ENVIRONMENTAL SUSTAINABILITY COMMITTEE MEETING Monday, September 19 – 5:15 PM LF Municipal Services, 800 N Field Dr.

AGENDA

- I. CALL TO ORDER AND ROLL CALL
- II. INFORMATIONAL ITEMS (:05 :15 per item)
 - a. FOOD CYCLER AT-HOME COMPOSTING UNIT PRESENTATION Alex Hayman, VP Business Development
- III. ACTION ITEMS (:10 :15 per item)
 - a. APPROVAL OF JULY 12, 2022 MEETING MINUTES
- IV. DISCUSSION ITEMS (:15 :20 per item)
 - a. UPDATE ON COMMUNITY GARDEN PROJECT Reagan Walsh, Management Analyst
- V. ADDITIONAL ITEMS (Packet Material Only)
 - a. STATUS REPORT ON SUSTAINABILITY INITIATIVES & PRIORITIES
- VI. PUBLIC COMMENT
- VII. NEXT MEETING DATE(S) October 19, 2022, 5:30PM
- VIII. ADJOURNMENT

FOODCYCLE SCIENCE FoodCycler Municipal Solutions The Future of Food Waste



Who is Food Cycle Science?

- Offer food waste diversion solutions using onsite technology called the FoodCycler
- C Semi-finalists in Impact Canada's Food Waste Reduction Challenge
- Products available in North America through FoodCycler Municipal / Vitamix and internationally through network of distributors & OEM partners
- Selected as one of the 2021 Deloitte Fast 50 CleanTech award winners and #81 on Globe & Mail's Canada's Top Growing Companies for 2021
- Collect and analyze data to help communities make **evidence-based decisions**



TRUSTED BY 40+ MUNICIPALITIES



And many others...



The Problem With Food Waste

- $\sim 63\%$ of food waste is avoidable
- \circlearrowright Household waste is composed of 25--50% organic waste
- C Food waste weight is up to **90%** liquid mass (which is heavy)
- The average household spends ~\$1,766 on food that is wasted each year
- Methane (CH₄) emissions from food waste are responsible for ~11% of global methane emissions

 $^{\rm C}$ CH_4 has a 100-year global warming potential 28-34 times that of CO_2





Municipal Impact

WASTE & LANDFILL COSTS

- ~25-50% of household waste is organics
- Landfills are quickly filling up, creating substantial costs for communities
- Hauling, transfer, and disposal services are a major cost factor to municipalities

ENVIRONMENT

- Landfilled organic waste produces methane, which is 25 times more harmful than CO₂
- 1 ton of food waste is equivalent to ~1 car on the road for one year



COMMUNITY

Food in the garbage:

- More frequent collection or trips to the disposal site
- Unpleasant odours
- Animals, pests & other visitors



Removing food waste from garbage:

- Volume is reduced by up to **50%**
- Less frequent collection, fewer trips to disposal site, save on bag tags
- Keeps odours out, makes garbage much less *interesting*" for animals



"Haven't We Solved This Already?"





GREEN BINS

- GHG emissions from curbside collection
- C Contamination is an ongoing challenge
- Expensive and relatively lowparticipation rates
- Safety concerns from additional trucks on the road
- Requires ongoing maintenance of processing infrastructure

BACKYARD COMPOST

- Cost-effective but can also be laborintensive
- May attract pests/animals or create unpleasant odors
- Most users do not compost in winter or inclement weather
- Adoption rates are relatively low and stagnant

LANDFILL

- Easiest solution and often perceived as the most cost-effective in the short term
- Waste is typically out of sight and out of mind for consumers
- High levels of GHG emissions, particularly methane
- Long-term environmental hazard requires monitoring / maintenance



THE SOLUTION? THE FOODCYCLER



Our Solution In Three Simple Steps

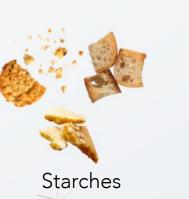
1.

FCODCYCLER

- Add waste to bucket
 - **2**. Add bucket to unit
 - **3.** Press Start. That's it!

Vegetable & Fruit Scraps

Dairy Products





Fish & Poultry Bones



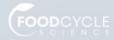
Egg shells

Tea bags & Coffee grinds



Nut shells, nuts & seeds

Meat, poultry & fish



The resulting by-product can be used in many applications, including gardening, farming, and more.

Reduces Food Waste Volume By 90%

1 kg (2.2lbs) of wet, smelly food waste

100 g (1/4lb) of dry, sterile & odorless soil amendment



4-8 HOURS + 0.8 kWh ~8 cents / cycle

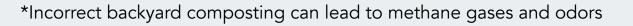


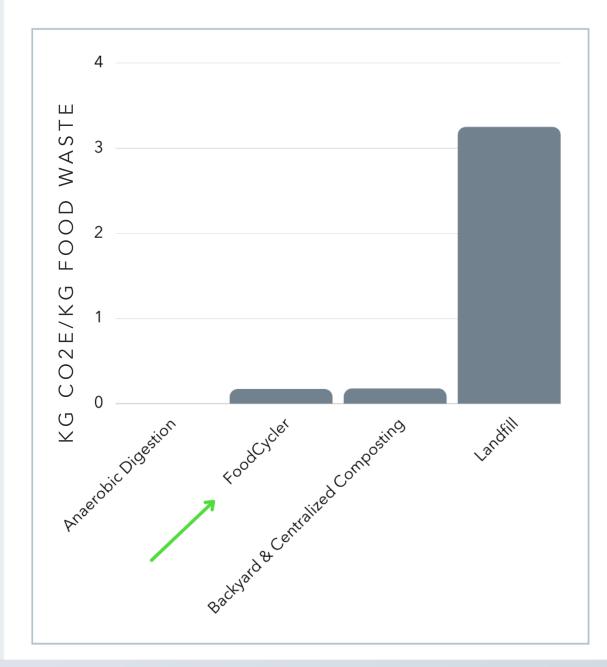


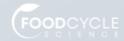
Lifecycle Analysis

FOODCYCLER IS COMPARABLE TO

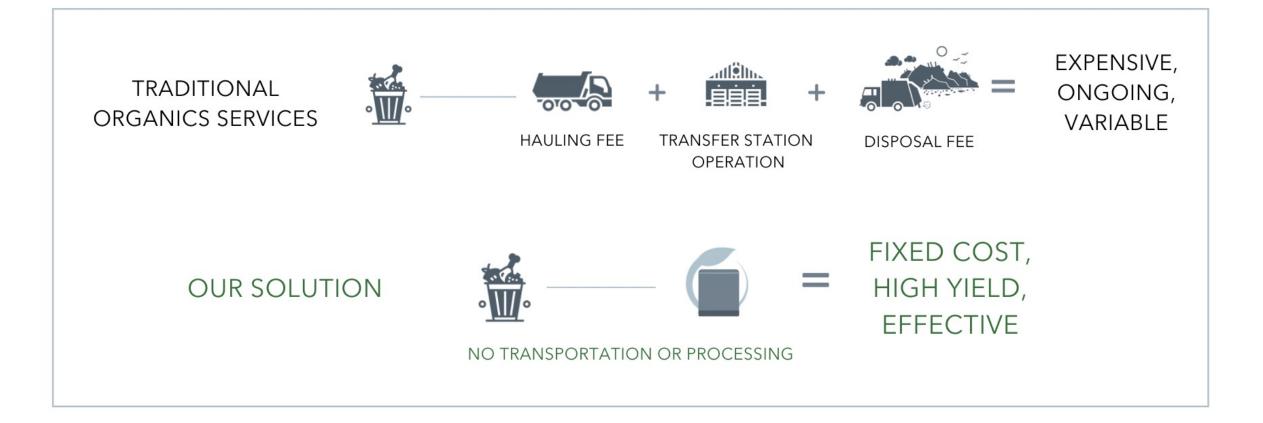
- Backyard composting (if done correctly*)
- Curbside collection with central composting (assuming zero transportation emissions)
- FoodCycler offers >95% reduction in CO₂e vs.
 sending food waste to landfill even after accounting for production-related emissions







Economic Impact





Social Impact

THE TIME IS NOW

- Constituents want solutions to reduce their environmental impact
- Waste is perceived as a government problem and **regulations** are coming



"It alleviates a lot of the concerns that people might have with backyard composting. The time commitment, the location, pests and animals and everything like that." - Kylie Hissa, Strategic Initiatives

Officer in Kenora

"I've received a number of positive messages from residents saying, "sign me up, where can I get mine." I'm 100 per cent in favor of it." - Deputy Mayor Lyle Warden, South Glengarry

"We were extremely happy with this program and loved that it made us aware of our daily waste." - Program participant in South Glengarry "It's a great tool to reduce household waste. Appreciate that the municipality is being innovative and piloting different solutions." - Program participant in Hornepayne



Completed Pilot Programs



Over 20 municipalities have completed their pilot programs with overwhelmingly positive results - the rest are in progress.

Net New Diversion

Each participating household is estimated to divert between 661.4 lbs and 881.9 lbs of food waste annually.



Would you recommend the FoodCycler?

Unsure 5%

Yes

>94%

Average overall user experience

4.6

No < 1%

Our Food Waste Diversion Pilot Programs Data-focused approach

PROGRAM TIMELINE			
START	12 WEEKS	END	NEXT STEPS
Residents obtain their FoodCycler from the Municipal Office (or other designated location).	Participants use their FoodCycler for a period of 12 weeks . Weekly cycles are tracked to estimate total diversion achieved throughout the program.	Participants fill out exit survey , providing a review of the program and any other feedback. Survey results are analyzed to evaluate program success and a report is prepared for the municipality.	Program expansion and implementation. Identify grants and government funding available.



Product Options

FC-30

- 2L Capacity Ideal for 1-3 person households

- Maestro (coming late 2022) 5L Capacity Ideal for 3+ person households
- Less noise, power consumption, odor Ability to handle harder food wastes such as bones/pits Modular design for easy
- repair

		CODORGER		
SPECS	FC-30	MAESTRO		
BUCKET CAPACITY	2L	5L		
UNIT VOLUME	30.5L	28.9L		
DIMENSIONS (IN ")	(H) 14 X (W) 11 X (D) 10.3	(H) 13.8 X (W) 13.8 X (D) 10.3		
PROGRESS INDICATORS	3-PHASE LED	PROGRESS TRACKING LEDS		
PROCESSING TIME	4-8 HOURS (OVERNIGHT)	6-8 HOURS		
POWER CONSUMPTION	<0.40KWH/L	< 0.35 KWH/LITER		
FILTRATION	2 REUSABLE FILTERS	1 REUSABLE FILTER		
VENT LOCATION	ВАСК	ТОР		
TRANSMISSION TORQUE	12 FT LBS (MAX)	24 FT. LBS MAX		



Pilot Program Funding – FC-30

SVitamix FoodCycler Retail Cost: \$400			
FoodCycler Pilot Cost: \$250*			
Standard Pricing Plan Cost-Sharing Plan			
Municipal investment: \$250* /unit	Municipal investment: \$125* /unit		
Resident investment: \$0	Resident investment: \$125 /unit		

*2022 price incentive of 10% reduces municipal investment by \$25/unit





Pilot Program Funding – Maestro

Svitamix Launching in 2023				
FoodCycler Pilot Cost: \$400*				
Standard Pricing Plan Cost-Sharing Plan				
Municipal investment: \$400 /unit	Municipal investment: \$165* /unit			
Resident investment: \$0	Resident investment: \$235 /unit			



*2022 price incentive of 10% reduces municipal investment by \$40/unit



Estimated ROI Analysis – City of Lake Forest, IL

Household refuse cost per month: \$19.96 (2021) Tipping fee per tonne: \$43.87 (2021) Estimated percentage food waste: 25% Annual per household cost for food waste: \$59.88

FC-30

Municipal contribution: \$100/unit Food waste capture rate: 75% Annual saving: \$44.91 **Payback period: 2.2 years**

5-year NET saving: \$124 (estimated minimum lifespan)

300 units: **150** metric tonnes of CO2e avoided per year

Maestro

Municipal contribution: \$125/unit Food waste capture rate: 95% Annual saving: \$56.89 **Payback period: 2.1 years**

7-year NET saving: \$273 (estimated minimum lifespan)

300 units: **190** metric tonnes of CO2e avoided per year





Thank You!

Questions?

Alex Hayman VP Business Development Email: alexh@foodcycler.com Phone: 613-979-4167



DRAFT ENVIRONMENTAL SUSTAINABILITY COMMITTEE MEETING Tuesday, July 12, 2022 – 4:00 P.M. IN-PERSON MEETING			
I.	ROLL CALL/CALL TO ORDER		
	irman Melanie Rummel called the meeting to order at 4:00 P.M. Aldermen en Weber was present. Alderman Jim Preschlack was absent.		
	f in attendance included Mike Strong, Assistant City Manager and Reagan sh, Management Analyst. Two public attendees were also present.		
A m	oment of silence was held for the victims of Highland Park.		
II.	INFORMATIONAL ITEMS		
	a. UPDATE ON THE RETHINK RECYCLE CAMPAIGN		
	Assistant City Manager Mike Strong provided an update on the City's Rethink Recycle campaign. The review provided an overview of the program in 2022, including interns hired, partners and funding, and events and outreach held throughout the year. A detailed overview of the data collected from the curbside audits was discussed. Mr. Strong and the Committee members agreed that the program has seen to have great success on its core mission.		
	Further outlining the success of the program, Mr. Strong announced the City of Lake Forest has been recognized by the International City Managers Association (ICMA) for its Rethink Recycle Campaign. The Committee was informed that an award will be presented to the City at the 2022 ICMA Annual Conference in Columbus, OH, this September, and formally presented to City Council in December of 2022.		
	Chairman Rummel asked if there were any additional comments or questions from the Committee. The Committee discussed potential new opportunities for tracking and merging address data. Chairman Webber asked specific contamination and recycling questions answered through a Rethink Recycle Campaign intern present. Chairman Rummel also recommended that the City's Recycling Center be added as a drop-off location that are listed on the "Oops" cards presented to citizens with		

- Chairman Rummel asked if there were any additional questions or comments from members of the public.
- Seeing none, she moved to the next agenda item.

contaminated carts.

Environmental Sustainability Committee Minutes Wednesday, June 15, 2022

0 III. ACTION ITEMS

a. APPROVAL OF APRIL 20, 2022, MEETING MINUTES

Chairman Rummel moved to approve the June 15, 2022, Environmental Sustainability Committee meeting minutes. Alderman Weber seconded the motion. The motion carried unanimously by voice vote.

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b. DIRECTION OF NEW SOLAR GENERATION FACILITIES PROJECT

- 60Assistant City Manager Mike Strong reviewed a presentation regarding61the new Solar Generation (PV) Facilities project. Mr. Strong outlined the in-62depth research and action steps that have been taken, including the63project scope narrowing to the Public Safety Building, the collection of64updated pricing proposal rates from vendors, and a list of the finalized65franchise account options that have been reviewed with ComEd.
- After reviewing the most recent pricing proposals and financial
 comparisons between vendors, Mr. Strong presented a review of the four
 franchise account options available to the City. Insights were centered
 around the different ways each listed option financially impacts both the
 City and its residents.
- 73A lengthy discussion was held thereafter reviewing each of the possible74viable project options. Additionally, the Committee suggested potential75future solar options, including the possibility of adding solar generating76panels on streetlights on Deerpath, as well as potential opportunities with77the lighting for Sports fields, future parking garages, and major assets in78the City including educational institutions and the hospital.
- 80After consideration, Chairman Rummel motioned to not move forward81with the Solar Energy Project, but for the City to continue to look at new82opportunities for solar generation and work with the qualified consultants83to find potentially new viable options outside of the options presented.84Alderman Weber seconded the motion. The motion carried unanimously85by voice vote.
 - Chairman Rummel asked if there were any additional questions or comments from members of the public.
 - Seeing none, she moved to the next agenda item.

IV. DISCUSSION ITEMS

a. DISCUSSION ON FUTURE SUSTAINABILITY INITITAVIES & PRIORITIES – Mike Strong, Assistant City Manager

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- 97 Assistant City Manager, Mike Strong, reviewed an update on the current
 98 projects that are underway including an update on the community
 99 gardening and increased accessibility to composting program projects.
- 100101Each Committee member provided their thoughts on the initiatives102presented. In particular, the Committee had discussed the dwindling103supply of space available for community gardening at the current104facilities and the potential need for a survey to be distributed throughout105the community to garner more insight on where and how much demand106is present for new space.
- 107 108 Composting discussions involved a potential pilot project for citizens to be 109 able to have an in-home composting unit that could increase the amount 110 of waste diverted from landfills. The cost share program would allow 111 families to apply for a composting unit, where they would then track their 112 composting results, and the city would ultimately analyze the return on 113 investment with diverted tons of garbage. The Committee reached 114 consensus to move forward with the needed actions to start the pilot 115 project.
- 116
 117 Chairman Rummel asked if there were any public comments on any non118 agenda items.
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 - Seeing none, Chairman Rummel moved to the next agenda item.

V. PUBLIC COMMENT

Chairman Rummel asked if there were any public comments on any nonagenda items.

Seeing none, Chairman Rummel moved to the next agenda item.

129 130 NEXT MEETING DATE(S)

Assistant City Manager, Mike Strong stated that the next meeting would be scheduled for the week of August 17, 2022.

135 **ADJOURNMENT** 136

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Before adjournment, Chairman Rummel expressed the deep gratitude the
Environmental Sustainability Committee and the City of Lake Forest has for
Assistant City Manager Mike Strong after his announced departure from the City
next month.

Alderman Weber moved to adjourn the meeting of the Environmental
Sustainability Committee at 5:10 P.M. seconded by Weber. The motion carried
unanimously by voice vote.

Environmental Sustainability Committee Minutes Wednesday, June 15, 2022

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148	Respectfully Submitted,
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150	Reagan Walsh
151	Management Analyst
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Community Garden Program Update

City of Lake Forest 8/30/22





Overview

- Opportunity to develop new Community Garden
 - Health & Wellness Theme
 - Ecosystem Vitality & Ravine Management Focus Area
- Provides new community opportunity and expands access to local health foods
- Elawa Farms Update
 - Currently limited space available at Elawa's garden
 - New location would improve access for residents & provide new space to grow food & expand programming

Preliminary Garden Details

- Around Acre in garden space
 - Roughly 1/2 of space dedicated to Elawa
 - Incremental growth
- Lease Plot Payment Structure
 - Annual programming
 - Best model based on outside research
- Fencing + Raised Beds
 - Further protocols/guidelines to be put in place
 - New parking lot to be constructed
- Funding Opportunities
 - Capital & Operational Funding
 - Special Rec Fund (ADA) / ESC (ongoing)
 - Civic Beautification Committee



Suggested Location

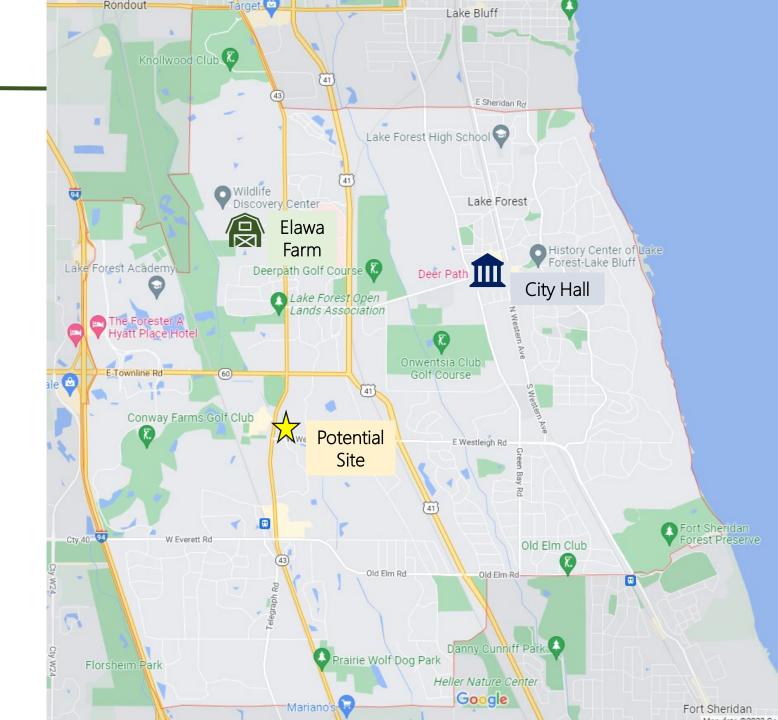
Highway 43 Pump Station

- Easy Access & Highly Visible
- Across from W HS Campus
- Zoned R5

Lake Forest Open Lands Trail

 West Skokie Nature Preserve



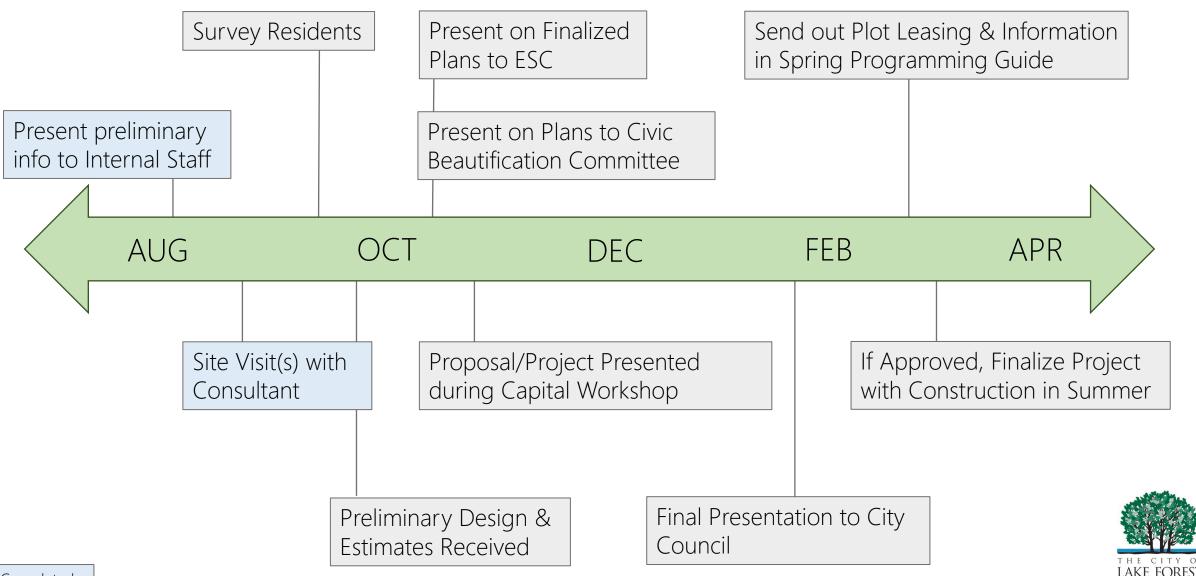


Location Cont.





Timeline



CHARTERED 1861

Environmental Sustainability Committee Current/Future Sustainability Initiatives & Priorities Updated September 2022

	2022			2023		
Project/Initiative		Q2	Q3	Q4	Q1	Q2
Greenhouse Gas Inventory						
Solar Facilities on City Facilities						
Community Gardening Program						
Composting Program						
Vehicle Idling Campaign						
"Green Infrastructure" Incentives						
Single-Use Plastics Discussion						



Planning/Research Presentation/Recommendation Follow Up Actions

Current Projects/Status:

1. Greenhouse Gas Inventory

- <u>Status</u>: ESC Meeting in June reviewed Initial GHG report and discussed emission reduction targets (Based on ICLEI recommendations)
- o <u>On Deck</u>:
 - Develop finalized list of future actions for ESC based on ICLEI recommendations (Oct-Dec 2022)
- <u>Target Timeline:</u>
 - Target November/December ESC meeting for follow up actions; with follow-up to City Council in early winter (No formal action needed – report will inform future priorities/opportunities)

Recommendations and Next Steps



- Short Term: Bolster community engagement around emissions results
 - Focused on high impact areas (e.g. fuel combustion, transportation, energy efficiency, etc.)
 - Leverage communication modalities, social media, newsletter, etc.
- **Medium Term**: Finalize forecast modeling to help inform Climate Action Planning work
- Long Term: Plan and implement a Climate Action Plan for community

2. Investigation of Solar Facilities on City Facilities

- <u>Status</u>: Motioned in July ESC Meeting to NOT move forward with solar facility projects presented
- o <u>On Deck</u>:
 - Investigate new opportunities for solar generation and work with the qualified consultants to find potentially new viable options outside of the options presented
 - In particular exploring rooftop and ground mount solar options for facilities that are not under a rider-FCA arrangement.
- <u>Target Timeline</u>:
 - Follow back with consultants, review past information, and come forward with new plan and timeline for solar facilities in first quarter of 2023.

3. Develop Community Gardening Program

- <u>Status</u>: Finalize internal work committee, meet with design consultants, and present preliminary information to ESC & necessary Department heads
- o <u>On Deck</u>:
 - Send out citizen survey to gauge interest
 - Receive design and estimates, discuss plans in greater detail with Elawa, work on partnerships/presentations (Civic Beauty Committee)
 - Capital Requests
- <u>Target Timeline</u>:
 - Initial meeting and discussion in early September, with recommendation to ESC in late fall

4. Provide greater access to composting programs or services for residents and businesses

- <u>Status:</u> Presented program to ESC, met with Food Cycler Representatives to determine financing and program structure
- o <u>On Deck:</u>
 - Send out citizen survey to gauge further interest in composting
 - Gather more information around ROI and finances, see if program is sustainable
- <u>Target Timeline</u>:
 - Provide recommendations to ESC in late fall on if program is sustainable/financially feasible
 - Solicitation to follow in fall for winter launch (composting offerings in winter)

Future Projects/Initiatives (As directed by Committee in April 2022)

5. Develop plan to discourage vehicle idling on City Properties

- <u>Proposed Scope</u>: Explore opportunities to reduce car idling on city properties
 - Soft approach, signage in key areas
 - Collaboration with community partners
- <u>Target Timeline</u>: Discussions have commenced with schools and Lake Forest Open Lands; campaign planning underway. Anticipated for discussion late summer
- 6. Promote the use of permeable pavers, rain gardens or other "green infrastructure" implements throughout the community
 - <u>Proposed Scope</u>: Marketing/communications on City projects utilizing infrastructure
 - Develop "green infrastructure" permit or reduced permit fees
 - Explore cost-share opportunities or grant program for residents to offset infrastructure investment through (e.g. Overhead sewer cost-share program)
 - <u>Target Timeline</u>: Research opportunities between September-December
 - Potential recommendations to ESC in Jan-Feb

7. Develop strategies to further reduce the City's use and collection of single-use plastics

- <u>Proposed Scope</u>: Explore opportunities to reduce the City's use of single-use plastics (e.g. City facilities, meetings/events, etc.)
 - Can we eliminate use of single-use plastics at our community events?
 - Can we promote/incentivize special event permit holds to not sell bottled water? What alternatives might exist?
 - May need to discuss with the City Council further how far do they want to go with banning/incentivizing these products
- <u>Target Timeline</u>: First quarter of 2023 for research/further policy decisions

Additional initiatives that have been discussed:

- <u>Coal tar sealants</u> Awaiting monitoring report from NBWW; anticipated in late fall 2022
- <u>Conversion of Mowed Areas to Natural Areas</u> No update/report
- <u>Landscape Equipment recommendations (Leaf Blowers)</u> No update/report