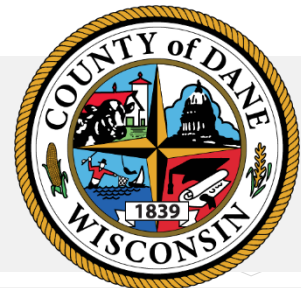




Moving Madison & Dane County Towards a Circular Economy

October 26, 2020
Sustainable Madison Committee

City of Madison - Streets Division
Dane County Department of
Waste & Renewables



Introductions



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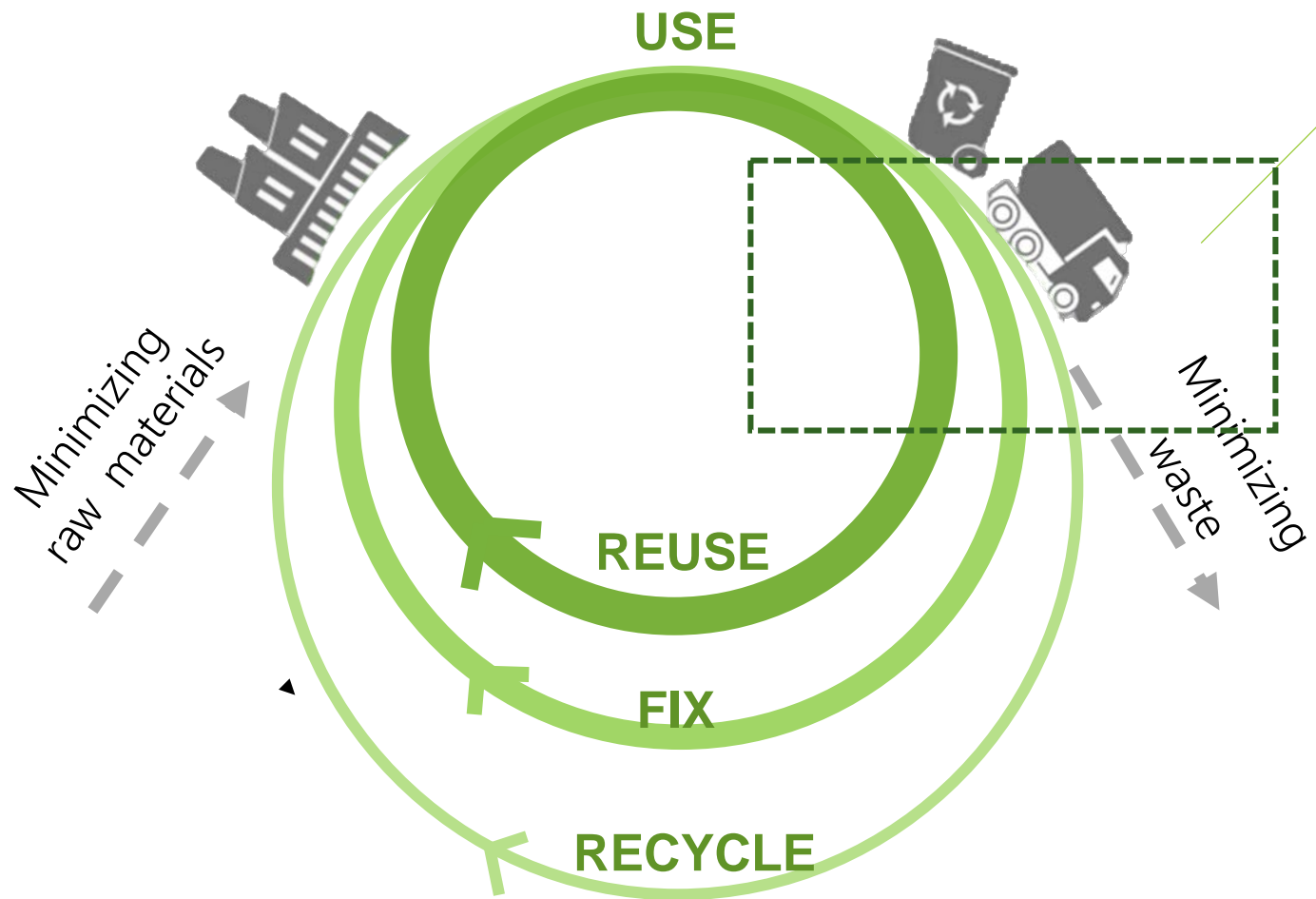


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Overview

- What is a circular economy?
- Where we are now:
 - City of Madison Perspective
 - Dane County Perspective
- How can we keep moving towards a closed loop?

Achieving a **circular economy** takes much more than a strong recycling program, but without the right waste management infrastructure the loop cannot connect



Where our waste management and recycling programs fit in.



Resource Recovery & Waste in Madison





Madison's recycling program started in 1968 with only newspapers.

See more about our recycling history at www.cityofmadison.com/recycling

In the last 50 years, collection systems have changed



What makes recycling work?

It creates commodities, or in other words it creates the raw material for the circular economy.

Even in 1968 – newspaper recycling started because the American Paper Institute was looking for another way to make paper and it made economic sense



What caused all these "recycling crisis" headlines?

WIRED THE WORLD'S RECYCLING IS IN CHAOS. HERE'S WHAT HAS TO HAPPEN

NEWS
U.S. faces recycling crisis after China rejects American recyclables



The Washington Post
A move by China puts U.S. small-town recycling programs in the dumps

The New York Times

Hundreds of US cities are killing or scaling back their recycling programs

The Seattle Times

Business | Economy | Environment |

Some Seattle-area recycling dumped in landfills as China's restrictions kick in

BUSINESS
As Costs Skyrocket, More U.S. Cities Stop Recycling
With China no longer accepting used plastic and paper, communities are facing steep collection bills, forcing them to end their programs or burn or bury more waste.

salon
Nationwide, communities are discontinuing recycling programs

Mother Jones

The Dirty Truth Is Your Recycling May Actually Go to Landfills
"I've been in garbage all my life. This is unprecedented."
DOMINIQUE MOSBERGEN | JULY 24, 2018



USA TODAY
Recycling is in trouble — and it might be your fault

The Atlantic

Is This the End of Recycling?
Americans are consuming more and more stuff. Now that other countries won't take our papers and plastics, they're ending up in the trash.



Recycling programs seen as a waste in many communities because of high costs, inefficiencies

PBS NEWSHOUR
Why your recyclables might have no place to go



Higher Recycling Costs Have Left Many Cities And Towns Searching For Solutions

Huge Amounts of Americans' Recycling Goes Into Landfills Because China Won't Take It Anymore

THE WALL STREET JOURNAL.
Recycling, Once Embraced by Businesses and Environmentalists, Now Under Siege



Episode 926: So, Should We Recycle?

SLATE

ST. LOUIS POST-DISPATCH

Changes to recycling pipeline have cities across the St. Louis area sorting through options

CBS NEWS Why America's recycling industry is in the dumps



Will Recycling Become a Thing of the Past? Experts Say It's Possible Unless Changes Are Made

Basic economics

- In 2018, China changed their importing rules
 - Scrap materials must meet very high purity rates to be accepted
- The importing change means material once sent overseas cannot go there
- Created more domestic supply than demand
 - Less money/revenue from the commodities

More changes to come...

- 2021 China may ban the import of all materials considered “solid waste”
- Basel Convention (international treaty on hazardous waste trade) added new restrictions for plastic trade



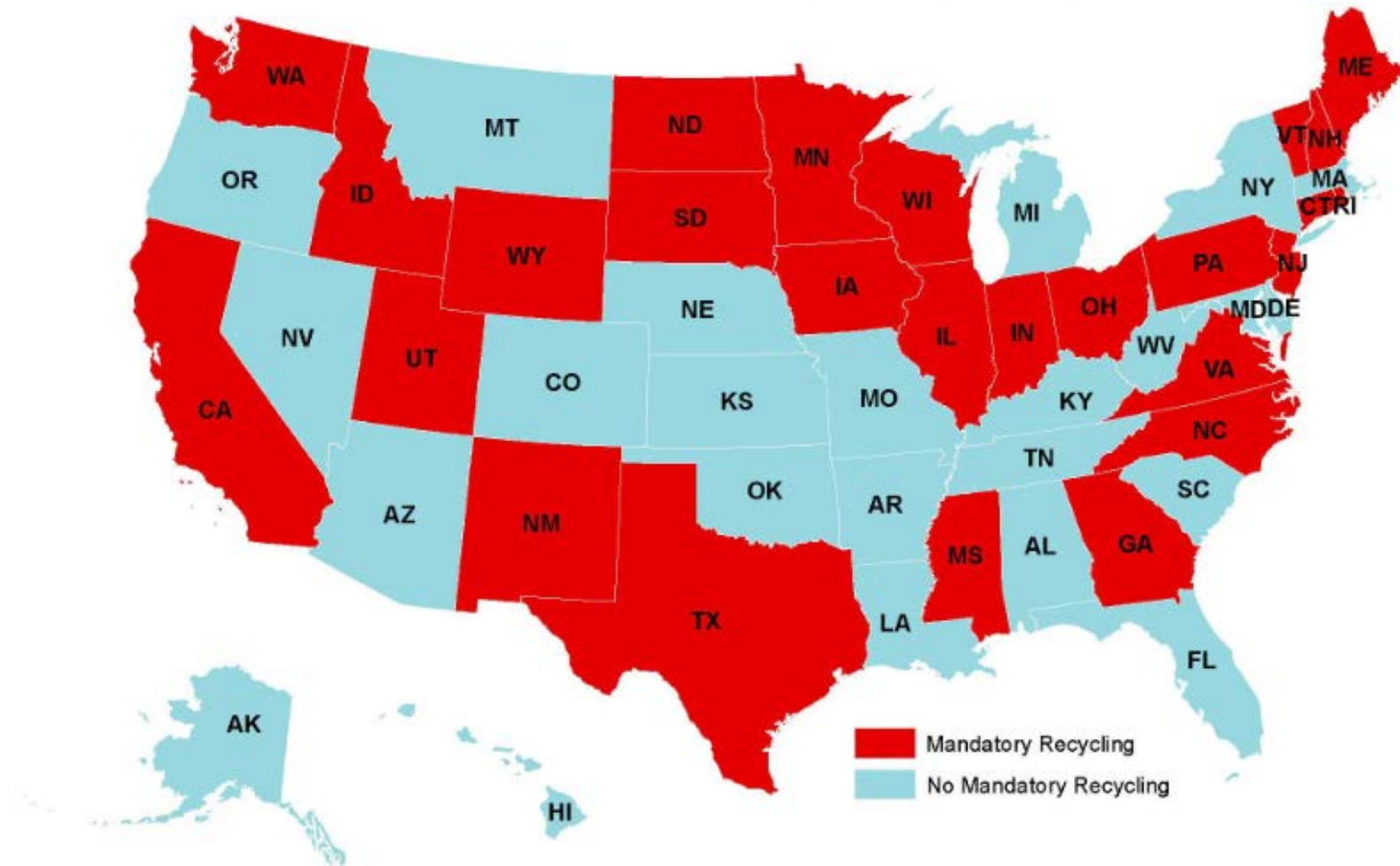
Photo from [Resource Recycling](#), April 2020 – not a photo from Madison, WI



There is no national recycling strategy

- 27 states and Washington DC have some kind of recycling mandate
 - Not all mandates are the same:
 - Idaho only mandate is to recycle lead batteries
 - Maine mandates governments, universities & businesses with more than 15 employees in one location to recycle certain household batteries, computers, CRTs, cardboard & high-grade office paper
- 23 state have no statewide mandate
 - Not all lack of mandates are the same
 - Oregon & New York let municipalities set their recycling rules.
 - Delaware requires haulers to bill for recycling, but doesn't require homeowners to participate

States with Mandatory Recycling Laws



Map and information comes from NERC's report: ["Disposal Bans & Mandatory Recycling in the United States"](#) (Revised July 2020)



Impact on Madison

- In 2017, **net** revenue was \$16.69/ton
 - For every ton of recyclables collected, the city received \$16.69
- In 2020, **net cost** of \$20.35/ton.
 - For every ton of recyclables collected, the city pays \$20.35.

What's at the root of the decrease?

- 36.5% of what is in the recycling carts does not generate revenue today. Other commodities have lower value due to the market.
- **18.9% of what is placed into the recycling cart is trash.**



What do we do?



Keep recycling! It's the right thing to do and...

- Recycling system is adapting
 - New plants opening up, but it takes time.
- Wisconsin has a strong recycling mandate
 - Most of what belongs in your recycling cart is required to be there by state law
 - State, county, and city laws still in place
- Markets are tough today, but they shift.
 - Can't let tough headlines today lead to bad choices for tomorrow



Recycle More. Recycle Right.



PAPER



Magazines
Newspaper
Office Paper

Cardboard
Mail
Cartons

PLASTIC



Deli Containers
Clamshell Packaging
Containers #1-#7

Bottles (lid ON)
Dairy Tubs
Jugs

GLASS



Bottles (remove caps)
Jars (remove lids)

METAL



Aluminum cans/pans
Empty aerosol cans

Pots & pans
Steel tin cans

- Follow the rules.
- Do not "wishcycle."
- See how Madison's recycling is sorted on YouTube; search for "[Kipp Street Recycling](#)"

The cleaner the material, the easier it is to sell, which means the recycling system works better.



Materials are always changing



Single-use coffee pods



Stand-up squeeze pouches

Image from The Seattle Times



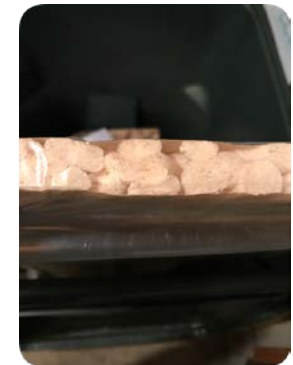
Electric bicycle batteries



Gel bag from pre-packaged food prep boxes



Insulated paper packaging from food prep box



And some things are flat out confusing



Foam sheeting with the chasing arrows logo & number

Hard plastic six-pack rings with "100% recyclable" printed on them

Neither belong in the recycling cart



As a consumer – you must stay informed

Recycling rules & opportunities change over time.

Recovery facilities lag behind the development of new products & packaging

- Ask questions
- Use *official* resources
 - Flyers
 - Magnets
 - Websites & apps
 - Signs
 - Stickers, etc.

And the pandemic may change things, too, so you need to stay informed.

2021 RECYCLOPEDIA

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WHAT DOES THE STREETS DIVISION DO FOR YOU?

The Streets Division provides a variety of services for the residents of the City of Madison. If you have questions about any of our services, feel free to contact us and we will help.

- » Recycling collection
- » Refuse collection
- » Large item collection
- » Brush collection
- » Leaf/yard waste collection
- » Street sweeping
- » Drop-off site services
- » Pothole and curb repair
- » Stump removal (for trees on City property)
- » Winter services (plowing, salting, sanding, etc.)
- » Graffiti removal (from City property)
- » Mowing of certain City properties
- » Removing general debris from the streets
- » Food scraps recycling
- » Urban Forestry services (trimming, planting, removals, etc.)

WHO TO CONTACT

Curbside Collection, Drop-Off Sites, Street Sweeping, Pothole Repair, and Snow Plowing Issues

For areas east of South Park Street:

- » Streets East: 4602 Sycamore Ave., 608-246-4532
- » Office hours: 7:30am-4:00pm, Monday to Friday

For areas west of South Park Street:

- » Streets West: 1501 W. Badger Rd., 608-266-4681
- » Office hours: 7:30am-4:00pm, Monday to Friday

For recycling information:

- » Recycling Coordinator: 1501 W. Badger Rd., 608-267-2626
- » Office hours: 7:30am-4:00pm, Monday to Friday

Urban Forestry Issues

- » Urban Forestry: 1402 Wingra Creek Parkway, 608-266-4816
- » Office hours: 7:00am-3:00pm, Monday to Friday
- » Website: www.cityofmadison.com/forestry
- » After-hours tree emergency: 608-255-2345 (Madison Police Non-Emergency Line)

Mulch and Brush Processing

- » Brush Processing Center: 121 E. Olin Ave., 608-266-4911
- » Hours of operation: 7:30am-2:30pm, Monday to Friday

Hotlines

» Brush & Yard Waste Information: 608-267-2088	» Report problems: www.cityofmadison.com/streets
» Winter Parking: 608-261-9111	» Report problems: www.cityofmadison.com/reportaproblem
» Urban Forestry Special Charge: 608-243-5899	» Email: streets@cityofmadison.com

OUR COLLECTION CARTS

Lines are for all collection carts provided by the City for curbside collection.

What goes into the recycling cart? Turn to page 6.

What goes into the refuse cart? Turn to page 4.

How do I correct carts curbside on collection day?

How do I load my collection schedule at www.cityofmadison.com/collectionschedule?

If you do not have internet access, contact Streets Division office that issues your home to mail a calendar to your home.

What are these rules to have your cart collected on the scheduled collection day?

What are the rules for recycling carts out by 7:00am?

What are the rules for refuse carts with no items sticking out 18 inches or more?

How much can I put in my cart? Do not put more than 100 pounds in your cart.

Cart Storage

Carts have been emptied, residents have 24 hours from the day of pickup to remove them from the curb.

Carts should be stored in the garage, or at the rear of the building.

Recycling and refuse cart ready for collection and following the guidelines.

2021 Recyclopeda coming eventually!

2021

Items from paper (e.g., newspapers, magazines, catalogs, etc.)	» Junk mail	» Paper/cardboard backing off retail packages
» Office and computer paper	» Newspapers and all the inserts	» Prose books
» Office and computer paper	» Office and computer paper	» Receipts and bills
» Paper egg cartons	» Outer frozen food boxes	» Soda cases, etc.
» Paper grocery bags	» Paper grocery bags	» Shredded paper must be in a clear or white bag. The bag of shredded paper should be no larger than a basketball.
» Paper milk and juice cartons (even if they have a plastic spout)	» Paper milk and juice cartons (even if they have a plastic spout)	
» Sanitary napkins	» Soiled and/or stained cardboard & paper products	» Tissue paper
» Polaroids		
» Jars - remove the lids (metal lids can be recycled loose in cart if they are roughly the size of a dairy tub lid, same with most plastic lids)	» Jars - remove the lids (metal lids can be recycled loose in cart if they are roughly the size of a dairy tub lid, same with most plastic lids)	
» Dishes & bowls	» Drinking glasses	» Laboratory glass
» Flower pots	» Incandescent & LED light bulbs (fluorescent tubes/tubes must be taken to retailer that sells them)	» Windows & mirrors
» Plastic bags & plastic film	» Plastic bags & plastic film	» Plastic bags & plastic film
» Dairy tub lids	» Dairy tubs (cottage cheese, etc.) - lids do not need to be on	» Dairy tubs (cottage cheese, etc.) - lids do not need to be on
» Frozen juice containers	» Jugs (milk, juice, etc.) - leave on lids	» Jugs (milk, juice, etc.) - leave on lids
» Laundry bottles - leave on lids	» Laundry bottles - leave on lids	
» Food wrap (i.e., Cling Wrap)	» Dark green or black bags	» Drawing string bags
» Motor oil bottles	» Wrapping from meat products	
» Metal pipe 1/2" and less	» Metal items weighing less than 10 pounds	» Pots & pans
» Small metal appliances, such as toasters (please remove glass)	» Small metal appliances, such as toasters (please remove glass)	
» Metal items weighing more than 10 pounds	» Car parts: like brake pads	» Wire hangers
» Chain link fencing	» Any metal item too big, too heavy, or too wavy for the collection cart	

Madison makes 45,000 tons of trash every year.

And that's only what the Streets Division
collects

What do we do?





Prior to being compacted in the landfill, the City of Madison generates enough trash each year to fill Camp Randall.

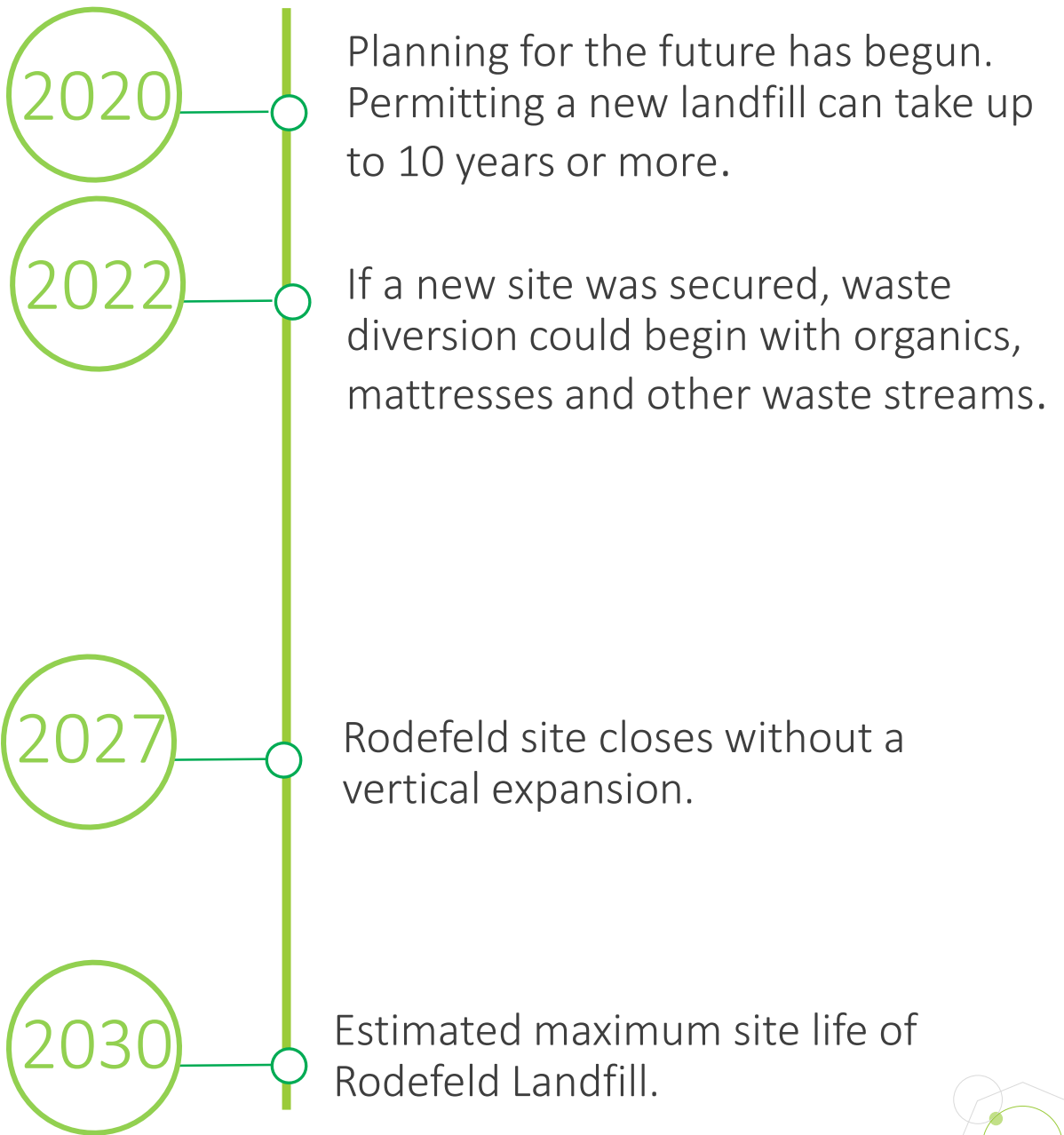
How much waste is that?

Dane County Landfill accepts over 290,000 tons of waste each year.

Estimate that approximately 50% comes from the City of Madison.

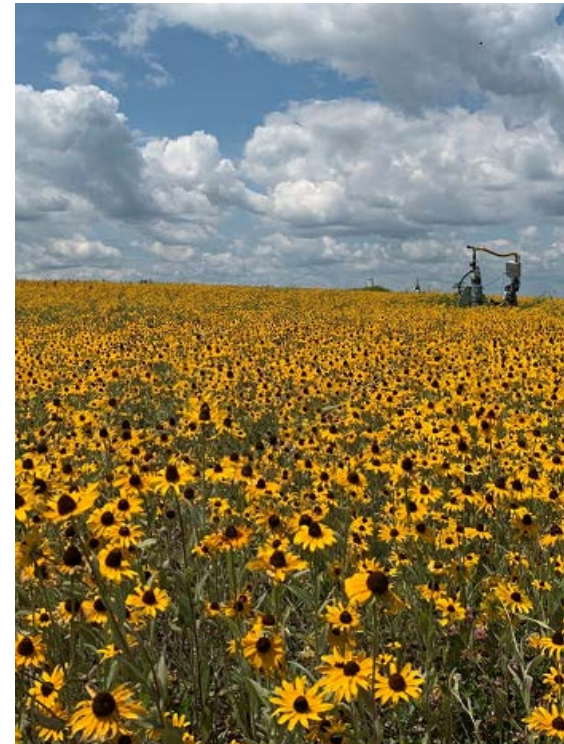


Dane County Landfill's Timeline



We are doing really great things already

- EPA Grant for Organics Feasibility
- Robust City Recycling Program
- Organics Collection and Drop Off
- C&D Recycling
- Clean Sweep
- Shingles, Tires, Metal, Bikes
- Landfill Gas to Renewable Natural Gas
- Native Prairie and Wetland Restoration



A Sustainability Campus



The opportunities

- Onsite Recycling and Reuse
 - Mattress recycling
 - Retail space for donation drop off centers
 - Maker's space
- Organics and alternative waste management options
- Renewable energy
 - RNG, Solar
- Education and recreation
 - Multi-use Trails: Hiking, Skiing, Biking
 - Mountain Biking, disk golf



And also here in Wisconsin



Expansive drop off area at their landfill

Outagamie County
Resource Recovery Park



Habitat Restore and
business park at
entrance to the landfill

Lacrosse County
Solid Waste Department

Future Site Requirements

- Transportation
 - Access to major highways
 - Close to City of Madison to minimize hauling costs
- Close to existing landfill site to utilize existing infrastructure
 - C&D Recycling & Clean Sweep can continue at current site
 - RNG Pipeline Access
- Large enough to secure waste management needs for decades
 - 250-350 acres
- Consideration for WDNR setbacks

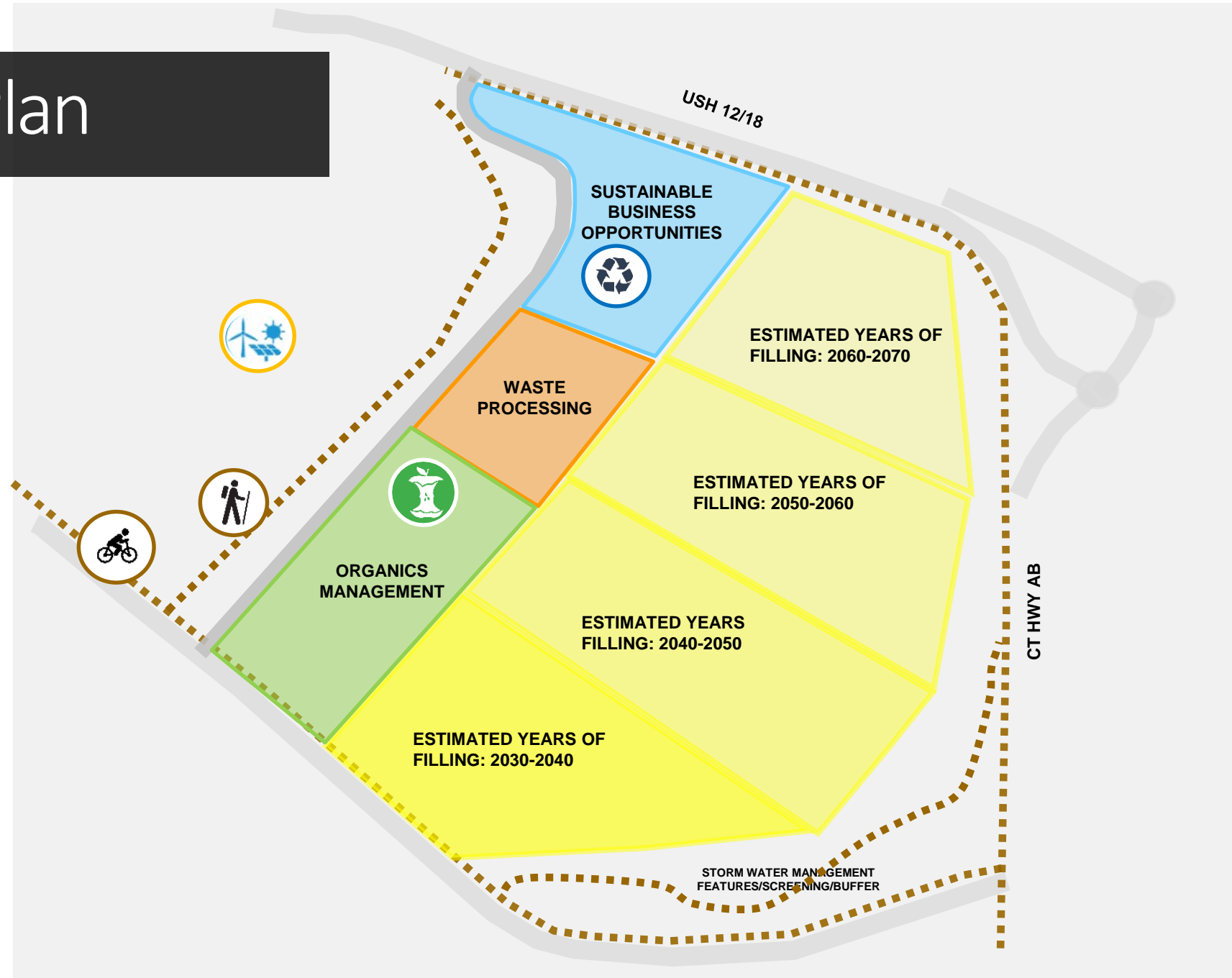


One Site with Potential for Future City-County Collaboration

Yahara Hills

Conceptual Site Plan

- 25+ acres for organics management
- 25+ acres for businesses and onsite recycling infrastructure
- 180+ acres for 50 years+ of landfill disposal
- 300+ acres remaining for recreation, renewable energy, or other activities



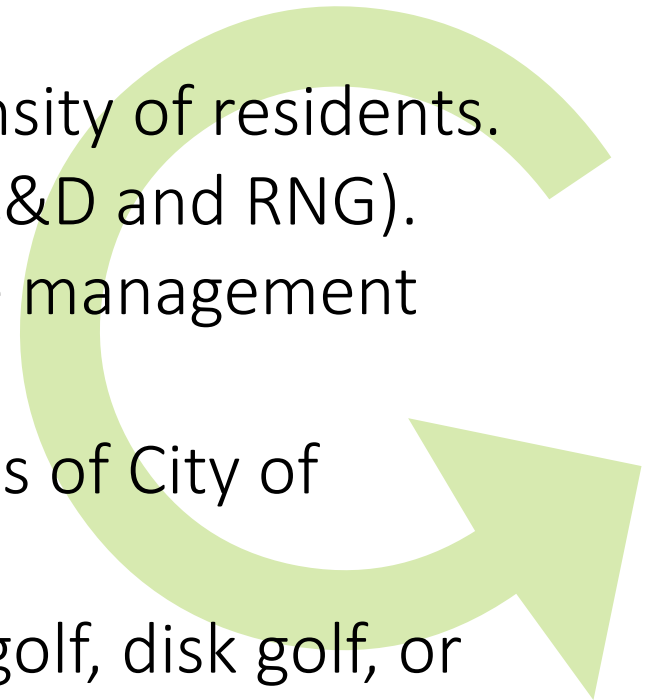
Equity

- City and County continue to manage our waste in a socially responsible way that does not pass the burden.
- Opportunities for training and job placement through existing apprenticeship style programs.
- Lessen impact by siting a new landfill near the existing Rodefild Landfill.
- Opportunity for collaboration with Ho-Chunk Nation on Natural Resources Heritage Center and other inclusive educational initiatives.
- Chance for City, County and State to collaborate on alternative transportation and access to the area.



Sustainability

- Continue to close the loop minimizing waste & helping to fight climate change.
- Wetland and natural habitat restoration priority for any future development.
- Recycling/drop off located near the highest density of residents.
- Existing Landfill infrastructure can be utilized (C&D and RNG).
- Viable location for research of innovative waste management and renewable energy technologies.
- Supplements current renewable energy projects of City of Madison, Ho-Chunk Nation, and Dane County.
- Multi-use recreational areas for hiking, biking, golf, disk golf, or other alternatives.



Economics

- Lump sum payment to City for property
- Job opportunities and economic development
- Large area will secure landfill airspace for several decades and provide continued stability for waste disposal needs and tip fees.
- Cost savings and efficiencies realized by locating a new landfill near the existing landfill.
- Transportation costs for the City's waste and recycling needs will remain stable.
- Waste tonnages and collaboration with City make this project viable.

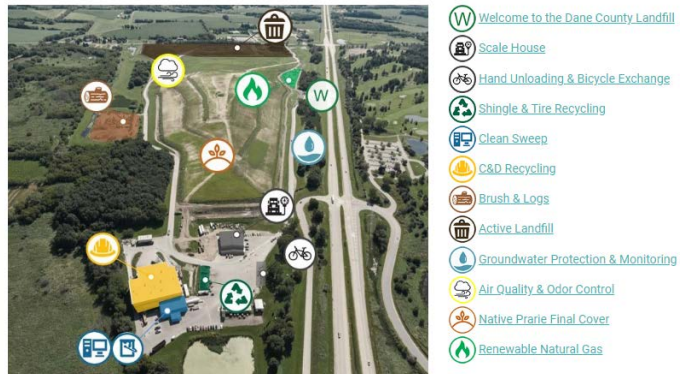


See more about the City of Madison's recycling history at

www.cityofmadison.com/recycling

Check out the landfill's virtual tour:

<https://landfill.countyofdane.com/about/Virtual-Tour>



Just have 3 minutes? Check out this landfill overview video:



Want to learn more?