



Madison Sustainability

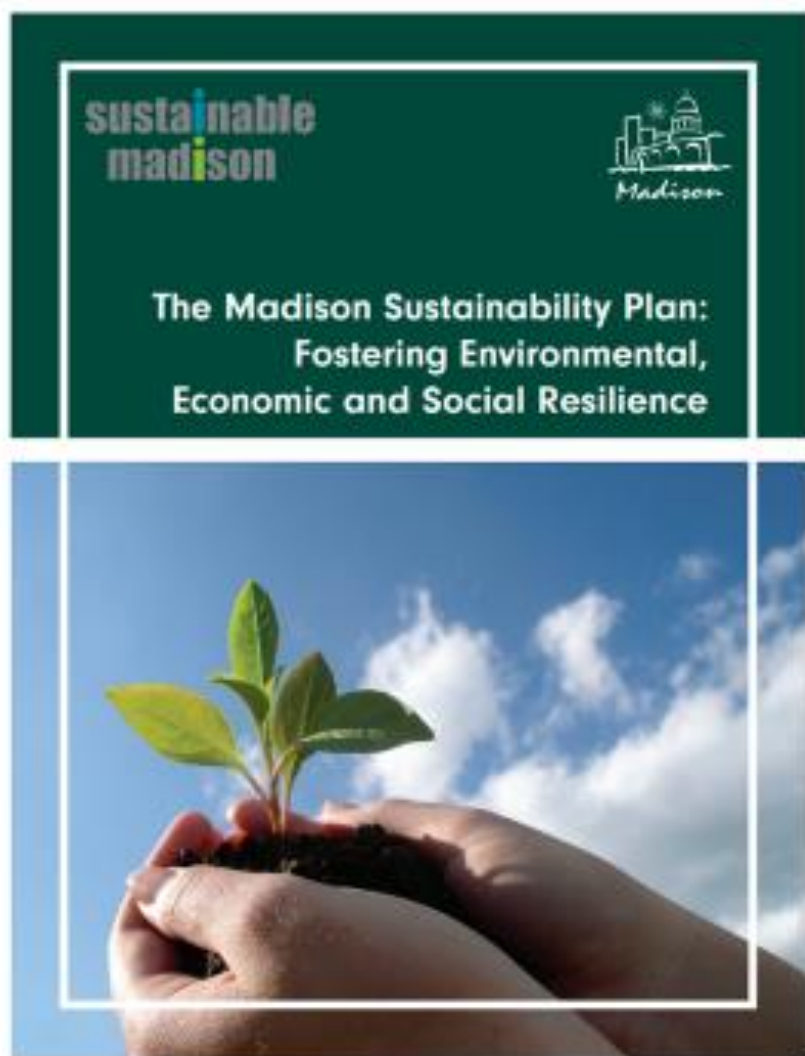
Committee on the Environment

Monday, April 15, 2019





Madison Sustainability



	7	Natural Systems
	18	Planning & Design
	24	Transportation
	32	Carbon & Energy
	40	Economic Development
	48	Employment & Workforce Development
	55	Education
	61	Affordable Housing
	68	Health
	76	Arts, Design & Culture



Madison Sustainability



CARBON & ENERGY GOALS

- Achieving an 80% carbon reduction by 2050
- Obtain 25% of electricity, heating and transportation energy from clean energy sources by 2025.



4/11/2016
As revised by the CCOC

City of Madison Energy Work Plan

Background:

In spring of 2015, the Common Council directed the Sustainable Madison Committee (SMC) to develop an energy and carbon action plan to establish Madison as a leader on energy innovation, racial and social equity, and environmental health.

Purpose:

The debate over climate change has been over for some time. Local and international scientific authorities have confirmed that a warming world could have dramatic and negative impacts on public health, economic development and provision of City of Madison services to all community members. The City of Madison desires to formulate and implement an energy policy consistent with the Madison Sustainability Plan that aims to reduce fossil-fuel based energy consumption and expand use of renewable energy sources in public and private buildings to ensure a resilient, healthy and economically robust region. This objective is in line with the City's Race Equity and Social Justice Initiative that demands an "equitable allocation of resources" in the community.

Process:

An ad-hoc working group of seven Sustainable Madison Committee members participated in four publically noticed meetings that invited nearly 3 dozen community members to identify and advocate for specific policies, practices and partnerships. SMC members recommend the following Work Plan based on concepts vetted throughout the process.

Work Plan Recommendations:

- Review Carbon & Energy Goals
- MOU with MGE
 - Expansion of Solar
 - Expanded use of EV's
 - Promote Energy Efficiency
 - Social Equity & Economic Development
 - Transportation
 - Ongoing Collaborative Projects



100% Renewable Resolution

"THEREFORE, BE IT RESOLVED, by the Common Council of the City of Madison that: The Sustainable Madison Plan must reflect scientific consensus and community aspirations and establish community-wide Energy and Carbon goals of 100% renewable energy and net-zero carbon emissions, within a time-frame that aligns with sound and established science, as official energy and carbon goals of the City of Madison;"



Photo by Master Electrician Jeremy Smith Courtesy of the City of Madison Engineering Division

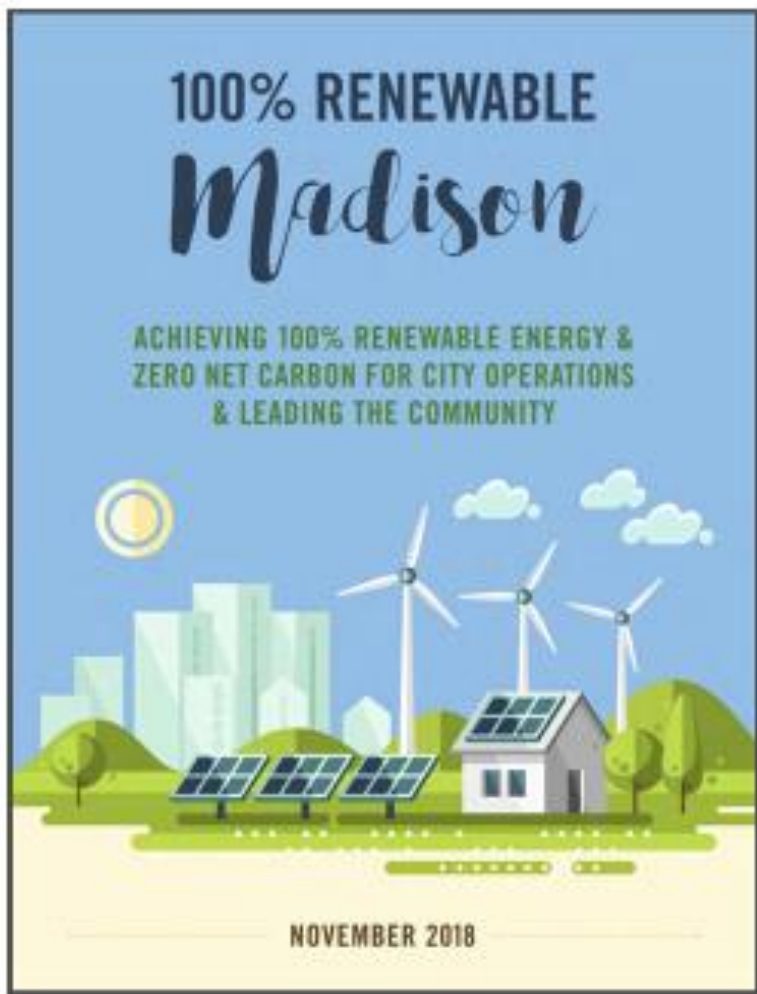


FIGURE 3-1. KEY STRATEGIES FOR ACHIEVING 100% RENEWABLE ENERGY GOAL



SCENARIO 3: 100% Renewable Energy and ZeroNet Carbon by 2030

- 55% carbon reduction with 25% self-generated renewable energy
- 45% RECs and carbon offsets
- \$95M investment over 13 years; IRR 17%
- Cost savings to city of \$78M by 2030
- Reduce total carbon emissions by 426,000 tons by 2030
- Societal co-benefits range from \$21M - \$162M by 2030



Madison Sustainability



- Dedicated funding for retro-commissioning existing buildings (insulation, lighting, automation, etc.)
- Working with Focus on Energy for targeting and incentives
- Benchmarking all buildings
- Public sharing of solar production
- Mandatory LEED certification for new and remodeled buildings
- Facilities and Energy Management Leadership Academy
- Ongoing analysis of pump optimization using variable speed drives for the water utility



Madison Sustainability



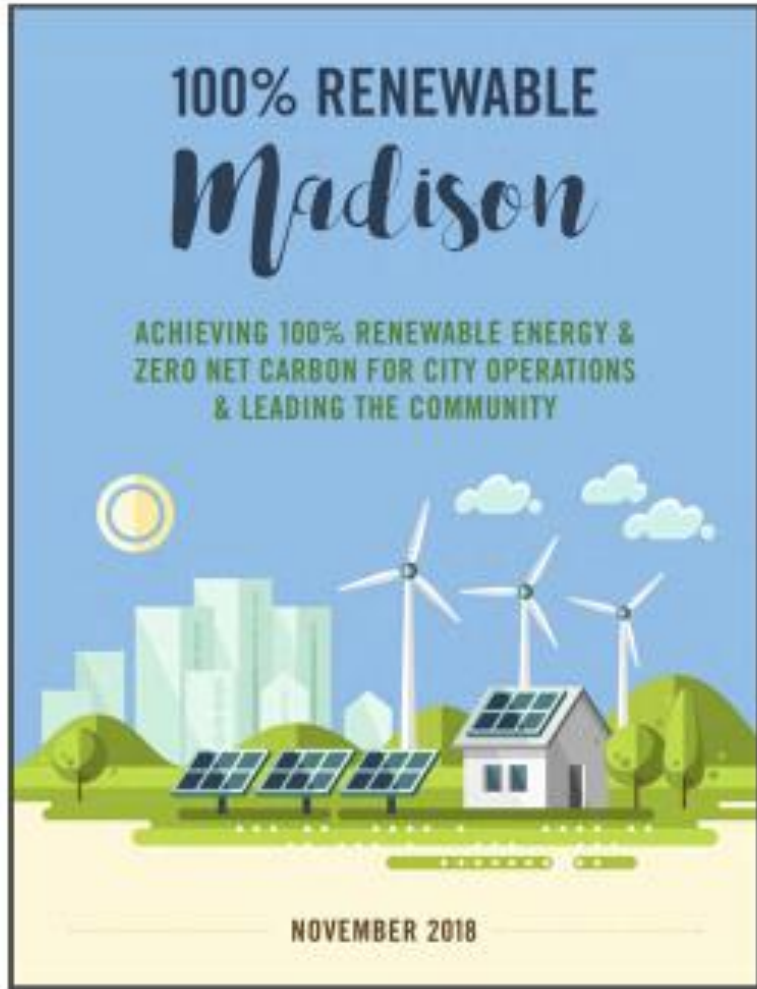
- Installed ~ 615 kW of solar at city facilities (end of 2018)
- Half of which was using the GreenPower program (9 month solar installer training program)
- Currently looking at large off-site solar through MGE's Renewable Energy Rider (RER)
- MadiSUN: 4 years, >100 residential homes + businesses
- Investing in 5 solar arrays totaling 14 MW in western Wisconsin, currently under development, online in 2019, 37% of electricity consumption – Supporting rural communities



Madison Sustainability



- Fleet – purchased 3 EVs in 2018; awarded a grant to procure 20 EVs in 2019, green fleet practices such as the use of biofuels, GPS technologies to prevent idling, etc.
- Madison in Motion: Bus Rapid Transit, JobRide Plus, Complete Streets for Bikes & Pedestrians
- LED Streetlights and innovations in traffic engineering through Smart Cities Collaborative
- 3 EV buses in 2020 (more to come) and expansion of EV infrastructure



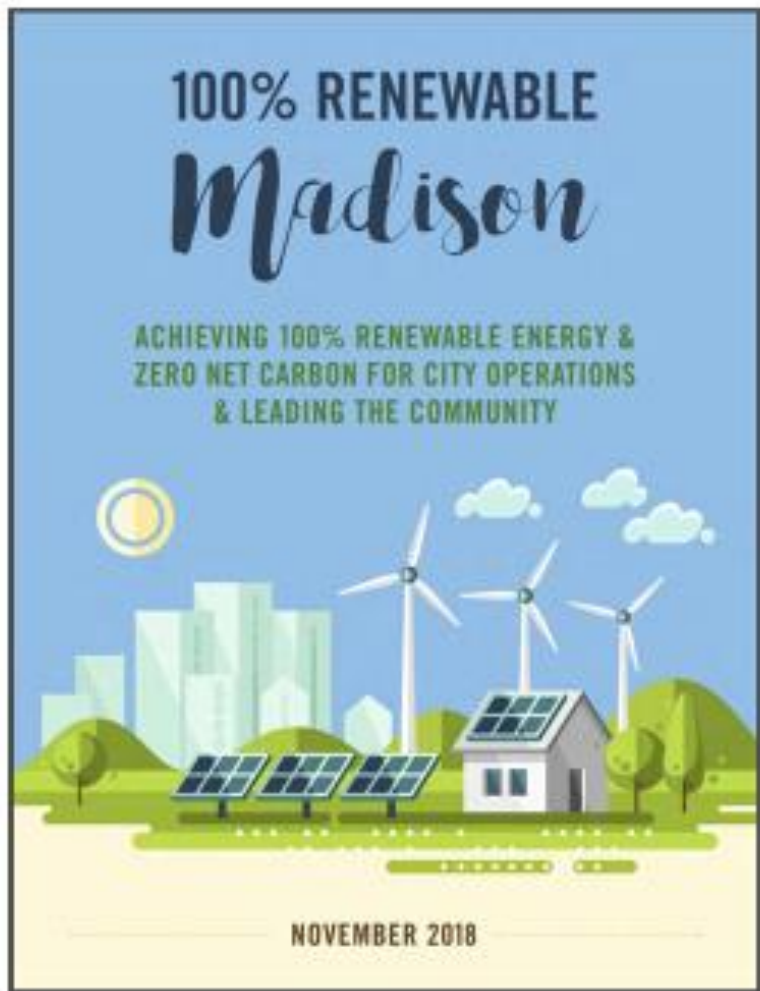
RESJI for 100% Renewable Energy Plan

- Communication Materials
- Community Survey
- Website





Madison Sustainability



HOW CAN I CONTRIBUTE TO MADISON'S 100% RENEWABLE ENERGY GOALS?



Call or email your alder to let them know you support the City's 100% renewable energy goal for city operations and leadership for the greater community



Reduce your energy consumption

- Replace incandescent lights with LEDs
- Install a smart thermostat and schedule your residence's HVAC system
- Enroll in the Focus on Energy Assessment Program
- Work with your employer to join Sustain Dane's MPower program



Explore solar PV for your residence or workplace through the MadiSUN Solar Group Buy Program



Sign up for MGE's Shared Solar program or Alliant's Second Nature program



Decide if you can save money through MGE's Time of Use rate or Alliant Energy's Time of Day Pricing program



Vote for elected officials that support clean energy policies



Support organizations that lobby for state and federal policies that accelerate the transition to 100% renewable energy



Purchase voluntary RECs or carbon offsets



Madison Sustainability



focus on energy®

Partnering with Wisconsin utilities



<https://www.focusonenergy.com/>



Saving Energy For Homes

- Tips
- Heating and Cooling
- Appliances
- Lighting
- Windows
- Incentives
- Home Energy Line

<https://www.mge.com/saving-energy/>



You've heard it before: you can't manage what you don't measure. That's why EPA created ENERGY STAR Portfolio Manager®, an online tool you can use to measure and track energy and water consumption, as well as greenhouse gas emissions. Use it to benchmark the performance of one building or a whole portfolio of buildings, all in a secure online environment.

<https://www.energystar.gov/buildings/facility-owners-and-managers/existing-buildings/use-portfolio-manager>



Madison Sustainability



MadisUN Solar

- Residential Group Buy
- Neighborhood Competition
- Businesses Incentive (2019!)
- Community Solar

<https://madisunsolar.com/>



green
power
tomorrow

With GPT, you can purchase a percent (1% to 100%) of your household's electricity use. You will be billed an extra \$0.01 per kWh based on the percentage you choose.* Or, choose a capped amount designed to fit your budget

<https://www.mge.com/environment/green-power/gpt/index.htm?redirect=greenpower>



Madison Sustainability



<https://www.cityofmadison.com/metro>

<https://www.cityofmadison.com/bike/madison/planTrip/map.cfm>

<https://www.mge.com/driveelectric/>



Madison
Sustainability

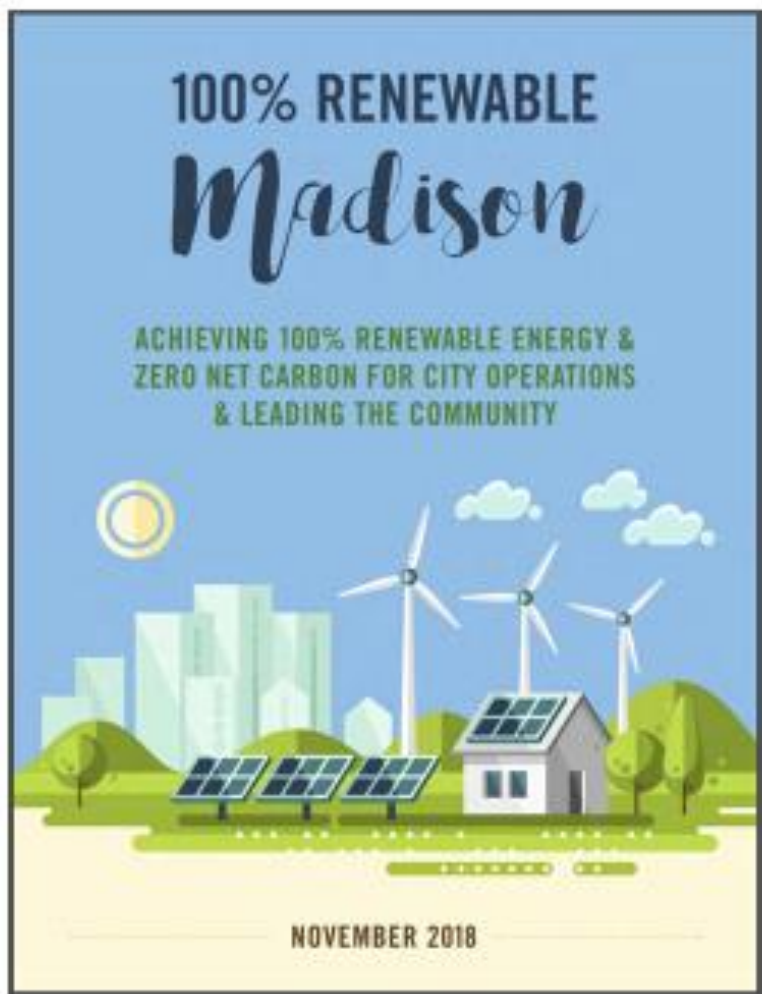


Photo credits: [@c40cities](#).



Other Sustainability Initiatives:

- Public Health & UHI
- Sustainable Purchasing
- Community Digester
- Integrated Pest Management
- Urban Canopy
- Adaptation & Resilience
- ... and more!




Source: <https://www.wpr.org/update-flooding-wisconsin>



Madison Sustainability

City of Madison

Accounts ▾ Services Jobs Agencies ▾ Data ▾ Contact ▾ Search



**CITY OF MADISON
ENGINEERING**

Photo Credit: Archie Nicolette

HomeStreets & SidewalksEnvironmentalErosion ControlProjectsSustainabilityMapsStorm & Sanitary Sewer

Home

About Us

Contact Us

Services

Dead Animal Collection

Permits

Quiet Zone

Report A Problem

Engineering Projects

Public Works


Traffic Engineering

Robert F. Phillips, P.E.,
City Engineer

Engineering
210 MLK, Jr. Blvd.,

Return to [Stormwater Management](#)

RAIN GARDENS



WHAT IS A RAIN GARDEN?

Rain gardens are specially-designed gardens that collect and infiltrate stormwater from impervious areas such as roofs, driveways, and heavily-compacted lawns.

Rain gardens are usually planted with native vegetation, though ornamentals may also be used. They can look as manicured or as natural as the gardener chooses.


The gardens are usually designed to be 6-8 inches deep, in order to retain stormwater long enough for it to infiltrate into the ground.

Maintenance is similar to that of any garden. The first couple of years require regular weeding, but once established, the native plants tend to crowd out most weeds.


Watch a Video
[The Wisconsin Gardener: Rain Gardens](#)

Brochure mentioned in the video
[A How-To Manual for Homeowners](#)

Area Rain Gardens
Click on each to see phases



Olin-Turville Park



[City of Madison](#) / [Live & Work](#) / [Sustainability](#) / Winter Salt Certification

Winter Salt Certification

Purpose

We rely heavily on road salt during our Wisconsin winters, but it comes with an environmental price. Road salt is contaminating local water bodies and the aquifer, Madison's drinking water source.

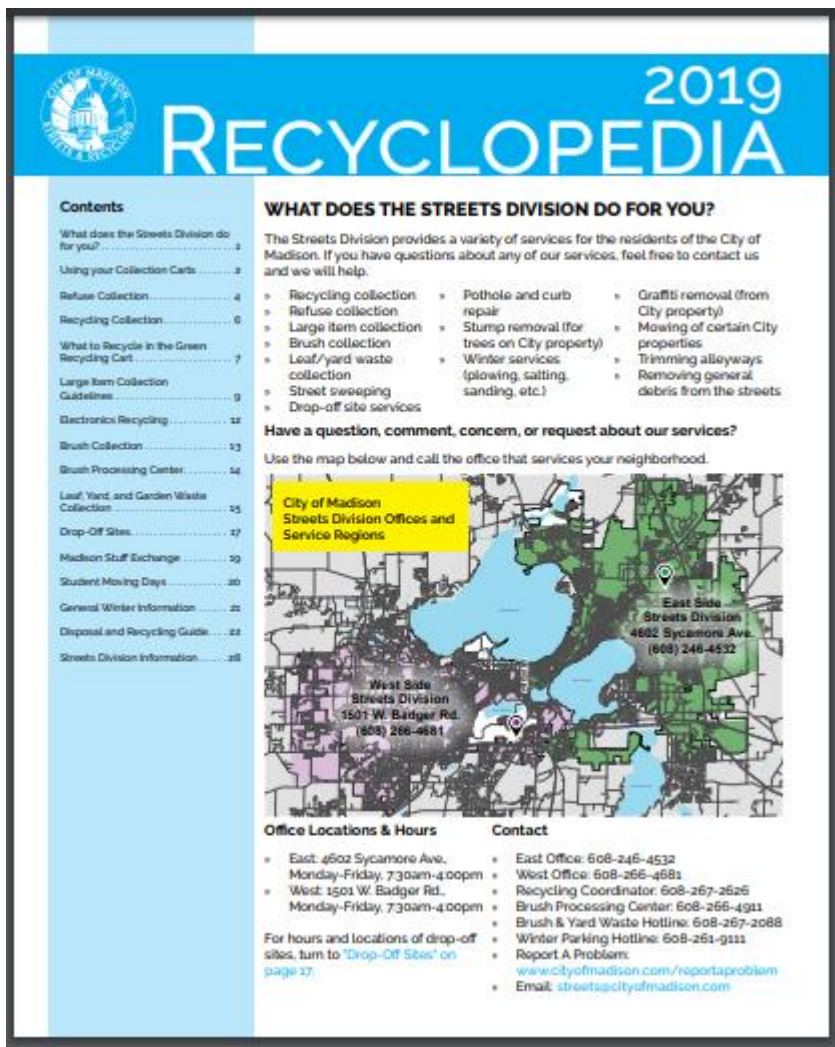
That's why the City of Madison is implementing a voluntary Winter Salt Certification Program, open to all in Dane County. This program encourages winter maintenance professionals to use the least amount of de-icing material necessary in order to keep parking lots, roads, sidewalks and driveways safe. Find out how to get certified and view upcoming trainings by heading to the [Get Certified](#) page.

<https://www.cityofmadison.com/live-work/sustainability/winter-salt-certification>

<https://www.cityofmadison.com/engineering/stormwater/raingardens/>



Madison Sustainability



[City of Madison](http://www.cityofmadison.com) / [Water Utility](http://www.cityofmadison.com/water) / Sustainability


Sustainability

What does sustainability mean to you? At Madison Water Utility, it means improved leak detection, renewing Madison's water infrastructure, preserving water quality, and engaging the public through outreach and education. It also means working to reduce Madison's carbon footprint by promoting water conservation initiatives. The less water we pull from the aquifer, the less energy we need to power motors and pumps in our facilities.



Madison water use at a glance


- Number of gallons pumped in 2016: just under 10 billion
- Average per-person daily water use for people living in single-family homes & duplexes: **60.9 gallons**





**URBAN
FOOTPRINT**


FREE WEBINAR
**Bridging the Gap
Between City
Sustainability and Land
Use Planning**


 **Wednesday, March 20th**  **11AM PT**



Joe DiStefano,
UrbanFootprint


Mike Steinhoff,
ICLEI USA


Harrison Rue,
City of
Honolulu


Rocky Mould,
City of
Honolulu


Stacie Reece,
City of
Madison


Ben Zellers,
City of
Madison

Sign Up to Join the Webinar

FIRST NAME*

LAST NAME*

WORK EMAIL*

ORGANIZATION*

TITLE*

COUNTRY*

Please Select ▼

WHICH CATEGORY BEST DESCRIBES YOUR ORGANIZATION?

ONE HEALTH INITIATIVE: THE PLASTIC EPIDEMIC

Posted on [03/28/2019](#)

We Welcome you to our **One Health Initiative** meeting! What is One Health and are you a One Healthier? Have you ever considered yourself a Global Citizen? Do you want to help contribute to some of the world's issues? Unsure of where to start? Join us on **April 10th at 6pm** to begin working with an interdisciplinary cohort of students with a common goal – to save the world!

On **April 10th** our topic of discussion will be **the plastic epidemic**. How can we lessen our plastic burden, save the environment, animals, and even ourselves? We have the privilege to begin our meeting with a talk from both **Bryan Johnson**, Madison recycling coordinator and public information officer, as well as **Stacie Reece**, Madison's sustainability manager. After a 30 minute talk, we want to create interdisciplinary groups and ask ourselves how we as an individual, a community, and as a society can tackle the issue of the plastic epidemic. We are calling all **law, medical, veterinary, pharmacy, engineering, public health, global health, education, and any and all graduate students**. This is a great way to **meet new people, share ideas, and learn from each other**. Education, communication, and collaboration are the best medicines.



Madison
Sustainability

[Home](#) [About Us](#) [The Council](#) [Initiatives](#) [Resources](#) [Contact Us](#)

The Dane County Office of
Energy and Climate Change



<https://climatechange.countyofdane.com/>


clean wisconsin
your environmental voice since 1970

 **RENEW
WISCONSIN**



I.C.L.E.I
Local
Governments
for Sustainability

USDN | urban sustainability
directors network



Youth Climate Strike brings hundreds of students to the state Capitol



By Negassi Tesfamichael Mar 16, 2019 3 min to read

TRY 3 MONTHS FOR \$3



Students head to the state Capitol during a climate change march and rally in Madison on Friday.

MICHELLE STOCKER

READERS' TOP 5 ON CAP TIMES

- 1 Records show a second local fire department disciplined Fitchburg Mayor Jason Gonzalez for missing shifts
- 2 Beto O'Rourke in Madison: Wisconsin is 'fundamental' to the presidency in 2020
- 3 Let's Eat: At Kingdom, stews and curries bring West African flavors north
- 4 Bingeworthy: CBS' 'The Good Fight' keeps throwing punches in Season 3
- 5 Editorial: Our endorsements for a progressive City Council

LATEST FROM CAP TIMES

'Nothing short of bizarre': New dispute emerges between Madison and Judge Doyle developer

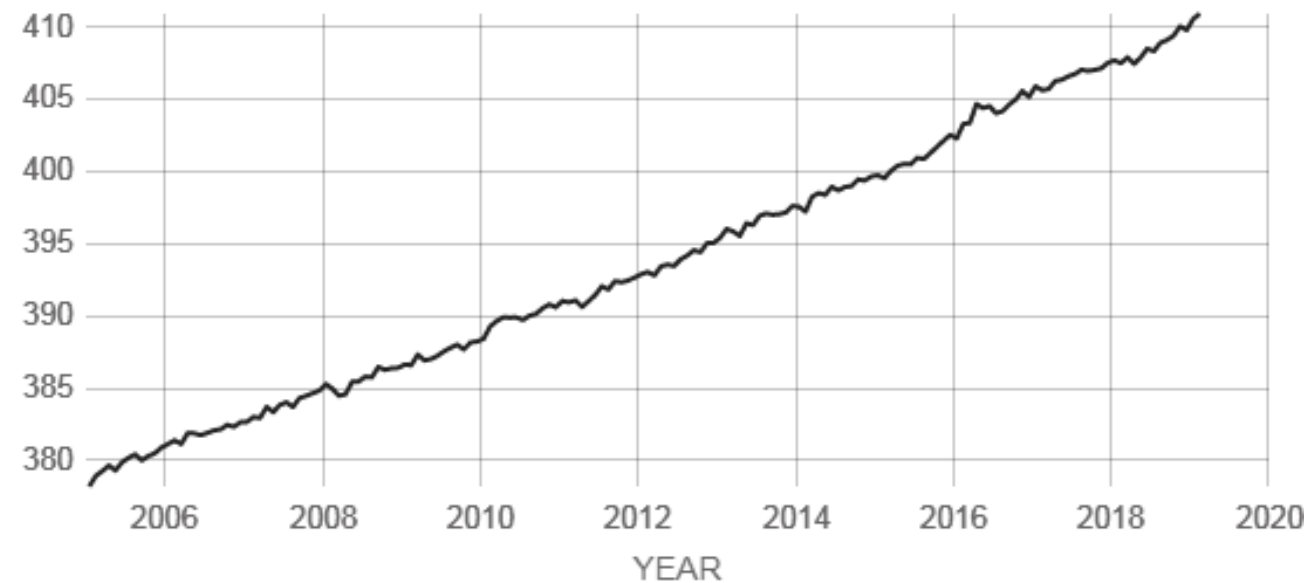
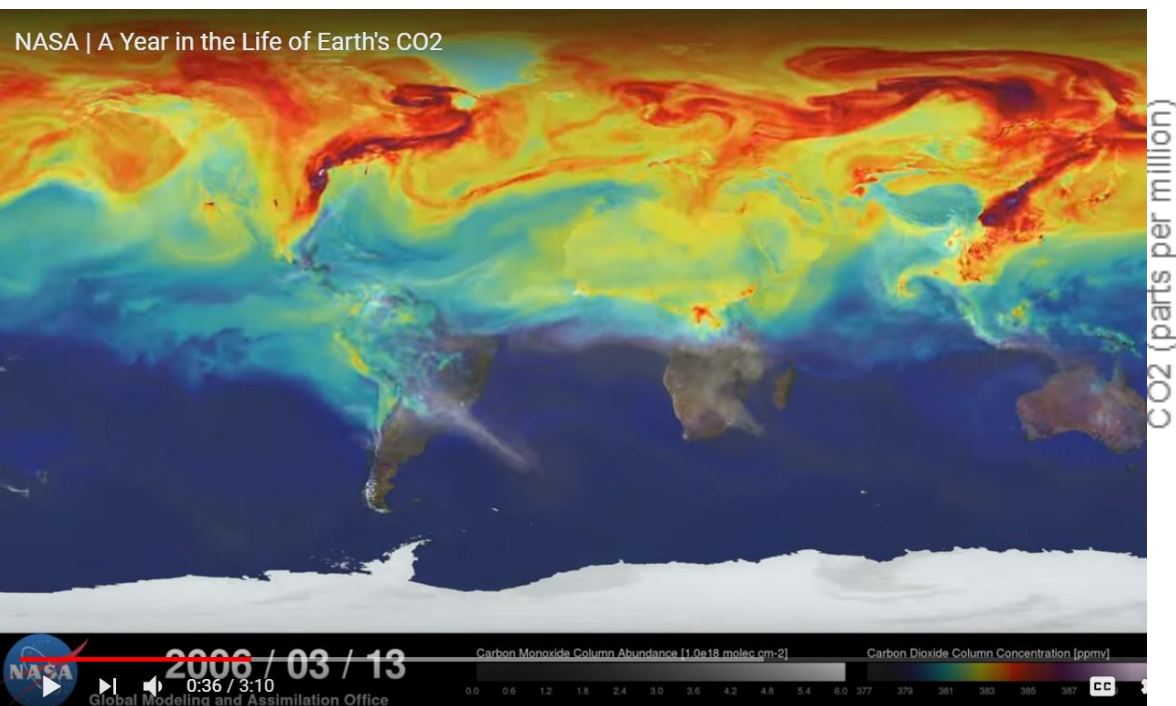
Joanne Juhnke: Carusi is devoted to public

100%

<https://100renewmadison.org/>



Madison Sustainability



Source: climate.nasa.gov

<https://www.youtube.com/watch?v=x1SgmFa0r04>



Madison
Sustainability

THANK YOU! – Q & A



Stacie Reece

Sustainability Program Coordinator

Engineering Division

210 MLK, Jr. Blvd. CCB Room 115

Madison, WI 53703-3342

sreece@cityofmadison.com

608-261-9823

Source: RENEW Wisconsin