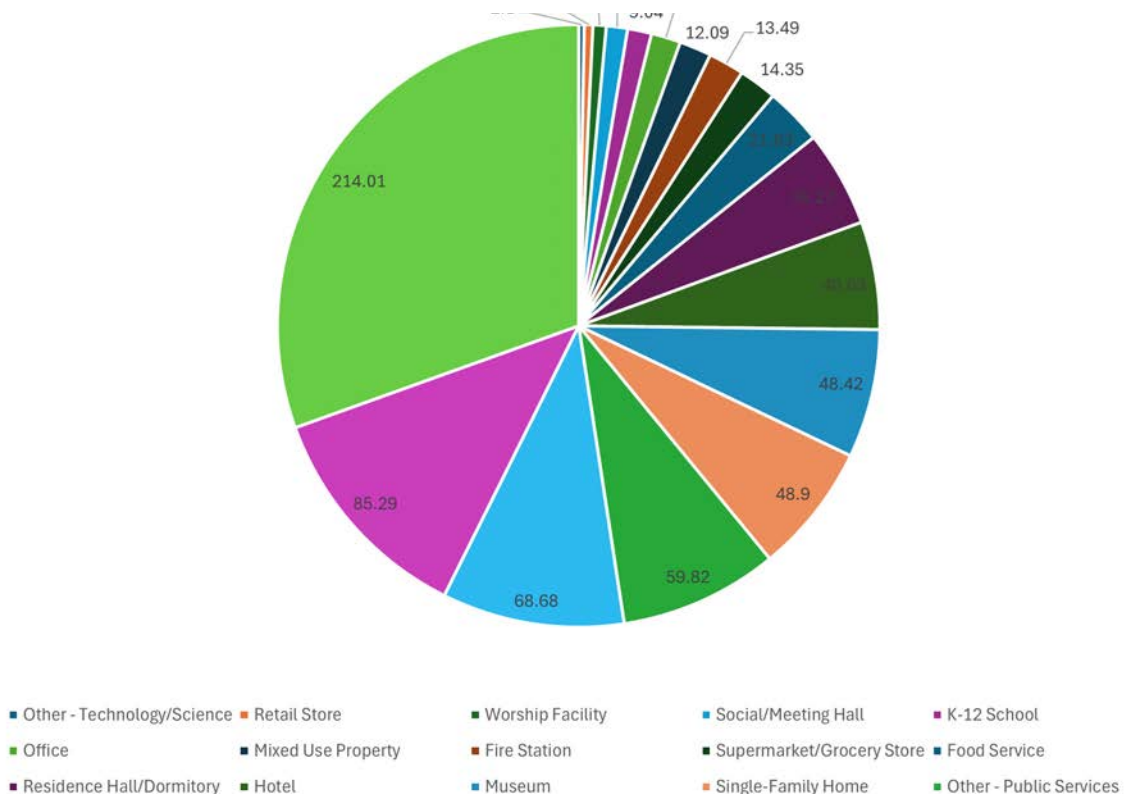


WATER BENCHMARKING

This is the third year the A2/W 2030 District is reporting the benchmarking of water use. This baseline decreased reflecting the increase in office area in the aggregation. Offices use less water per square foot than multifamily buildings. There is peak water use June-August indicating that many of our buildings use potable water for landscape irrigation. Working on reducing turf grass and increasing the use of native landscaping would be a helpful strategy in reducing water use in addition to promoting WaterSense fixtures.



AVERAGE WUI BY PROPERTY TYPE



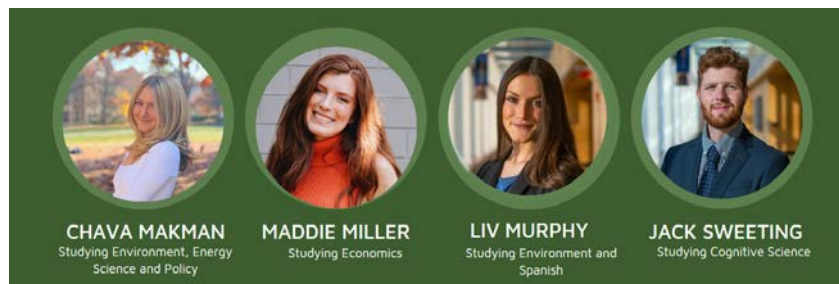
TRANSPORTATION BENCHMARKING

The 2023 Transportation Survey, conducted in January 2023, had 349 respondents from 25 buildings. The average round trip commute was 26.5 miles. Emissions per commute have rebounded post-pandemic, but is slightly below pre-pandemic levels. This is reflected in an increase in the number of days/week people work from home. Driving alone continues to be the largest mode of commuting (over 80% of respondents). AAATA, the area transit system statistics show that most routes have yet to rebound to pre-pandemic levels. The number one policy preference for reducing transportation emissions continues to be work from home policies. 20% of respondents indicated that they are seriously considering an electric vehicle.

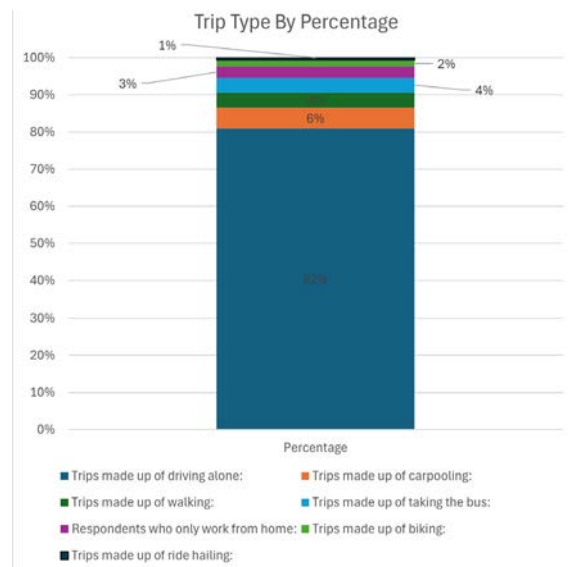
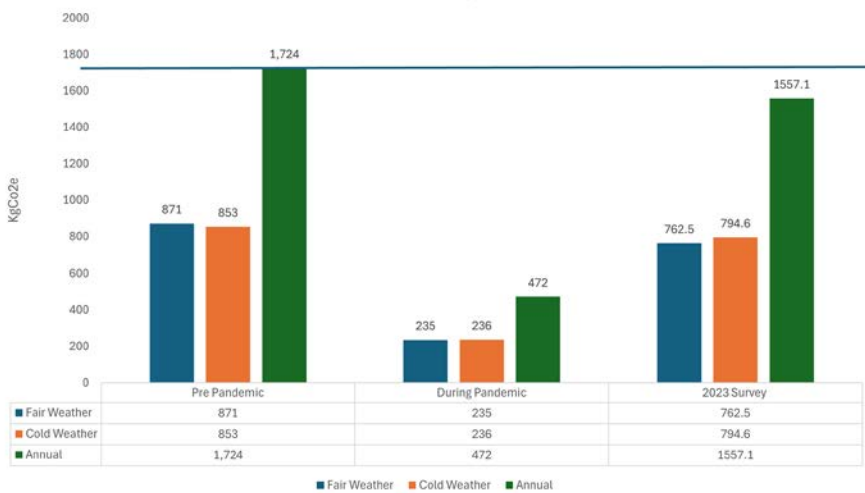
THANK YOU TO THE GRAHAM SCHOLARS 2022-2023 PROGRAM STUDENT TEAM

Learn about the Graham Sustainability Institute Graham Scholars Program

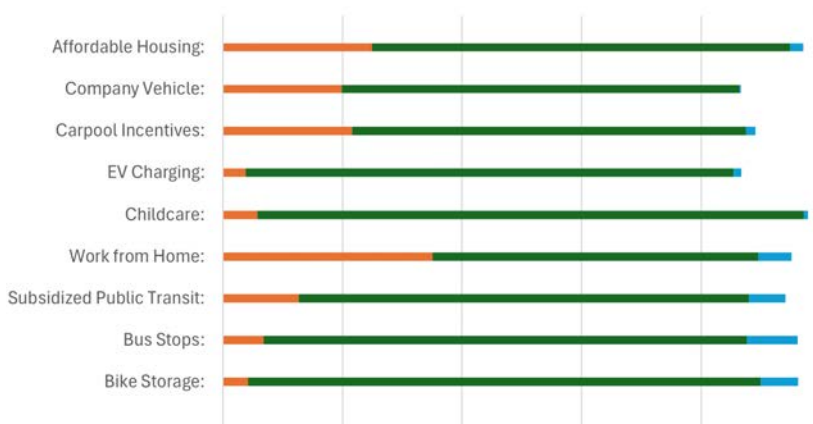
<https://graham.umich.edu/scholars>



Per Commuter Average Emissions



Potential Transportation Policies and Impact on Behavior



KEY HIGHLIGHTS OF OUR WORK IN 2023

BENCHMARKING



The City of Ann Arbor's City Council unanimously adopted the Energy and Water Benchmarking Ordinance (City Code 104) in October 2021. The ordinance requires that building owners and managers of buildings greater than 20,000 square feet benchmark - or track - their building's energy and water use. Our work with DTE's Data Hub pilot enabled the district to support benchmarking for 415 buildings with an increasing number expected in 2024. Learn more about this ordinance and A2/W 2030D's role [here](#).

ENERGY MANAGEMENT GRANTS

Energy Management Best Practices



Benchmark and Track Energy Usage



Conduct an Energy Audit



Improve Energy Efficiency



Transition to Renewable Energy

In 2023 A2/W 2030D granted 14 ASHRAE Level II energy audits, covering 280,000 square feet. We also helped fund one decarbonization plan. Members can apply for an energy management grant [here](#). Energy management grants can be used for energy audits, HVAC retrocommissioning or replacement options, decarbonization planning or Energy Star Building Certification.

MULTIFAMILY BEST PRACTICES GROUP

Formed to support multifamily building managers and owners of all sizes to benchmark and decarbonize their buildings through efficiency, electrification, and renewable energy. Our focus has been on benchmarking, connecting property managers with resources. The Green Rental Housing Ordinance is expected to Launch in late 2024. Learn about the Green Rental Housing Ordinance [here](#).



HOUSE OF WORSHIP (HoW) GREEN TEAM

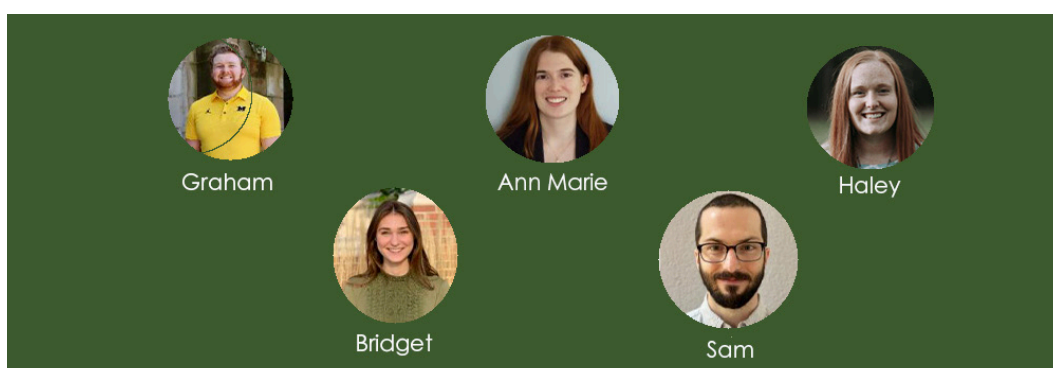


The HoW Green Team meets monthly and offers webinars on topics of interest to houses of worship and nonprofits. Among the members of AA /W 2030D are twelve houses of worship. Of these four have solar, eight have completed energy audits, and two congregations are working on their decarbonization plans.

MUNICIPAL OUTREACH

Washtenaw County, City of Ann Arbor, Ann Arbor Township and Scio Township form the foundation of our emerging Municipal Group. Research by our 2023-2024 SEAS Masters Project Team produced a [toolkit for municipalities](#) looking to reduce their energy use and emissions. [Resources for municipalities](#).

THANK YOU TO OUR 2022-2024 SEAS TEAM:





IMPLEMENTING A²ZERO LUNCH & LEARN SERIES

A joint program with AIA Huron Valley and Washtenaw Contractors Association. If you missed the programs, recordings and presentations can be found here:

- 1-10-23: [A decarbonization pathway for retrofitting buildings and portfolios to be Future-Fit and avoiding Brown Discounts](#)
- 2-14-23: [How professionals can incorporate energy efficiency, renewable energy, and develop brownfields and historic properties with the knowledge of tax credit incentives and the influence of Carbon Neutrality policies from the Inflation Reduction Act](#)
- 3-14-23: [Reducing Embodied Carbon: Challenges, strategies and tools](#)
- 4-11-23: [GeoExchange Systems: Renewable and Efficient](#)
- 5-9-23: [Accelerating to Zero—Faster Together City of Ann Arbor, Washtenaw County, U-M updates](#)
- 6-13-23: We ran into some technical difficulties and the presentation was not recorded but you can access the [presentation materials](#).
- 9-12-23: [Technologies that get us to carbon neutral](#)
- 10-10-23: We ran into some technical difficulties and the presentation was not recorded but you can access the [presentation materials](#).
- 11-14-23: [Energy as a Service Energy Transformation](#) and [presentation](#).



Celebrating Members

GENESIS OF ANN ARBOR - WATER REDUCTION ACHIEVEMENT



Genesis of Ann Arbor was presented a Battle of the Buildings Award for reducing water use by 60.23% (2023 vs 2022). This award was presented to Murray Rosenthal, Chair of the Genesis Green Team, on May 8, 2024, at the Michigan Energy Summit in Grand Rapids. They used [Aquahawk](#) to understand how they were using water. They then made adjustments to their usage, repaired and replaced leaking or outdated equipment. When possible, fixes were done by volunteer congregants or facility staff members.

HATHAWAY'S HIDEAWAY - CARBON NEUTRALITY ACHIEVEMENT

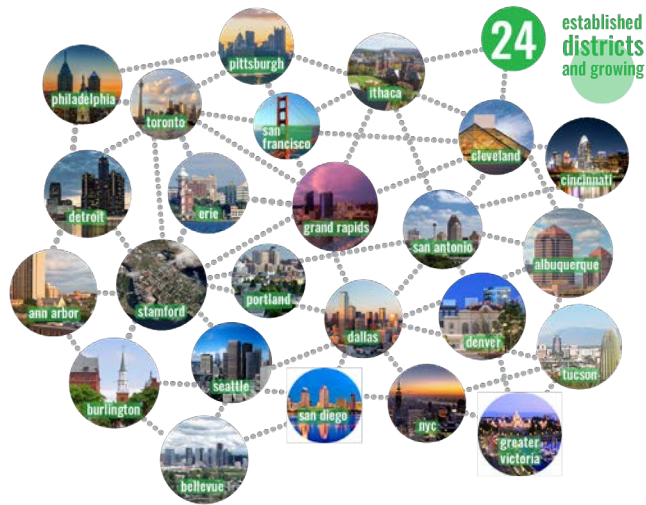


Hathaway's Hideaway, constructed in 1901, achieved a Zero Net Carbon (ZNC) building status in 2023 by electrifying and enrolling in MIGreen Power. The building's 2023 was EUI=7.8. In December, the building owner added a 4.48 kW rooftop solar system. Will they achieve Zero Net Carbon with on-site solar in 2024?

Note we use Architecture 2030's Zero Net Carbon Building definition: A highly energy efficient building that produces on-site, or procures, enough carbon-free renewable energy to meet building operations energy consumption annually.

A special thank you!

2030 DISTRICTS NETWORK



STATE-WIDE SPONSORS

Thank you to our 2030 Statewide Supporters

Supporters



Silver Supporters



MAJOR FUNDERS



MICHIGAN DEPARTMENT OF
ONMENT, GREAT LAKES, AND EN



Join Us!

PROPERTY OWNER/MANAGER/TENANT STAKEHOLDERS

If your building is in **Washtenaw County**, consider joining us! Not only will we help you set up an ENERGY STAR Portfolio Manager account to track your energy and water usage, but once you share your data with us we'll generate a building performance report. This provides you with the information you need to take the next steps toward making your building operationally efficient. Membership is free for building members. Note: the district does not include single family, condos or duplex residences.

PROFESSIONAL STAKEHOLDERS

If your firm provides a service or product that could be helpful to our members in reaching their 2030 goals, consider becoming a professional stakeholder! This will help expand your brand awareness to the most progressive property owners and managers in Ann Arbor. Bring your cutting-edge technology and service to support the mission of the district.

COMMUNITY STAKEHOLDERS

If your organization's mission is aligned with our own, consider becoming a community stakeholder! You can expand your organization's reach and collaborate with the district in providing new thought leadership.

VOLUNTEERS

We have several committees always open to new volunteers. No matter what your area of expertise is, we have a place for you to make a difference.

SPONSORS

Please consider supporting the district. We would not be able to make progress toward our goals without your generous support that contributes to making Washtenaw County a more sustainable, healthy, and resilient place to live and work. Contact jculbertson@2030districts.org.

STATE-WIDE SPONSORS

Join all three Michigan 2030 Districts in Ann Arbor, Detroit, and Grand Rapids at a discount! [Sign up here](#).



Photos courtesy of Christopher James Mitchell - IG: @travelingmitch

JOIN US! [2030DISTRICTS.ORG/ANNARBOR/](https://2030districts.org/annarbor/)

ANN ARBOR/WASHTENAW

2030 DISTRICT®

We acknowledge that the land the City of Ann Arbor occupies is the ancestral, traditional, and contemporary lands of the Anishinaabeg (including Odawa, Ojibwe, and Boodewadomi) and Wyandot peoples. The taking of this land was formalized by the Treaty of Detroit in 1807.

We further acknowledge that our city stands, like almost all property in the United States, on lands obtained from indigenous peoples, generally in unconscionable ways. The original indigenous peoples' trails can be seen on this map.

Knowing where we live, work, study, and recreate does not change the past, but a thorough understanding of the ongoing consequences of this past can empower us in our work to create a future that supports human flourishing and justice for all individuals.

Learn more about the early history of the area [HERE](#).

Image: [Excerpt from Archaeological Atlas of Michigan](#)