



Stoughton Public Works

SUSTAINABILITY IN ACTION

BRETT HEBERT – DIRECTOR OF PUBLIC WORKS

Public Works Facility



▶ Solar Production

2019 - 104.69 MWh
2020 - 117.20 MWh
2021 - 107.87 MWh
2022 - 110.30 MWh

▶ Energy Efficient Lighting

- All LED lighting
- Occupancy Sensors
- Focus on Energy Grant

▶ High Efficiency HVAC Systems

- 95% Efficient gas boilers
- VFD Controls on boiler water pumps
- De-stratification Fans
- Intelligent Programmable HVAC Controls



Compost Facility

The process of Turning Leaves into Usable Compost



**1. Leaves are collected
Curbside from over
4,000 City residences**



**2. Leaves are taken
to the yard waste
site and windrowed**



**3. Windrows are turned
periodically to speed up
the composting process**



**4. Compost material is run
Through a trammel to
Remove trash and other
Inorganic material**



**5. The end product is compost
that is rich in nutrients**



**6. Compost is free for
City residents at the
yard waste site when
it is open**



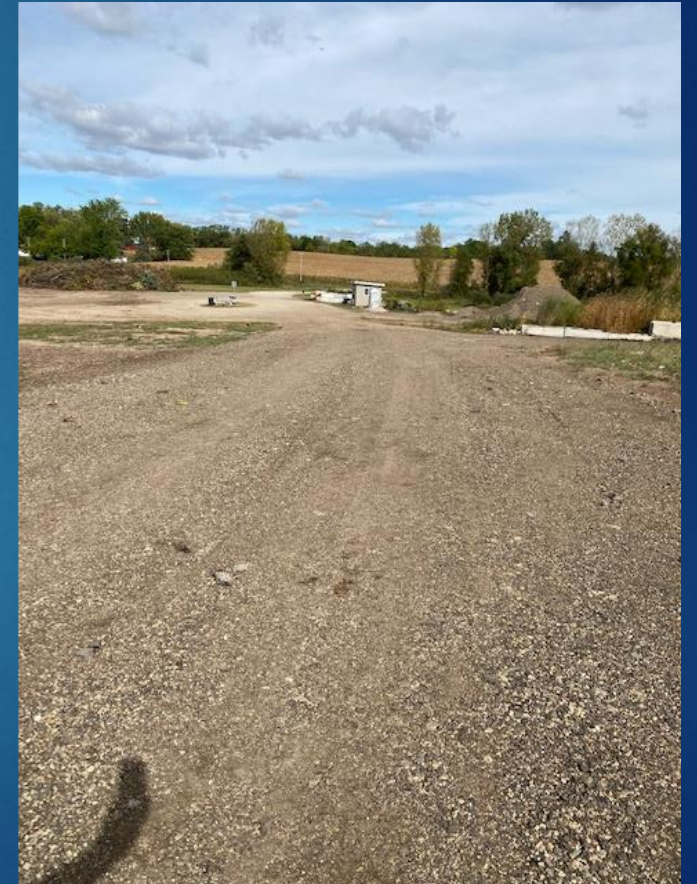
Free for the Taking:

- Finished Compost Material
- Mulch
- Logs

*These items are subject to
availability*

Pavement Recycling

► Pulverized Asphalt Re-use



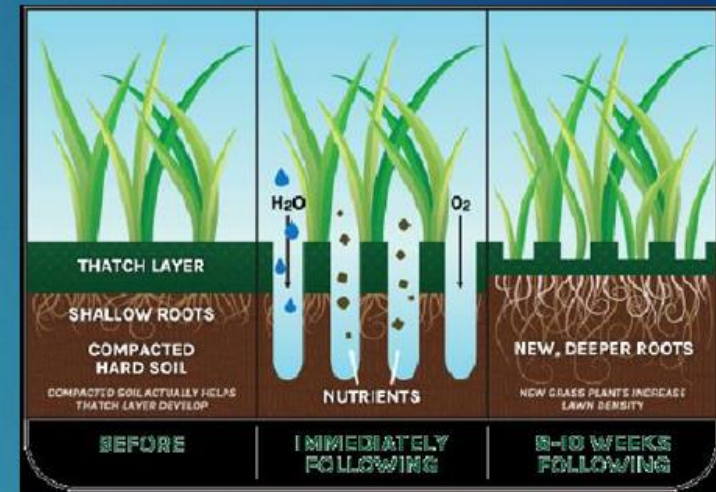
Stoughton Prairies Task Force



Turf - Integrated Pest Management (IPM)

Tools in our Toolbox

- Data Collection and Analysis
- Aeration
- Over Seeding
- Soil Sampling
- Soil Additives to adjust PH
- Spot Treatments of Pesticides
- Mowing Practices
 - 3" mowing height
 - Mow in different directions



Downtown LED Lighting Project



	kwh	Cost
2021	22,289	\$ 2,880.24
Avg 2017-2019	62,640	\$ 6,914.83
Annual Savings	40,351	\$ 4,034.59
Project Cost and ROR		
LED Lights and Intallation		\$ 11,016.20
Rate of Return (years)		2.7



The reduction in energy is equivalent to the CO2 Emissions from:

- 5.2 homes' electrical use for one year
- 31,595 pounds of coal burned
- 66.2 barrels of oil
- 3,477,206 smartphones charged

What happens to our recyclables?

All of our recycling in Stoughton goes to a Materials Recycling Facility (MRF) in Whitwater.

- Heavily regulated by the DNR to ensure only trash goes to the landfill.
- 1 Ton of recycling is 10-12% garbage
- Recyclables are sorted at the MRF in Whitwater and distributed to various facilities for further processing:
 - **Glass** sent to Strategic Material in Delavan
 - Bottles (Brown, Green and Clear)
 - Stoughton-Whitwater-Delavan-Burlington-Miller Brewing
 - **Plastics**
 - Turned into carpet
 - Plastic Lumber (Decking)
 - Etc
 - **Tin**
 - Gary Indiana gets turned into new cans
 - **Paper**
 - 100 of Paper and Cardboard stays in WI
 - New cardboard boxes



Recycling: The Paper Trail

Item Shipped from Amazon
to your house at **8:00 am**



Box get set out with your
recycling container at **8:30 am**

Johns recycling truck picks
up your recycling at **9:30 am**



- Recycling truck leaves Stoughton with a full load at **10:00 am** for the MRF in Whitewater and arrives at 10:35 where it gets dumped and sorted.



- Paper is baled and picked up by a semi at **noon** and taken to Beloit, WI for further processing.



- The paper goes into a vat to create a pulp. The pulp is then filtered, de-inked and dried creating new usable cardboard material by **6:00 pm**



- A semi picks up a load of new paper and delivers it to a factory in Beloit which makes cardboard boxes by **8 pm**.



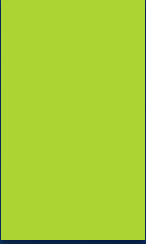
- By **10 pm** the new recycled boxes get delivered to the Amazon Distribution Center in Beloit.



- An item that someone else ordered off Amazon gets shipped out that night or the next day using the cardboard that you recycled that morning.



Tree Cycling Program



Tree Planting

Emerald Ash Borer Program

	2017	2018	2019	2020	Totals
Ash Trees Removed	393	258	11	249	911
Trees Treated	110	100	90	87	NA
Trees Planted	225	229	134	196	784
*Trees Planted -Other	279	131	125	104	639
Total Trees Planted	504	360	259	300	1423

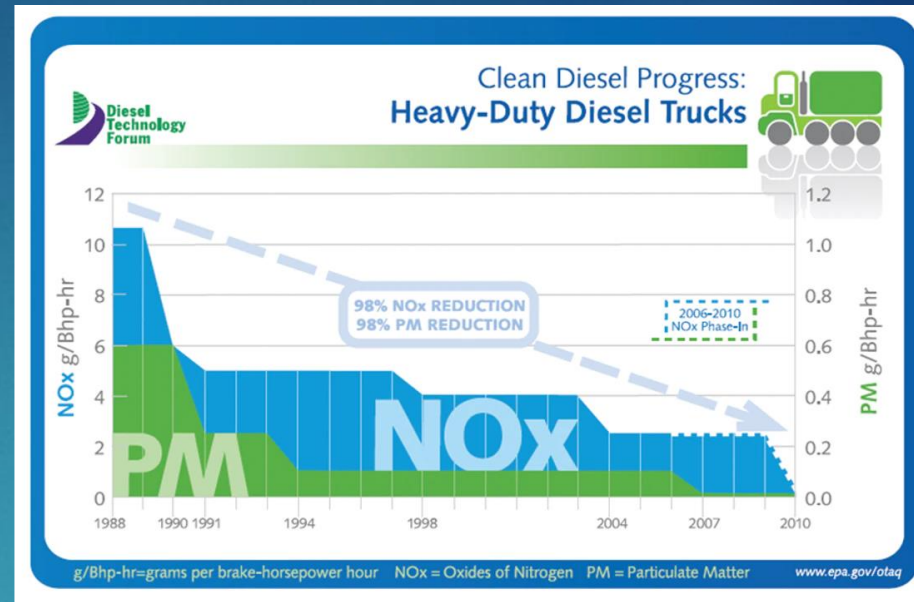
*Includes infill and Developer Plantings

We plant roughly 160 trees each year between our City infill program and developer tree planting requirements.



Fleet

- ▶ Diesel Emissions Reduction
 - ▶ Diesel Exhaust Fluid (DEF)



- ▶ Implementing and Monitoring hybrid and full electric technology



Salt Reduction Tools During Snow and Ice Events

- ▶ Operator Training
 - ▶ Annual Staff Training
 - ▶ Operators are cognoscente that all chlorides eventually make there way to our waterways.
 - ▶ Trained on the right amount of salt to use depending on conditions
- ▶ Truck Calibration
 - ▶ Each truck is equipped with electronic monitoring equipment that can tell us exactly how much salt is being dispensed.
 - ▶ Less is more (We dispense between 250-350 lbs of salt per lane mile. Before calibration it was more like 600-800 lbs per lane mile.
- ▶ Liquid Brine Mixed with Salt
 - ▶ Reduces Salt Scatter
 - ▶ Activates Salt Quicker



Exploring Solar Opportunities on Public Lands

- ▶ Stoughton Landfill Superfund Site



- ▶ Storm Water Retention Basins



Questions?