



City of Ypsilanti
SUSTAINABILITY COMMISSION MEETING

One South Huron Street
Ypsilanti, Michigan 48197

MONDAY, September 10, 2018
7:00 P.M.

I. CALL TO ORDER

II. ROLL CALL

Keith Michalowski	P	A	Brett Zeuner	P	A
Emily Drennen	P	A	Julia Bayha	P	A
Nancy Heine	P	A	Bryan Foley	P	A
Natalie Sampson	P	A	Thomas McKee	P	A
Ashanti Proffit	P	A			

III. AGENDA APPROVAL

IV. PRESENTATIONS

- A. City of Ypsilanti Draft Energy Plan presentation with (Bonnie Wessler/Brittany Turner of Ecoworks) [1](#)

V. AUDIENCE PARTICIPATION

VI. CONSENT AGENDA

- A. Approval of August 13th, 2018 minutes [1](#) [2](#)

VII. RESOLUTIONS/MOTIONS/DISCUSSIONS

- A. Introduction of our new youth member, Ashanti Proffit

VIII. LIAISON REPORTS

- A. Sustainability Plan subcommittee (Drennen/Zeuner)
B. MGC Challenge subcommittee (McKee/Sampson)
 1. Action Item #5 - Waste Reduction discussion (McKee) [1](#) [2](#)
 2. Reporting Metrics discussion (Michalowski) [1](#) [2](#)
C. Outreach subcommittee (Bayha/Foley)
D. Housing Affordability & Access Committee of the Planning Commission (Foley)

IX. COMMUNICATIONS

- A. Recycling program status update (McClary/Bashert)
 1. Resolution 2018-08-001 - Public Recycling Bins update
B. Peninsular Dam status update (McClary/Bashert)
C. Sustainability Plan advisor proposal update (McClary)

X. AUDIENCE PARTICIPATION

XI. PROPOSED BUSINESS

XII. NEXT MEETING DATE

Monday, October 8th, 2018

XIII. ADJOURNMENT



THE CITY OF YPSILANTI

ENERGY PLAN 2018



CITY OF
YPSILANTI

Home of Eastern Michigan University

August 2018

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DRAFT

ACKNOWLEDGMENTS

This report was written through a collaborative effort between the City of Ypsilanti City Manager's Office, EcoWorks, and the Southeast Michigan Regional Energy Office (SEMREO). The project was made possible by a grant awarded to EcoWorks from the C.S. Mott Foundation.

THE CITY OF YPSILANTI

Darwin McClary - City Manager

Bonnie Wessler – City Planner

CITY COUNCIL

Mayor Amanda M. Edmonds

Mayor Pro Tem Nicole Brown

Council Member – Ward 1, Lois Richardson

Council Member – Ward 2, Beth Bashert

Council Member – Ward 2, Daniel Vogt

Council Member – Ward 3, Peter Murdock

Council Member – Ward 3, Brian Robb

SUSTAINABILITY COMMISSION

Chair - Keith Michalowski

Commission Member - Julia Bayha

Commission Member - Emily Drenen

Commission Member - Nancy Heine

Commission Member - Natalie Sampson

Commission Member - Thomas McKee

Commission Member - Brett Zuener

ECOWORKS

Brittany Turner - Energy Analyst and Lead Planner

Nithiya Saravanan – Energy Analyst

Henrik Mader - Energy Analyst

Allison Harris – Director of Strategic Community Initiatives, EcoWorks

Special Thanks

The authors would like to extend a special thanks to Bonnie Wessler for her leadership and commitment to the strategic energy planning process. Importantly, the author would also like to thank Rick Bunch for contributing initial revisions of this document.



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PURPOSE OF THE PLAN

This document lays the foundation for a robust energy plan employing six categories to help the City of Ypsilanti achieve its goals of saving energy and reducing costs. This plan is written in a complimentary way to be easily added into existing plans such as the city's overall Master Plan. An action plan is located on page 26 and outlines each category by goals, timeframe, and subsequent actions that represent a step-by-step approach to maximizing facility efficiency within the budgetary constraints of the city.

AN ENERGY VISION FOR YPSILANTI

Having established a sustainability commission, completed a number of energy efficiency projects including solar photovoltaic installations, and adopted a Climate Action Plan, the City of Ypsilanti has demonstrated a commitment to reducing emissions and energy consumption in municipal facilities. The following pages represent a pathway for accomplishing the city's vision of becoming a clean, efficient city powered by renewable energy.

Energy production, management, and consumption are inextricably linked to environmental and community health and climate change – impacts that ripple through local economic development and municipal financial situations in ways that are hard to value but are real and significant nonetheless. Therefore, for municipalities and local governments, prioritizing clean energy projects in concert with long-term energy planning efforts can simultaneously promote community sustainability while generating significant financial benefits.

An energy plan is an important tool for cutting costs, reducing risks, and optimizing returns on investment - in other words, improving the bottom line, inescapably a central concern of city leaders. This benefit alone justifies the exercise. The City of Ypsilanti is positioned to benefit to a far greater and fundamental extent from development of an overall energy strategy that grows the top line - economic growth and municipal revenue - by helping the city become its best self.

The vision and goals articulated in the master plan, climate action plan, and economic development and downtown plans, as well as the values widely held among residents, elected officials and city staff, all strongly resonate with an ambitious energy vision. For example, knowledge workers and the firms they start or work for are attracted to communities with complete streets, lively downtowns and intact neighborhoods - already strengths of Ypsilanti - but in addition interpret the presence of solar power, energy efficient buildings, electric vehicle infrastructure, modern LED street lighting and other clean-energy investments as powerful place-making commitments of a community that is on the cutting edge and confidently investing in its own future while supporting those who live, work, and play in Ypsilanti with a strong and healthy city.

SUMMARY OF ACCOMPLISHMENTS

- During the planning process for this document, the City Council passed a resolution in support of developing a Community Energy Strategic Plan for the City of Ypsilanti. The resolution language can be found in Appendix 1.
- Effective February 2017, the city created a Sustainability Commission under Ordinance No. 1280. The ordinance language can be found in Appendix 2.
- The city is actively working to create a sustainability plan being led by the Sustainability Commission.
- In 2016, the City of Ypsilanti joined SolSmart earning a Gold SolSmart designation. Various variables of the program included: Determining path to designation; reviewing the zoning code, developing a checklist to make the solar permitting process more transparent; and cross-training inspection and permitting staff on solar PV.
- On April 2nd, 2013, the City Council officially set its own goal of the City of Ypsilanti and its residents generate 5 MW of electricity from distributed solar, to reach 1,000 solar roofs by 2020. The resolution language can be found in Appendix 3.
- Through a collaborative effort with Solar Ypsi, the city has invested resources in installing solar PV arrays throughout the city.

The development of a municipal energy vision will tie these efforts, as well as many other existing and future initiatives, into a coherent, prioritized and cost-effective framework that is synergistic with the city's economic and social development, fiscal, sustainability and other goals.

SUMMARY OF RECOMMENDATIONS

The six sections of the Energy Plan present a wide range of recommended goals and actions to build on Ypsilanti's strengths and improve its weaknesses related to energy management and sustainability in the city.

Recommendations reflect how Ypsilanti city management and leadership envision Ypsilanti's energy future and relevant energy goals that the city wishes to achieve in order to advance that vision.

To this end, the opportunities for energy management are presented in six categories:

1. Project selection and implementation
2. Funding
3. Staffing
4. Policies and procedures
5. Data
6. Communications

A comprehensive set of action steps can be found in the Action Plan located at the end of this document.

Disclaimer:

This plan covers energy generation and uses in municipal facilities only and does not cover transportation planning or municipal fleet management. Also, while the plan does not directly address energy management for residents and businesses it is our hope that city officials, residents, and businesses will be encouraged by the success of municipal energy planning to adopt broader-reaching policies, practices, and projects.

1

PROJECT SELECTION & IMPLEMENTATION

The development of this energy plan revealed opportunities for updating how the city manages buildings and selects projects.

GOAL 1: IMPROVE MUNICIPAL BUILDING PERFORMANCE.

GOAL 2: IDENTIFY AND IMPLEMENT CLEAN ENERGY PROJECTS.

The EcoWorks/SEMREO approach to becoming a 100% renewable energy municipality begins with efficiency. Efficient buildings increase the benefits of renewable energy generation while creating comfortable, healthy work environments for municipal employees. The determination of which projects are tackled first is most effective as a data-driven decision guided by an understanding of which buildings are underperforming compared to other buildings of comparable size and use.

Second, a whole-building approach that examines how the various parts of the building work together is strongly recommended. Tackling only the “low-hanging fruit” for example, can lead to oversized HVAC systems, excess lighting, or lost opportunities to couple projects together for more attractive loan terms.

Finally, working across departments and gathering input from facilities maintenance staff and department heads can identify non-energy related building issues (mold, pests, etc.) that can be addressed simultaneously with other upgrades.

Not all priority areas for project selection will be defined by a data-driven approach – political or community factors need to be accommodated. Reviewing ongoing planning efforts such as the

city’s master plan will help to address these areas and round out the final project selection process. A full set of recommended steps can be found in the Action Plan at the end of this document.

The City of Ypsilanti has been a longtime supporter of renewable energy and energy efficiency having completed numerous energy efficiency measures and solar PV projects at city facilities. A summary of implemented energy projects is located in Table B. As the city continues to invest in efficient projects it is recommended to conduct energy audits of municipally owned facilities as to prioritize poorly performing facilities.

It is recommended that future energy assessments be incorporated into a larger municipal energy portfolio such as the capital improvement plan. Table A includes a summary of technical assessments and audits previously completed for the City of Ypsilanti.

The city has a strong history of addressing energy efficiency, however to the authors’ knowledge, the City of Ypsilanti has never consistently benchmarked and/or analyzed energy usage. Benchmarking facility energy usage via platforms like the EPA’s portfolio manager can empower the

Table A: Summary of Technical Assessments and Audits			
Facility Name	Assessment/Audit Description	Assessment/Audit Administrator	Assessment/Audit Date
Previous Assessments/Audits Over Last Five Years			
All Municipal Facilities	Energy Management Study	Honeywell	3/7/2007

city to best address usage, billing and rate issues independently.

Climate Action Plan Recommendations

In the 2012 City of Ypsilanti Climate Action Plan (CAP), it was recommended that the city implement a variety of direct investments, those most relevant to this energy plan are provided below:

- upgrade lighting fixtures in city buildings as soon as possible;
- install occupancy sensors on lights throughout public buildings;
- upgrade streetlights as quickly as possible, focusing on least efficient fixtures first with the city's revolving loan fund, working with the DDA, EMU and Regional Energy Office to achieve the best price through bulk upgrades and to identify any grants or other funding opportunities.

Two out of three of the recommendations have been implemented as of 2018.

All DTE owned streetlights were converted to LED lights in 2014; all light fixtures in city buildings have been converted to LED as of 2016; These projects are also listed in the summary of implemented clean energy actions located in Table B. It is recommended to fulfill the remaining project of occupancy sensor installations on lights throughout public buildings.

According to 2012 CAP, 54% of Ypsilanti's governmental sector emissions come from streetlight and traffic signals. It is recommended to upgrade the city's greenhouse gas (GHG) inventory to reflect the expected reduction in GHG from LED streetlight conversions.

The three following recommendation from the 2012 CAP are outside the scope of municipal facilities, but are valuable to project implementation and selection, diversifying municipal employee transportation options, and helping to reduce GHG emissions for the city:

- adopt a Green Globes certification requirement for any development project receiving at least \$10,000 in municipal incentives or tax abatements in a single year;
- continue development of bicycle and pedestrian network in coordination with Townships, WCRC, and Border to Border (B2B) trail development;
- partner with Eastern Michigan University bike-sharing program and car-sharing program.

None of the three recommendations have been implemented as of 2018.

With strong support for energy efficient projects from the City Council and Mayor, the city is positioned to continue exploration of creative methods to manage and finance energy efficiency improvements and clean energy projects. It is recommended to establish a process to continuously assess municipal facilities by way of energy audits and assessments. A trusted auditor such as Michigan Energy Options can help identify key opportunities for performance improvements.

An up-to-date summary of implemented clean energy actions is in Table B and a summary of clean energy projects to be completed in the near future is located in Table C.

GOING SOLAR:

"The city of Ypsilanti has partnered with grassroots effort SolarYpsi and independent power producer Chart House Energy to create a local team named Solar Destination Ypsilanti" for "the SunShot Prize: Solar in Your Community Challenge." "The team plans to install three PV systems at the New Parkridge housing development, at the Ypsilanti Department of Public Services, and at the site of the old landfill near exit 183 on I-94."

Source: <http://www.secondwavemedia.com/concentrate/features/ypisolar0449.aspx>

PROJECT COMMITMENT:

During the planning process of this energy plan, the City of Ypsilanti made a commitment to install a solar array at the Department of Public Service truck port by year 2018.



Figure 1. Solar array Installation on City of Ypsilanti Fire Station.



Figure 2. DTE Energy solar array located in the City of Ypsilanti hosted by the Ypsilanti Highland Cemetery Association.



Figure 3. Solar array installed on Historic property in City of Ypsilanti.

Table B: Summary of Implemented Clean Energy Actions

Facility Name	Projects Completed								
	Project Description	Date Completed	Fund Source	Retro-Commissioning	Lighting	Building Envelope	Supplemental Loads (Electronic Equipment)	Air Distribution System/Conditioned Air (fans)	HVAC
City Hall	2.5 kW photovoltaic solar array with help of Solar Ypsi initiative (12 Sanyo HIT 205 watt). Historic District Commission developed explicit guidelines to streamline appropriate installation of solar panels on historic properties.	2010	Lease				✓		
All Municipal Facilities	Converted lights to LED	2016	RLF		✓				
Senior Center	Photovoltaic solar array (20 SolarWorld 250-watt solar panels).	2015	Lease				✓		
Fire Station	Photovoltaic solar array (176 SolarWorld 285-watt solar panels).	2017	Lease				✓		
Parkridge Community Center	Photovoltaic solar array (19 Suniva MVX 270-watt mono solar panels).	2014	Lease				✓		
Parkridge Meeting Center	Photovoltaic solar array (68 SolarWorld 290-watt panels).	2017	Lease						
City Streetlights	All DTE owned streetlights converted to LED	2014	Special assessment		✓				
West Cross St.	Streetscaping on West Cross used LED fixtures in new streetlights	2011	Unknown		✓				

Commented [BT1]: need source

Ypsilanti Freight house	Photovoltaic solar array (15 Unisolar 128-watt PVI solar panels).	2015	Private funding source				✓		
North River	Collaboration with DTE city installed 844 kW Photovoltaic array on North River St north	2016	Lease				✓		
DPS Carport	Photovoltaic solar array (19 Solar World 240-watt and 69 290-watt panels).	2018	Private funding source				✓		

Table C: Project Action Plan Summary

Facility Name	Expected Implementation Date	Best Practices Opportunity									Preparation		Impact			
		Air Handlers/ RTUs	Boilers	Chillers	Cooking Equipment	DHW Systems	Heating/Cooling Systems	Building Envelope	Lighting	Other	Project Description	Building Drawings	Equipment Drawings, Manuals	Project Quote		Short-term or long-term
														Yes	No	
Former City Landfill	2020									✓	Photovoltaic solar array					L
Public facilities	TBD									✓	Ypsi Housing Commission and Solar Ypsi collaboration to do solar installations and provide job training.					L
Public facilities	TBD								✓		Install occupancy sensors on lights throughout public buildings.					S
City parking lots and city parks									✓		Upgrade exterior lighting in city owned parking lots and city parks.					L

IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Improve municipal building performance.	
PSI1.1	Assemble all audit reports from any buildings that have had audits within the last 10 years.
PSI1.2	Review the existing capital improvement plan to identify any equipment that is otherwise due for replacement. Adopt a life cycle costing approach to equipment replacement decisions.
PSI1.3	Interview facilities maintenance staff, department heads, the city manager, the mayor, and other key staff and officials to identify any other energy-related needs or opportunities.
PSI1.4	Have audits performed on any buildings that have not had an audit performed in the past 10 years.
PSI1.5	Use the results of Portfolio Manager accounting to identify buildings that are underperforming and/or experiencing unusual spikes in consumption that may be a sign of gas leaks or malfunctioning electrical equipment.
PSI1.6	Have retro-commissioning studies performed on any building with equipment that is not due for replacement, but may be showing a steady decline in performance over time.
PSI1.7	Upgrade the city's greenhouse gas (GHG) inventory to reflect the expected reduction in GHG from LED streetlight conversions.
PSI1.8	Prioritize the following unimplemented 2012 Climate Action Plan recommendations: 1. adopt a Green Globes certification requirement for any development project receiving at least \$10,000 in municipal incentives or tax abatements in a single year; 2. continue development of bicycle and pedestrian network in coordination with Townships, WCRC, and Border to Border (B2B) trail development; 3. partner with Eastern Michigan University bike-sharing program and car-sharing program.
PSI1.9	Review ongoing planning efforts including the city's master plan to identify any priority areas that may not be identified through a strictly data-driven approach.
GOAL 2: Identify and implement clean energy projects.	
PSI2.1	Prioritize table C: Project Action Plan Summary.
PSI2.2	Prioritize a list of potential energy assessments and audits to be completed in the next five years.
PSI2.3	Utilize the most efficient equipment available and incorporate renewable energy into the energy portfolio of each building including back-up generation.
PSI2.4	Using the information gathered in the steps above, select a suite of projects to undertake in the short-term. Couple projects with a short return on investment with projects with a long return on investment to improve the terms of longer ROI projects and facilitate their completion.

2

FUNDING

Most energy upgrades save municipalities money in the long term, but the challenges in obtaining upfront capital must be acknowledged. The steps identified in this document are recommendations geared toward avoiding impacts to the general fund and are outlined in the Action Plan located at the end of this document.

GOAL 1: INCREASE ENERGY EFFICIENCY AND RENEWABLE ENERGY FUNDING THROUGH INTERNAL AND EXTERNAL SOURCES.

GOAL 2: SUSTAIN THE CITY'S REVOLVING LOAN FUND.

To enhance current efforts an overview of less well-known funding opportunities is provided in table D to support municipal energy efficiency and/or renewable energy projects.

Revolving energy funds are a promising alternative to external financing where savings can then be used to fund future energy savings projects, capturing additional capital.

According to the city's 2012 Climate Action Plan, the City of Ypsilanti seeded a Revolving Loan Fund with \$250,000 from past years' budget surpluses during the early 1990s. The purpose of the fund being to finance municipal energy efficiency improvements.

Various project accomplishments like the LED lighting upgrade to all municipal facilities was made possible through the city's Revolving Loan Fund. It is recommended to annually track energy savings from RLF financed projects.

Regards additional funding options, the city has pursued various grant funded opportunities much like the EcoWorks Municipal Energy Planning program funded by the C.S. Mott Foundation.

Furthermore, as recommended in the city's 2012 Climate Action Plan, the city is encouraged to continue to monitoring grant opportunities for solar hybrid systems on high water-usage public buildings, such as the Rutherford Pool and Fire Department.



Dedicated RLF Management:

It is recommended to assign dedicated staff to monitor and select projects for the revolving loan fund. Just a few benefits of consistent management include safeguarding funds from being spent on non-energy efficiency projects and increased municipal department and staff awareness of fund monies.

2012 City of Ypsilanti Climate Action Plan RLF Recommendation:

“upgrade as many streetlights as possible with the city’s revolving loan fund, working with the DDA, EMU and Regional Energy Office to achieve the best price through bulk upgrades and to identify any grants or other funding opportunities; “

Table D: Project Financing Options

Financial Source	Eligible Projects	Available Funding
Loans		
State Revolving Fund	Renewable energy and energy efficiency measures	Varies
Michigan Saves	Energy efficiency and renewable energy projects for the residential, commercial, multifamily, and public sectors	Varies
Grants		
DOE Small Grants and EERE Exchange	Residential, commercial, and municipal building energy efficiency and renewable energy measures	\$1,000-\$100,000; Grant-specific
Private Foundations	Diverse renewable energy initiatives	Varies
Rebates		
DTE Commercial & Industry Energy Efficiency Program	Energy efficiency improvements, equipment replacement, efficient retrofits	Varies by equipment
Consumers Energy Efficiency Program	Wide range of rebates for energy efficient upgrades	Varies
Alternative Options		
Tax- exempt Lease Purchase (TELP)	Energy conservation improvements	Municipality annual appropriations
Third-party Power Purchase Agreement (PPA)	Renewable energy projects i.e. solar photovoltaic	Varies

IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Increase energy efficiency and renewable energy funding through internal and external sources.	
F1.1	Apply for applicable utility-based energy waste reduction programs.
F1.2	Continue to take advantage of sporadic and time-sensitive grant opportunities like the Mott funded Energy Planning with EcoWorks.
F1.3	Review the table of Project Financing Options located in Table D of this document for financing mechanisms that may be a good fit for a particular project or need.
GOAL 2: Sustain the city's revolving loan fund.	
F2.1	Assign dedicated staff to monitor and select projects for the revolving loan fund.
F2.2	Report on the revolving loan fund annually during budget review.
F2.3	Establish and adopt guidelines for revolving loan fund decision criteria.
F2.4	Define scope of the fund (i.e. single building, municipal, community-wide).
F2.5	Return 80% of energy cost savings from all projects to the revolving energy fund to allow for seeding of projects in the following year.

3

STAFFING

For many years, the Mayor, Council and community members have spearheaded energy efficiency projects for the city. Supporting that work have been the City Manager, the Department of Public Services, the Community & Economic Development Department, and the Finance Department. There is currently no one point of contact or responsibility for energy efficiency or other sustainability initiatives; elected officials and staff lead these as the opportunities arise. The planning process associated with this document revealed the need for dedicated staff to lead the ongoing and future energy management and sustainability work.

GOAL 1: ESTABLISH AN ENERGY MANAGER POSITION.

GOAL 2: INCORPORATE THIS ENERGY PLAN INTO THE SCOPE OF WORK FOR THE CITY'S SUSTAINABILITY COMMISSION.

Cities that have successfully managed their energy portfolios have dedicated staff to lead the work. This is typically a staff member who has the technical skills necessary to identify key energy projects, has the authority level to move projects through the approvals processes, and the financial know-how to make sure that projects fit within the budgetary constraints of a city.

For larger cities with populations of 100,000 or more, it is recommended to hire a full-time energy manager to serve on the municipal staff. For cities under 100,000 in population, a part-time energy manager is typically sufficient. This person may be on staff or be part of a third-party organization like the members of the Michigan Community Energy Partnership (MI-CEP) which includes EcoWorks, SEMREO, SEEDS, and Michigan Energy Options.

Regardless of the staffing structure for the energy manager, political buy-in from decision

makers including the mayor, city manager, members of city council, and department heads is essential for making productive changes in how a city manages its energy portfolio.

The City of Ypsilanti created a sustainability commission with ordinance No. 1280 (please refer to Appendix 2), effective February 2017. The commission is made up of nine regular members, serving for staggered three year terms, and two non-voting youth members serving one year terms; chaired by the Director of Economic Development. Incorporating this energy plan into the scope of work for the city's sustainability commission is recommended to compliment energy efforts pursued by the city.

In the City of Ypsilanti, the City Manager's Office, the Office of the Mayor, the City Council, and the Department of Economic Development have all been supportive and instrumental in passing significant energy goals. Establishment of at least a part-time energy manager is a strong next step

toward ensuring that these energy goals are brought to fruition and sustained. In the meanwhile, it is recommended that the city establish authority of an interim Energy Manager to coordinate energy management activities and identify the individual as a recognized resource for city staff.

The bullets below are recommended components of the job description of an energy manager:

- Monitor energy bills and facility performance for all of the city's holdings.
- Manage capital improvement projects related to energy efficiency or renewable energy generation.
- Lead bid processes for large-scale energy efficiency and/or renewable energy projects.
- Promote the energy vision among staff, residents, and businesses.
- Seek grants, loans, special assessments, bonds, PPAs, and/or other external funding mechanisms to implement clean energy projects.
- Support the establishment of policies and procedures that make energy efficiency and/or renewable energy projects easier to undertake in the city.
- Establish and facilitate an energy commission of local government staff and officials as well as residents who will be responsible for enacting the energy vision of the city.



IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Establish an Energy Manager position.

S1.1	Continue to support the City Manager's Office as the resource for energy management activities and initiatives.
S1.2	Hire a part-time Energy Manager as an added part of a current employee's job description, as a new position within the government, or as a third-party contract.

GOAL 2: Incorporate this energy plan into the scope of work for the city's Sustainability Commission.

S2.1	Include implementation of this Action Plan in the Sustainability Commission scope of work.
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4

POLICIES AND PROCEDURES

The City of Ypsilanti Sustainability Commission is committed to establishing a comprehensive sustainability plan within the next couple of years. This commitment is outlined in ordinance 1280 (please refer to Appendix 1). The planning process involved in this document revealed opportunities for the city to take this commitment and continue to institute written energy policy that improves sustainable design and raises awareness within the community.

GOAL 1: PROMOTE AND STRENGTHEN ENERGY MANAGEMENT POLICIES AND PROCEDURES.

GOAL 2: IMPROVE KNOWLEDGE OF ENERGY MANAGEMENT AND SUSTAINABLE DESIGN AMONG CITY STAFF AND APPOINTED AND ELECTED OFFICIALS.

The sections discussed previously including project selection and implementation, funding, and staffing, are all critical to beginning the transition to becoming a clean energy city, but changes in policy and procedures are essential follow ups to build clean energy into city operations and ensure the longevity of efforts regardless of staff turnover or election cycle



IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Promote and strengthen energy management policies and procedures.	
PP1.1	Continue to promote “alternative energy” zoning policies permitted as an accessory use in all districts, subject to certain conditions- PV panels have to be building-mounted or, in the case of solar lighting, attached to the light pole; geothermal and solar water heating are also permitted everywhere; wind is only permitted when attached to a building; other methods are also potentially permissible- upon consultation with city planning and Development Department, Planning Commission, and other departments as fit.
PP1.2	Continue to promote installation of “alternative energy” according to the Ypsilanti Historical Preservation ordinance and the Standards for Rehabilitation of Historic Structures set by the U.S. Secretary of the Interior governing the review of any work proposed in the district. The term “alternative energy” covers a variety of technologies including geothermal, wind, and solar power.
PP1.3	Continue to promote “alternative energy” special use permitting policies including solar farms/solar as a primary use permissible with a special use permit in city Parks zoning district and Production, Manufacturing, and Distribution (industrial) zoning district.
PP1.4	Pass a council resolution in support of adopting this Energy Plan.
PP1.5	Examine procurement policies to ensure that the bidding and/or purchasing processes account for the energy efficiency of equipment and do not create a barrier to implementing clean energy projects.
PP1.6	Pass a resolution or policy that requires the city to benchmark energy consumption data annually for all municipal buildings and report the usage to City Council annually.
PP1.7	Continue to promote the goal of the City of Ypsilanti and its residents to generate 5 MW of electricity from distributed solar, to reach 1,000 solar roofs by 2020.
PP1.8	Establish and adopt a municipal energy vision statement.
PP1.9	Create and adopt a Sustainability Plan.
PP1.10	Sign and uphold the commitments of the Paris Climate Agreement.
PP1.11	Sign and uphold the Sierra Club’s Ready for 100 pledge to commit to running your city facilities on 100% renewable energy.
PP1.12	During the city’s next master plan cycle, adopt energy policy guidance as a part of the Master Plan.
GOAL 2: Improve knowledge of energy management and sustainable design among city staff, appointed and elected officials.	
PP2.1	Include information on the city’s energy vision and energy management strategy in the orientation packets for all appointed and elected members of boards and commissions as well as municipal staff members.

5

DATA

The planning process revealed opportunities to benchmark energy consumption data and in return save money.

GOAL 1: IMPROVE THE DATA-DRIVEN APPROACH TO MANAGING ENERGY USAGE.

GOAL 2: ESTABLISH A PROCESS TO ANALYZE DATA TO DETERMINE ENERGY USE TRENDS AND BILLING ERRORS.

GOAL 3: IMPROVE COMMUNICATIONS WITH FACILITY MANAGERS, UTILITY PROVIDERS, AND RELEVANT CONTRACTORS TO RESOLVE ISSUES QUICKLY.

To help stretch project dollars as far as possible and ensure the “best bang for the buck”, a data-driven approach to decision making should be taken. By assessing Ypsilanti’s current annual energy consumption and dollar expenditure, it becomes possible to identify in quantifiable terms underperforming facilities, gas leaks, and sometimes even faulty equipment causing otherwise unexplained spikes in energy consumption and/or gradual increases in energy consumption that are not explained by other factors.

TIPS!

Gas leaks are an emergency and the appropriate hotline should be called immediately:

- DTE Energy Gas Leak Hotline: 1-800-947-5000

The widespread energy and financial benefits of systematically reporting and analyzing energy

HOW TO BENCHMARK:

Begin benchmarking by gathering all available information on municipal facilities including 12-36 months of energy bills, square footage, occupancy levels, and the year built.

Common places to look for missing information are your facility managers, finance department, and/or your DTE or Consumers account representative.

The Energy Star Portfolio Manager tool is recommended for tracking. This tool will enable your energy manager to compare, at a glance, each building’s performance against similar buildings in your region as well as with one another.

data with Portfolio Manager are reflected in the findings of a study on benchmarking and energy savings conducted by the U.S. Environmental Protection Agency. With data from over 35,000 facilities using the EPA Portfolio Manager tool

for energy benchmarking, average energy consumption per building was reduced by 7% over the period of 2008-2011.

The Planning and Development Department and the Finance Department are working together

collecting electricity and natural gas bills and establishing a list of facilities and associated addresses, square footage, account numbers, and meter numbers. City Planner, Bonnie Wessler is leading the benchmarking effort with technical assistance from EcoWorks.



IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Improve the data-driven approach to managing energy use.	
D1.1	Collect copies of the previous 12-36 months of energy (gas, electricity, and steam) consumption data and enter into a spreadsheet format consistent with Portfolio Manager.
D1.2	Create a spreadsheet on the shared drive to organize energy use information including the appropriate level of detail such as facility name, address, account numbers, meter numbers, square footage, year built, number of computers etc.
D1.3	Create a Portfolio Manager account to upload all building and consumption information into the EPA's Portfolio Manager.
D1.4	Establish a process to populate energy consumption data monthly or quarterly into Portfolio Manager.
GOAL 2: Establish a process to analyze data to determine energy use trends and billing errors.	
D2.1	Examine bills from each facility for any errors or rate optimization that may be possible.
D2.2	Set a base year for comparison using the most complete and relevant sets of data and normalize for weather.
D2.3	Audit at least 10% of energy consumption data in Portfolio Manager for quality assurance/quality control.
D2.4	Look at each building's performance noting any energy spikes or gradual increases in energy consumption that may indicate mechanical failures or leaks.
D2.5	Look at how your facilities compare to others in the region. For any buildings that have recently had upgrades, ensure that the expected drops in energy consumption are also represented. The absence of reductions may indicate failing equipment or incorrect installation.
GOAL 3: Improve communications with facility managers, utility providers, and relevant contractors to resolve issues quickly.	
D3.1	Call DTE to request any refunds for billing errors.
D3.2	Ensure that it is part of the energy manager's task load to review building performance quarterly to flag any new issues.

6

COMMUNICATION

The City Manager's office currently uses face to face meetings to communicate with staff. Fully using existing and potential channels of communication across departments and with constituents is key to the implementation of any energy plan.

GOAL 1: IMPROVE ENERGY AND SUSTAINABILITY-RELATED COMMUNICATION RESOURCES.

GOAL 2: PROMOTE AND SHARE ENERGY REDUCTION ACHIEVEMENTS WITH STAFF AND RESIDENTS.

Energy conservation as a municipal-wide strategy will be most successful when it is built into the culture of the organization. Sharing project successes and conservation tips broadly through the communications channels of the City so that there is awareness among staff, officials, and boards is encouraged. Full adoption of the energy vision will ensure that energy conservation cascades throughout the City's various operations in ways that will likely be creative and surprising.



IMPLEMENTATION STRATEGIES AND ACTIONS

GOAL 1: Improve energy and sustainability-related communication resources.

C1.1	Highlight achievements at the municipal, departmental, and individual level by way of an annual report and submit to the Sustainability Commission and the City Council.
C1.2	Distribute easy to follow tips and reminders about the city's energy vision on a regular basis (monthly or quarterly).
C 1.3	Publish the final adopted version of this energy plan on the city's website.

GOAL 2: Promote and share energy reduction achievements and projects with staff and residents.

C2.1	Promote the city's energy vision on municipal marketing materials, the city's website, through regional conferences, and/or other appropriate communication mechanisms.
C2.2	Increase communications and citizen outreach around sustainability, publicizing efforts and providing information on how citizens can get involved or replicate green initiatives.
C2.3	Consider the development of a website dashboard to report on municipal energy management achievements and progress.
C2.4	Work with community stakeholders to initiate an energy competition (the University and city can partner together to challenge another city and university to an energy reduction competition).
C2.5	Provide a discounted AATA pass via the City Treasurer and DDA as an alternative to downtown parking permits (City Hall can lead by example by implementing a parking cash-out alternative benefit option for employees currently eligible for parking permits).

ACTION PLAN

In order for the Energy Plan to be implemented, the city and relevant community stakeholders must carry out the actions needed to achieve the goals and the vision for Ypsilanti's future. The Action Plan should be updated frequently by the energy manager who will serve in an overall project management capacity and advised by the Sustainability Commission. This Action Plan can be used as a checklist to acknowledge accomplishments and identify next steps which the city can consider at critical decision-making points.

Time Frame

NOW: Begin work immediately upon plan adoption.

1-2 YEARS: Begin work within 1-2 years.

3-5 YEARS: Begin work within 3-5 years.

ONGOING: Actions that require continuous monitoring or effort.

Next Master Planning Cycle: Actions recommended for next master plan update.

RECOMMENDED TASK LEADERS INVOLVED

CITY GOVERNMENT:

City Mayor
City Manager (CM)
Department of Public Works (DPW)
Planning and Development
Finance
Energy Manager (EM)*

*proposed new position

BOARDS AND COMMISSIONS:

City Council
Sustainability Commission (SC)
Downtown Development Authority (DDA)
Planning Commission (PC)
Parks and Recreation (PRC)

PROJECT SELECTION AND IMPLEMENTATION		
ACTION	TIME FRAME	LEAD DEPARTMENT

GOAL 1: Improve municipal building performance.

PSI1.1	Assemble all audit reports from any buildings that have had audits within the last 10 years.	NOW	EM
PSI1.2	Review the existing capital improvement plan to identify any equipment that is otherwise due for replacement. Adopt a life cycle costing approach to equipment replacement decisions.	NOW	EM/Finance
PSI1.3	Interview facilities maintenance staff, department heads, the city manager, the mayor, and other key staff and officials to identify any other energy-related needs or opportunities.	NOW	EM
PSI1.4	Have audits performed on any buildings that have not had an audit performed in the past 10 years.	1-2 YEARS	EM
PSI1.5	Use the results of Portfolio Manager accounting to identify buildings that are underperforming and/or experiencing unusual spikes in consumption that may be a sign of gas leaks or malfunctioning electrical equipment.	1-2 YEARS	EM
PSI1.6	Have retro-commissioning studies performed on any building with equipment that is not due for replacement, but may be showing a steady decline in performance over time.	1-2 YEARS	EM/CM
PSI1.7	Upgrade the city's greenhouse gas (GHG) inventory to reflect the expected reduction in GHG from LED streetlight conversions.	1-2 YEARS	EM
PSI1.8	Prioritize the following unimplemented 2012 Climate Action Plan recommendations: 1. adopt a Green Globes certification requirement for any development project receiving at least \$10,000 in municipal incentives or tax abatements in a single year; 2. continue development of bicycle and pedestrian network in coordination with Townships, WCRC, and Border to Border (B2B) trail development; 3. partner with Eastern Michigan University bike-sharing program and car-sharing program.	1-2 YEARS	EM/CM
PSI1.9	Review ongoing planning efforts including the city's master plan to identify any priority areas that may not be identified through a strictly data-driven approach.	Next Master Planning cycle	EM/PC/Planning & Development

GOAL 2: Identify and implement clean energy projects.

PSI2.1	Prioritize table C: Project Action Plan Summary.	NOW	SC/City Council
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PSI2.2	Utilize the most efficient equipment available and incorporate renewable energy into the energy portfolio of each building including back-up generation.	1-2 YEARS	DPW
PSI2.3	Using the information gathered in the steps above, select a suite of projects to undertake in the short-term. Couple projects with a short return on investment with projects with a long return on investment to improve the terms of longer ROI projects and facilitate their completion.	1-2 YEARS	EM/CM

FUNDING		
ACTION	TIME FRAME	LEAD DEPARTMENT

GOAL 1: Increase energy efficiency and renewable energy funding through internal and external sources.

F1.1	Apply for applicable utility-based energy waste reduction programs.	ONGOING	EM
F1.2	Continue to take advantage of sporadic and time-sensitive grant opportunities like the Mott funded Energy Planning with EcoWorks.	ONGOING	EM
F1.3	Review the table of Project Financing Options located in Table D of this document for financing mechanisms that may be a good fit for a particular project or need.	NOW	EM/Finance

GOAL 2: Sustain the city's revolving loan fund.

F2.1	Assign dedicated staff to monitor and select projects for the revolving loan fund.	NOW	EM/Finance
F2.2	Report on the revolving loan fund annually during budget review.	NOW	EM/Finance
F2.3	Establish and adopt guidelines for revolving loan fund decision criteria.	NOW	EM/CM
F2.4	Define scope of the fund (i.e. single building, municipal, community-wide).	NOW	EM/CM
F2.5	Return 80% of energy cost savings from all projects to the revolving energy fund to allow for seeding of projects in the following year.	NOW	Finance

STAFFING		
ACTION	TIME FRAME	DATE COMPLETED

GOAL 1: Establish an Energy Manager position.

S1.1	Continue to support the City Manager's Office as the resource for energy management activities and initiatives.	NOW	CM
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S1.2	Hire a part-time Energy Manager as an added part of a current employee's job description, as a new position within the government, or as a third-party contract.	NOW	CM
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GOAL 2: Incorporate this energy plan into the scope of work for the city's Sustainability Commission.

S2.1	Include implementation of this Action Plan in the Sustainability Commission scope of work.	NOW	SC
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POLICIES AND PROCEDURES

ACTION	TIME FRAME	LEAD DEPARTMENT
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GOAL 1: Promote and strengthen energy management policies and procedures.

PP1.1	Continue to promote "alternative energy" zoning policies permitted as an accessory use in all districts, subject to certain conditions- PV panels have to be building-mounted or, in the case of solar lighting, attached to the light pole; geothermal and solar water heating are also permitted everywhere; wind is only permitted when attached to a building; other methods are also potentially permissible- upon consultation with city planning and Development Department, Planning Commission, and other departments as fit.	ONGOING	Planning & Development
PP1.2	Continue to promote installation of "alternative energy" according to the Ypsilanti Historical Preservation ordinance and the Standards for Rehabilitation of Historic Structures set by the U.S. Secretary of the Interior governing the review of any work proposed in the district. The term "alternative energy" covers a variety of technologies including geothermal, wind, and solar power.	ONGOING	Planning & Development
PP1.3	Continue to promote "alternative energy" special use permitting policies including solar farms/solar as a primary use permissible with a special use permit in city Parks zoning district and Production, Manufacturing, and Distribution (industrial) zoning district.	ONGOING	Planning & Development
PP1.4	Pass a council resolution in support of adopting this Energy Plan.	NOW	City Council
PP1.5	Examine procurement policies to ensure that the bidding and/or purchasing processes account for the energy efficiency of equipment and do not create a barrier to implementing clean energy projects.	NOW	CM/City Council
PP1.6	Pass a resolution or policy that requires the city to benchmark energy consumption data annually for all	NOW	City Council

	municipal buildings and report the usage to City Council annually.		
PP1.7	Continue to promote the goal of the City of Ypsilanti and its residents to generate 5 MW of electricity from distributed solar, to reach 1,000 solar roofs by 2020.	1-2 YEARS	EM
PP1.8	Establish and adopt a municipal energy vision statement.	1-2 YEARS	City Council
PP1.9	Create and adopt a Sustainability Plan.	1-2 YEARS	SC
PP1.10	Sign and uphold the commitments of the Paris Climate Agreement.	NOW	City Council
PP1.11	Sign and uphold the Sierra Club's Ready for 100 pledge to commit to running your city facilities on 100% renewable energy.	NOW	City Council
PP1.12	During the city's next master plan cycle, adopt energy policy guidance as a part of the Master Plan.	Next Master Planning cycle	PC

GOAL 2: Improve knowledge of energy management and sustainable design among city staff, appointed and elected officials.

PP2.1	Include information on the city's energy vision and energy management strategy in the orientation packets for all appointed and elected members of boards and commissions as well as municipal staff members.	1-2 YEARS	EM
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DATA		
ACTION	TIME FRAME	LEAD DEPARTMENT

GOAL 1: Improve the data-driven approach to managing energy use.

D1.1	Collect copies of the previous 12-36 months of energy (gas, electricity, and steam) consumption data and enter into a spreadsheet format consistent with Portfolio Manager.	NOW	EM
D1.2	Create a spreadsheet on the shared drive to organize energy use information including the appropriate level of detail such as facility name, address, account numbers, meter numbers, square footage, year built, number of computers etc.	NOW	EM
D1.3	Create a Portfolio Manager account to upload all building and consumption information into the EPA's Portfolio Manager.	NOW	EM
D1.4	Establish a process to populate energy consumption data monthly or quarterly into Portfolio Manager.	NOW	EM

GOAL 2: Establish a process to analyze data to determine energy use trends and billing errors.

D2.1	Examine bills from each facility for any errors or rate optimization that may be possible.	1-2 YEARS	EM/Finance
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D2.2	Set a base year for comparison using the most complete and relevant sets of data and normalize for weather.	1-2 YEARS	EM
D2.3	Audit at least 10% of energy consumption data in Portfolio Manager for quality assurance/quality control.	1-2 YEARS	EM
D2.4	Look at each building's performance noting any energy spikes or gradual increases in energy consumption that may indicate mechanical failures or leaks.	1-2 YEARS	EM
D2.5	Look at how your facilities compare to others in the region. For any buildings that have recently had upgrades, ensure that the expected drops in energy consumption are also represented. The absence of reductions may indicate failing equipment or incorrect installation.	1-2 YEARS	EM

GOAL 3: Improve communications with facility managers, utility providers, and relevant contractors to resolve issues quickly.

D3.1	Call DTE to request any refunds for billing errors.	NOW	Finance
D3.2	Ensure that it is part of the energy manager's task load to review building performance quarterly to flag any new issues.	NOW	CM

COMMUNICATION

ACTION	TIME FRAME	LEAD DEPARTMENT
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GOAL 1: Improve energy and sustainability-related communication resources.

C1.1	Highlight achievements at the municipal, departmental, and individual level by way of an annual report and submit to the Sustainability Commission and the City Council.	NOW	EM
C1.2	Distribute easy to follow tips and reminders about the city's energy vision on a regular basis (monthly or quarterly).	NOW	EM
C 1.3	Publish the final adopted version of this energy plan on the city's website.	NOW	EM

GOAL 2: Promote and share energy reduction achievements with staff and residents.

C2.1	Promote the city's energy vision on municipal marketing materials, the city's website, through regional conferences, and/or other appropriate communication mechanisms.	NOW	EM/CM
C2.2	Increase communications and citizen outreach around sustainability, publicizing efforts and providing information on how	NOW	EM

	citizens can get involved or replicate green initiatives.		
C2.3	Consider the development of a website dashboard to report on municipal energy management achievements and progress.	3-5 YEARS	EM
C2.4	Work with community stakeholders to initiate an energy competition (the University and city can partner together to challenge another city and university to an energy reduction competition).	3-5 YEARS	SC
C2.5	Provide a discounted AATA pass via the City Treasurer and DDA as an alternative to downtown parking permits (City Hall can lead by example by implementing a parking cash-out alternative benefit option for employees currently eligible for parking permits).	3-5 YEARS	DDA

LIST OF APPENDICES

Appendix 1 – Memorandum of Understanding – Community Energy Management Planning Project, Resolution No. 2017-261

Appendix 2 - Ordinance No. 1280

Appendix 3 – Resolution for 1,000 Solar Roofs Initiative, Resolution No. 2013-175

DRAFT



SOUTHEAST MICHIGAN  REGIONAL ENERGY OFFICE



Meeting Minutes

City of Ypsilanti Sustainability Commission

Regular Meeting City Hall Council Chambers – 1 South Huron St. Ypsilanti, MI 48197

Monday, August 13, 2018 – 7:00 p.m.

I. CALL TO ORDER: 7:00pm

II. ROLL CALL:

Commissioner Michalowski	Present
Commissioner Drennen	Present
Commissioner Heine	Present
Commissioner Sampson	Present
Commissioner Zeuner	Absent
Commissioner Bayha	Present
Commissioner Foley	Present
Commissioner McKee	Present

Also Present: Council Liaison Beth Bashert
City Manager Darwin McClary
Nancy Hare-Dickerson, Commission Secretary

III. AGENDA APPROVAL:

Foley (Second Drennen) moved to approve the Agenda as submitted.
Vote: Unanimous Motion: Carried

IV. PRESENTATIONS:

None

V. AUDIENCE PARTICIPATION:

None

VI. CONSENT AGENDA

A. Approval of July 9, 2018 Minutes

Bayha (Second Foley) moved to approve the Consent Agenda as follows:

Approval of the July 9, 2018 minutes as submitted.

Vote: Unanimous

Motion: Carried

VII. RESOLUTIONS/MOTIONS/DISCUSSIONS

A. EMU Sustainability Commission Liaison and Formal Communication Discussion

Commissioner Michalowski indicated that EMU will soon have their own sustainability commission, which will be headed up for the first year by Tom Kovacs and that Mayor Edmonds suggested that the City and EMU commissions interact and work together. He asked commissioners to ponder ways to best formulate the relationship; i.e., a commission member willing to attend the EMU commission meetings and give reports, and vice versa.

Commissioner Michalowski further indicated that there is an open seat on the City of Ypsilanti Sustainability Commission, with a link on the City website for those who wish to apply.

B. Public Recycle Bins Resolution

Commissioner Michalowski explained that he put together a resolution for presentment to City Council in the interest of providing recycling access to the community. He expressed that he thought it would be a good idea to propose placing a recycling bin adjacent to each garbage can in order to expose people to recycling, to give people access to it and to educate people on the idea that they can in fact recycle quite a bit of the waste that they have.

[Discussion ensued as to possible locations, temporary/permanently affixed bins, cost and overhead expenses involved, increased staff demands and educational awareness]

City Manager McClary suggested that in addition to adopting the Resolution, that the Commission remand it to DPS for review and recommendation on how the program could be implemented before being placed on the City Council agenda.

Commissioner Bayha expressed that this is an important step to increasing the visibility of what the Commission is all about.

Council Liaison Bashert further expressed that with the major recycling changes occurring in the City, the implementation of this program would help to show the community that the City continues to move forward and grow in their commitment to recycling.

[Discussion continued re: effective ways for moving the program forward in a timely manner]

Bayha (Second Foley) moved to approve Resolution 2018-08-002 - Adoption of Public Recycling Bins Adjacent to All Public Trash Cans.

In response to a question by Commissioner McKee, City Manager McClary expressed that he has no concern with the Commission recommendation that implementation be established by May 2019. He explained that the Resolution will go to City Council, who will provide the directive to administration and determine whether the date is feasible and all of the parts that would have to come together for it to be feasible.

Voice Vote: Unanimous

Motion: Carried

C. Resilience Discussion

Commissioner Michalowski explained that the Resilience information provided is additional reference material on the subject of resilience strategy and planning that he referred to at the previous Commission meeting.

Council Liaison Bashert suggested dividing the material into separate parts to aid in discussing different aspects of it in order to help decide if the Commission wants to take on a resilience strategy.

Commissioner Drennen shared thoughts related to strategies being done for heat island effect and pavement, looking at it through an equity lens.

Council Liaison Bashert initiated discussion regarding urban forestry – looking into the number of trees the City has and if more need to be planted for shade and shelter.

Commissioner Michalowski indicated that a tree canopy cover is something the Commission will be looking closer at as work is done going through the next level of the MGC. He stated that possibly the idea of resilience can be tucked in and as work is done to help move forward the MGC categories, through developing ordinances and resolutions, the Commission will, in turn, be supporting this principle.

Commissioner Bayha initiated discussion regarding City areas which might benefit from reforestation after construction. She also shared that homeowners who become members of the Arbor Day Foundation receive ten free tree seedlings to plant.

Commissioner Sampson asked if a vulnerability assessment is contained in the Climate Action Plan for Ypsilanti, as it is important to identify where people are going to be most vulnerable in the next 30-50 years for some of these issues.

Commissioner Michalowski asked commissioners to ponder if there is interest in acting on this; i.e., putting together a group to further explore the subject and see where the Commission might benefit from it.

VIII. LIAISON REPORTS

A. Sustainability Plan Subcommittee

Commissioner Michalowski shared a concern regarding the lack of forward movement in working to write a sustainability plan.

Commissioner McKee agreed with the concern and expressed that a fair amount of help; i.e., a consultant to assist in guiding the process, would be needed to help make the goal obtainable.

City Manager McClary cautioned commissioners about possibly trying to take on too many other tasks; that it might be helpful to refocus on some key areas. He advised the Commission to stay focused on the Sustainability Plan because that is the key task that has to be accomplished.

Council Liaison Bashert offered that waiting until the consultant is on board and then possibly planning a retreat with the consultant to do commission-deep work in a short-term amount of time together, might be a good way to refocus.

[Discussion continued re: budget/resource questions, possible topics to pursue with the consultant, and timeline for consultant coming on board]

City Manager McClary indicated that once a draft is in place for the consultant, then it can be published after the Chair has reviewed it and the Commission is comfortable with it.

Commissioner Michalowski indicated that he will share the draft with the subcommittee and then reply after the draft is provided.

[Commission Consensus to focus the sustainability plan discussion, for the next few agendas, on the consultant process until the consultant is in place]

B. MGC Challenge Subcommittee

Commissioner Michalowski indicated that after much follow up, he was able to learn that the MGC data was acknowledged and he received verbal confirmation that bronze status was achieved. He stated that a formal statement of such will follow within the next few weeks and he expressed kudos to everyone who worked on the subcommittee.

[Discussion ensued re: data requirements to obtain MGC silver/gold status and possible ways to retrieve the information]

Commissioner McKee shared that the MGC awards presentation will be held Thursday, September 20th, from 9:30-4:30 in Grand Rapids and that registration is free for City officials. Commissioner Drennen indicated that she will be in attendance.

Commissioner Michalowski indicated that he will share the awards presentation information with Mayor Edmonds and invite her to attend.

C. Outreach Subcommittee

Commissioners Bayha and Foley provided an overview of plans for the Joe Dulin Day Parkridge Summerfest event, to be held August 25th.

Commissioner Michalowski discussed time/resource constraints and being unable to implement zero waste or the “Bigbelly” idea for the Parkridge event.

Commissioner Foley indicated that there will be recycling boxes at the Parkridge event and that individual vendors are required to provide their own waste disposal and recycling.

[Discussion ensued re: commissioner availability for the Parkridge Summerfest event to help increase a sustainability presence]

D. Housing Affordability & Access Committee of the Planning Commission

Commissioner Foley updated the Commission that the last presentation was completed and the committee is now ready to join the larger group and move forward with the City Master Plan.

IX. COMMUNICATIONS

A. Zero Waste Events Update

Commissioner Michalowski updated the Commission that he was able to make contact with Recycle Ann Arbor who indicated that because there is a 3-6 month period of planning to prepare for a zero waste event, that they would be happy to help facilitate 2019 events once the Commission has been part of a presentation and has spent time working with them. He stated that he also has an additional contact with Washtenaw County who he will contact and see if he can get something to occur sooner. He indicated that he will continue follow up and would expect to have a presentation at least by December of this year.

Council Liaison Bashert suggested selecting one event to start with and choosing someone from the Commission to be a liaison as the zero-waste advocate to that event and to begin early planning.

Commissioner Foley suggested engaging the Parkridge Summerfest. He stated that the Commission could educate further into the community and through Parkridge Community Center on the importance of recycling.

Commissioner Michalowski stated that he will bring it up at the next meeting and the Commission can discuss any ideas about direction at that time.

B. Big Belly Update

Commissioner Michalowski gave an overview of the “Big Belly” system and indicated that he is pursuing having a representative give a presentation to the Commission. He stated that he learned through his research that “Big Belly” is more for long-term use, rather than for individual events and that perhaps the City would consider running a pilot program.

City Manager McClary indicated that he attended a “Big Belly” presentation in the past and expressed that it is a wonderful program and is something the City may seriously want to look at in moving toward being smarter in how our waste and recyclable materials are managed in the downtown areas.

[Discussion ensued re: rentals, type of receptacles/containers, cost and public recycling access]

City Manager McClary added that another aspect of “Big Belly” is that, at additional cost, they can also be Wi-Fi hotspots.

Council Liaison Bashert further added that the City could charge for advertising placed on the “Big Belly” containers.

Commissioner Michalowski stated that he will set up a presentation which would provide more information and help to answer any questions; after which, the Commission could then decide if they would like to propose a pilot program.

C. Recycling Program Status Update

Commissioner Michalowski shared an idea of possibly locating a recycling center in the picnic area of the vacant former Ford plant on Spring Street.

[Discussion ensued re: the idea of a recycling drop-off center at the former Ford plant location]

City Manager McClary indicated that an agreement is being worked out with Ypsilanti Township to use their recycling drop-off center on Clark Road for City residents to use. The City would contribute toward the cost of Township attendant personnel and would provide their own roll-off container service. He expressed his appreciation for the Township being willing to work with the City in this regard.

In response to a question by Commissioner Bayha, City Manager McClary indicated that no job losses will result from the temporary re-location of the City recycling drop-off center.

D. Peninsular Dam Status Update

Commissioner Michalowski asked if the survey has been completed.

City Manager McClary responded that the draft report has not yet been completed; that due to weather issues in the Spring, there was a delay in completing the work that needed to be done. He indicated that he is still waiting to hear from HRWC as to when the final work group meeting will be held. He stated that at that meeting, the work group will be hopefully reviewing a draft of the report, providing input and making whatever final changes are needed to the report before it is put in final form and submitted to the City Council.

X. AUDIENCE PARTICIPATION

None

XI. PROPOSED BUSINESS

A. Opportunity Zones

Commissioner Michalowski explained that information was initially sent to him by Commissioner Drennen regarding opportunity zones. He stated

that he located information about it on the Ypsilanti Township website but that the City of Ypsilanti is also included in those opportunity zones.

Commissioner Drennen expressed that she thought it would be interesting to learn more about them at some point.

Commissioner Michalowski stated that he sent off a request for a possible presentation, or at least more information.

XII. NEXT MEETING DATE:
Monday, September 10, 2018

XIII. ADJOURNMENT: 8:46pm

Foley (second Heine) moved to adjourn the meeting of the Sustainability Commission.

Vote: Unanimous

Motion: Carried

Action Minutes

City of Ypsilanti Sustainability Commission

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Commissioner Foley	Present
Commissioner McKee	Present

Also Present: Council Liaison Beth Bashert
City Manager Darwin McClary
Nancy Hare-Dickerson, Commission Secretary

III. AGENDA APPROVAL:

Foley (Second Drennen) moved to approve the Agenda as submitted.
Vote: Unanimous Motion: Carried

IV. PRESENTATIONS:

V. AUDIENCE PARTICIPATION:

VI. CONSENT AGENDA

A. Approval of July 9, 2018 Minutes

Bayha (Second Foley) moved to approve the Consent Agenda as follows:

Approval of the July 9, 2018 minutes as submitted.

Vote: Unanimous

Motion: Carried

VII. RESOLUTIONS/MOTIONS/DISCUSSIONS

A. EMU Sustainability Commission Liaison and Formal Communication Discussion

B. Public Recycle Bins Resolution

Bayha (Second Foley) moved to approve Resolution 2018-08-002 - Adoption of Public Recycling Bins Adjacent to All Public Trash Cans.

Voice Vote: Unanimous

Motion: Carried

C. Resilience Discussion

VIII. LIAISON REPORTS

A. Sustainability Plan Subcommittee

B. MGC Challenge Subcommittee

C. Outreach Subcommittee

D. Housing Affordability & Access Committee of the Planning Commission

IX. COMMUNICATIONS

A. Zero Waste Events Update

B. Big Belly Update

C. Recycling Program Status Update

D. Peninsular Dam Status Update

X. AUDIENCE PARTICIPATION

XI. PROPOSED BUSINESS

A. Opportunity Zones

XII. NEXT MEETING DATE:

Monday, September 10, 2018

XIII. ADJOURNMENT: 8:46pm

Foley (second Heine) moved to adjourn the meeting of the Sustainability Commission.

Vote: Unanimous

Motion: Carried

MGCC Action Item Overview - Waste Reduction

Bronze

5. Implement a program to encourage recycling and waste reduction.

Our submission this year included an entry for the bronze level:

#5 Implement a program to encourage recycling and waste reduction. Ypsilanti currently has a functional yard waste collection program and a free yard waste compost and wood chip pick-up site. <https://cityofypsilanti.com/315/Yard-Waste>

Some ways other communities have reduced solid waste and encouraged recycling that we may consider pursuing for next year's submission:

- State and local experience and available data to date suggest that the most effective strategies for reducing waste at the local level include the following measures:
 - Bans on single-use plastic bags.
 - Fees for single-use plastic or paper consumer items like bags, straws, and food service items.
 - Bans on Styrofoam™ food service and packing items.
 - Of these, across-the-board fees do the most to reduce local waste and disposal costs while being the most acceptable to consumers, because they preserve some choice and convenience. **(Michigan, however, has banned banning plastic bags)**
- Recycling crews that can't collect something leave postcards explaining the reasons why they couldn't pick up the recycled material.
- Individuals who repeatedly recycle improperly receive phone calls, visits, or get fined.
- In cities and towns with universities and colleges, local councils & student officers go door to door in main student areas to talk recycling and waste reduction.
- Some cities have dedicated their own communications team to reducing waste.
- **Local councils have made it mandatory for recycling bins to be the largest bins allowed for curbside pickup.**
- Offenders of constantly throwing food laced containers in their recycling have been made to re-sort their waste.
- Educational information about recycling has been sent to apartment dwellers and homeowners on behalf of local councils.
- In Cleveland, recycling bins have been outfitted with [RFID tags](#) that tell the sanitation department if someone hasn't put out their recyclables for a few weeks – not doing so will get the offender slapped with a \$100 fine.
- **Ohio and North Carolina have held campaigns called [“Get Caught Green Handed”](#) which awarded people with gift cards when they used community recycling bins.**
- Recycling rates went up by 137% when the town of Cherry Hill, New Jersey implemented the [RecycleBank](#) rewards program!

- Halifax implemented a clear plastic bag rule that has decreased curbside waste by 3,248 tons, or 31.4%

Silver

5. Implement communitywide residential and commercial recycling programs.

Communitywide recycling has been a common theme of discussion for us on the commission. This action item is far more narrow than the bronze one. It seems the only way to meet this action item is to provide recycling service to all of our residents and businesses in the city. We, as a commission, have to keep pressure on council to keep looking for solutions.

Gold

5. Implement a communitywide composting program.

We have a yard waste composting program, but diverting food waste from landfills is where we should be focusing our efforts.

Here is a great resource for cities looking to start food-waste compost collection:

<http://mitsloan.mit.edu/actionlearning/media/documents/s-lab-projects/Guide-to-Composting.pdf>

Importance of diverting food waste from landfills:

Reducing wasted food does great things for the environment:

- **Reduce Methane from Landfills** - When food goes to the landfill, it's similar to tying food in a plastic bag. The nutrients in the food never return to the soil. The wasted food rots and produces methane gas.
- **Save Resources** – Wasted food wastes the water, gasoline, energy, labor, pesticides, land, and fertilizers used to make the food. When we throw food in the trash, we're throwing away much more than food.
- **Return Nutrients to the Soil** – If you can't prevent, reduce or donate wasted food, you can compost. By sending food scraps to a composting facility instead of to a landfill or composting at home, you're helping make healthy soils. Adding compost to gardens, highway construction sites, and poor soils makes great things happen. Properly composted organics (wasted food and yard waste) improve soil health and structure, improve water retention, support more native plants, and reduce the need for fertilizers and pesticides.

<https://www.epa.gov/sustainable-management-food/sustainable-management-food-basics>

Municipal Collection service that does not require extra truck routes (subscription based):

<https://www.organixsolutions.com/green-bag-organix/green-bag-organix-program>

Biogas production for energy co-generators:

http://biogas.ifas.ufl.edu/foodwaste/documents/Nov_TAG_meeting_presentation.pdf

Some other food waste reduction ideas:

- **Kingston Upon Thames – a borough of London – changed its recycling and waste collection to every two weeks while collecting kitchen compost every week.**
- San Francisco made composting mandatory, reducing waste and cutting disposal costs.



Getting Started: 10 Questions for Cities and Towns Considering Residential Curbside Composting

In recent years, an increasing number of municipalities have begun to explore the economic and environmental benefits of citywide residential composting programs. These programs can greatly increase the amount of waste diverted from landfills and potentially lead to reduced waste disposal fees as well. Cities and towns considering the implementation of such programs will be faced with a number of fundamental questions. The questions provided below are intended to help municipalities become aware of the varied decisions and considerations that they will have to contend with when evaluating the feasibility of new composting programs.

1. Who will collect food waste?

A city's relationship with local waste haulers can be a key factor in determining the success of future programs. In over 70% of cities with effective residential composting programs, a single private contract hauler collects trash, recycling, and organic waste. Just 10% of cities operate a municipally run collection program, while only 6% of cities allow multiple haulers operating under open competition to provide services.ⁱ

The presence of exclusive contracts allows haulers to maximize route density, which results in more efficient and profitable programs. Public officials in San Francisco point to the city's long-term, mutually beneficial contract with their hauler when discussing the success of their program. Long-term commitment from the city has allowed the hauler to make significant investment in future capacity and has helped the program to become one of the more successful programs in the country.

In other cities a small number of haulers divide collection responsibility geographically, with little to no overlap. In Seattle, two private haulers are each responsible for separate portions of the city. This allows for dense efficient collection of waste while maintaining a level of competition among waste haulers.

2. What will be collected?

Deciding what type of organic material will be accepted is another important decision for any city considering a new composting program. The majority of current municipal composting programs depended heavily on yard waste in their early stages. Most found that adding food waste to an existing yard waste program is the quickest, easiest, and least expensive way to implement a new program.

Over 90% of programs currently accept meat and dairy. In fact, pilot programs conducted in San Francisco in the late 90's found that those pilots that accepted meat and dairy had noticeably higher diversion and participation rates than those pilots in which only vegetable matter was accepted.ⁱⁱ

Paper products are another important material for cities to consider. In some communities paper was reported to make up as much as 50% of the total material collected by weight. Food soiled paper has been recognized as a particularly effective means of improving participation rates, with studies noting that it is relatively easy to get residents to include items such as pizza boxes in the organics stream. This helps to get the public started in the program and increases participation rates.

Of course processing capability in the local region will likely have the greatest influence on what a program is able to accept. Compostable serving-ware is a good example of this constraint. In areas served by processors capable of handling large volumes of compostables, serving-ware is typically accepted. This is less common in

communities with small volume processing facilities.

3. How will it be collected?

There are a number of factors that need to be considered when answering the “how” of food waste collection. Frequency of collection, variety of bins offered to residents, and acceptance of compostable trash bag are a few of the issues to consider.

Frequency

Collection frequency tends to vary with region and season. The majority of programs offer weekly collection. This helps to reduce sanitation concerns and complaints of smell. In winter or in regions with colder climates collection may be reduced to every other week. This can reduce the costs associated with collection.

Recently cities with more mature programs have begun implementing composting collection every week, while at the same time reducing trash collection to every other week. This is intended to create an additional incentive for households to increase diversion rates.

Bin Types

The vast majority of operating programs currently use wheeled lidded carts ranging in size from 32 to 96 gallons. Use of different sized carts allows programs to charge varying rates depending on the volume produced by households.

Bags

Most programs currently allow compostable garbage bags, but do not actively encourage their use. Compostable bags are often expensive for the consumer and frequently pose a challenge for processors who find that the bags do not break down easily during the composting process. Many programs instead encourage the use of paper to line composting bins.

Kitchen pails

The use of kitchen pails is a source of debate among cities with successful food waste collection programs. Many cities provide citizens with small 1-2 gallon containers that are intended for use as temporary kitchen storage devices. Some

programs advocate their use, while others claim the pails go unused and are an unnecessary expense. Most mature programs are trending away from providing residents with pails, preferring instead to educate households on the use of alternatives already present within the home.

4. Where will it be taken after collection?

Processing capacity has proven to be a significant constraint for various locations throughout the country. The City of Cambridge cites lack of processing capacity in eastern

Massachusetts as the most significant factor preventing the expansion of their current small-scale drop-off only program to a full-scale curbside collection program.

By contrast, cities with successful full-scale programs such as Seattle and San Francisco are located near large commercial composting facilities capable of processing as much as 500 tons per day. In comparison, most facilities in eastern Massachusetts are small farms permitted to process only about 15 tons per day.

Proximity to processing facilities may also pose a challenge for certain cities. In 2010 Denver cancelled what had been a successful residential curbside composting pilot program due to high cost of operation. The high cost was attributed primarily to the long haul distance required to reach the processing facility.

Please refer to the accompanying paper, *Anaerobic Digestion in Managing Food Waste* for additional information on processing capabilities.

5. How will communities fund collection and how will residents pay for it?

Communities currently fund collection of household waste through three primary methods:

- Revenue collected through property taxes

Adding food waste to an existing yard waste program is the quickest, easiest, and least expensive way to implement a new program.



- Fixed fees from households
- Pay-as-you-throw (PAYT).

PAYT is currently in place in 26% of communities nationwide. Among communities with successful composting programs the rate is significantly higher, with 80% using a PAYT structure.ⁱⁱⁱ

This disproportionately high number of composting cities using PAYT is unsurprising given that PAYT, when combined with a rate structure in which citizens pay less for the disposal of organic waste than trash, can provide a significant economic incentive for citizens to participate in the program.

Boulder, Colorado provides an example of the economic incentives provided by PAYT programs. In Boulder residents are offered a choice between a 32, 64, or 96-gallon trash container, with rates increasing with size. During the city's initial pilot in 2006 residents were given an additional 32-gallon container to be used for the collection of compostables. This resulted in a 12% drop in the number of households subscribing to a 64 or 96-gallon service.^{iv}

For cities where true PAYT programs are not feasible, an alternative is to require that haulers embed a minimal level of composting service within trash rates so that all households pay for the service. This typically results in a moderate increase in rates for customers. When Boulder implemented this type of mandate, residential waste disposal bills increased by an average of \$2.50 per month.

6. Will food waste collection save households money?

Savings per household will vary significantly from region to region. Local collection rates and differences in quantity of waste produced per household account for much of the variability. In many cases households will actually be required to pay slightly more for food waste collection. This increase is highly dependent upon the local tipping fees at landfills and organic waste processing facilities.

In cases in which residents are asked to pay more to participate in composting programs it is helpful to emphasize the potential for minimizing these increases by increasing household diversion. It is also helpful to motivate citizens by emphasizing the positive environmental impact of composting.

The accompanying spreadsheet tools can give households and municipalities a good estimation of the potential costs and environmental impacts associated with residential composting.

7. What local organizations can help?

Among communities with successful composting programs the rate is significantly higher, with 80% using a PAYT structure.

Holding a regional organics summit can be an effective means of ensuring various organizations are involved in identifying and overcoming barriers to organic waste diversion. Processors, generators, haulers, decision-makers, and regulators all have a stake in the development of residential composting programs and should be encouraged to work together to effectively solve shared challenges.

In addition, citizens groups such as Sustainable Arlington can help to generate significant public interest in these programs and provide the public support necessary for success. Sustainable Arlington has been instrumental in the current push for a new municipal composting program in Arlington, Massachusetts.

State environmental institutions can also be called upon to provide assistance in the implementation of the municipal composting programs. Both Denver and Cambridge received financial assistance in the form of state grants when beginning their respective composting initiatives. In San Francisco, the city Department of the Environment annually distributes \$600,000 in grants to nonprofit organizations in support of:

- Innovation in reuse
- Market development
- Education
- Various other recycling and composting initiatives



Local colleges and universities have also provided significant assistance in the implementation of organics programs. These institutions often have significant access to grants and other sources of funding necessary to begin pilot programs. Additionally, college and university students can often provide the labor and enthusiasm necessary for the initiation of new programs.

8. What educational campaigns can be helpful?

It is impossible to overstate the importance of comprehensive public education campaigns. These campaigns are essential to the success of any new residential composting program. In 2009, after completing a rigorous outreach program, Seattle successfully implemented a major new curbside solid waste collection program, which included the addition of a mandatory residential composting service. The program included a 42% rate increase and affected 530,000 customers. Despite these potential challenges, the city reports that 90% of residents were aware of the new program prior to implementation and 90% feel “very satisfied” with the new program.^v

The success of this program implementation is due in large part to the multiple forms of media that the city used to reach citizens, including:

- Newsletters
- Newspaper articles
- City websites
- Multiple forms of advertising
- Clear instructions on the new trash receptacles
- Community meetings

In San Francisco, Department of the Environment maintains a team of full-time “zero-waste” specialists. These individuals perform waste audits, provide technical assistance to residents and businesses, and knock on thousands of doors whenever rules change. San Francisco also leverages a strong relationship with the local media in order to generate positive impressions of the city’s programs and increase participation rates.

9. What legislation or changes to city code may be necessary to ensure success?

Although participation in residential composting campaigns is voluntary in over 90% of programs, legislation does play a major role in many of the most successful programs. Participation is mandatory for residents of San Francisco and Seattle. In Boulder, independent haulers are required to embed curbside composting into their standard residential trash service. In Massachusetts, the Department of Environmental Protection is working on a plan to ban food scraps from commercial waste streams in 2014.

Local governments can also facilitate the growth of composting programs by streamlining the permitting and siting procedures for processing facilities. They may also spur development by reducing permitting fees, which have the potential to make development economically infeasible. Taking these actions would be a major step in reducing the lack of processing capacity in regions like Eastern Massachusetts.

10. What can be learned from the difficulties that other cities have faced?

Cities must be aware of the difficulties they will face during the implementation process. When possible, it is best to take lessons from cities that have already faced similar challenges.

One frequent challenge is resistance from citizens fearful of smell, the “yuck” factor, and vermin. In each of these cases, education is a very effective means of combating such concerns. Freezing, wrapping in paper, and layering with yard waste are all effective methods for dealing with unpleasant food scraps. It is also helpful to remind citizens that, with the exception of households using garbage disposals, no new materials are being added to waste bins. It is simply a matter of moving contents to a separate bin. Pests and animals should be of no greater concern than they were before implementation of the new program.

Wildlife disturbances are another common concern for citizens living in more rural locations. A recent survey of Boulder residents reported that 25% of households have experienced some type of animal disturbance. Again, education can significantly reduce these challenges. The use of proper waste disposal containers with functioning lids must be encouraged. In addition, citizens should be cautioned against leaving waste containers out overnight, as most animals likely to cause disturbances are active primarily at night.

More significant difficulties usually stem from unfavorable costs and lack of processing capacity as discussed above. These issues have been enough to halt pilot programs in Denver and in Burnsville, Minnesota. Despite the setback, local officials in both cities remain optimistic about the potential success of future programs. Citizens in both cities continue to demonstrate significant interest in municipal composting services. The introduction of new processing facilities would significantly improve the economic prospects of composting in both locations.

ⁱ Econservation Institute, Best Management Practices, <http://www.foodscrapsrecovery.com/research.html>

ⁱⁱ Macy, J. (2000, February) San Francisco Takes Residential Organics Collection Full-Scale. Biocycle

ⁱⁱⁱ EPA, 2006 PAYT Programs, <http://www.epa.gov/epawaste/conserve/tools/payt/states/06comm.htm>

^{iv} SERA, (2007, September) Boulder Colorado Pilot Recycling Program Report

^v Seattle Public Utilities, SWANA Excellence Award Nomination: Marketing

Scott Westover to Marilou, Darwin, me, Dwayne

Sep 4

I inadvertently typed #14 twice earlier. The correct responses to #13 through #15 are as follows:

I believe #13 and #14 are the same number: 570,145,048 gallons.

#15 is 520,883,896 gallons.

Sorry for any confusion.

SCOTT WESTOVER | Engineering Manager

Telephone: (734) 484-4600 ext. 220 | Facsimile: (734) 484-4699

swestover@ycua.org

Ypsilanti Community Utilities Authority

[2777 State Road](#) | [Ypsilanti, Michigan](#) [USA](#) [48198-9112](#)

www.ycua.org

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From: Scott Westover

Sent: Tuesday, September 4, 2018 1:00 PM

To: 'Marilou Uy' <MUy@cityofypsilanti.com>

Cc: Darwin McClary <dmccclary@cityofypsilanti.com>; kmichalowski@gmail.com; Dwayne Harrigan <DHarrigan@ycua.org>

Subject: RE: Reporting metrics

We can't help you with #12, there isn't much data over here about trees.

I believe #13 and #14 are the same number: 570,145,048 gallons.

#14 is 520,883,896 gallons.

Those numbers came from Dwayne, who also gave me combined City and Township amounts for both water and wastewater.

We're not sure if that is what you are looking for 'communitywide' or not. If so, water is 3,898,110,744 gallons and wastewater is 8,858,396,000 gallons.

SCOTT WESTOVER | Engineering Manager

Telephone: (734) 484-4600 ext. 220 | Facsimile: (734) 484-4699

swestover@ycua.org

Ypsilanti Community Utilities Authority

[2777 State Road](#) | [Ypsilanti, Michigan](#) [USA](#) [48198-9112](#)

www.ycua.org

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SECTION 2: Reporting Metrics

Energy:

1. Total annual municipal energy consumption. (MBTU)
2. Total annual communitywide energy consumption. (MBTU)
3. Annual energy savings from municipal building and/or lighting upgrades. (MBTU)
4. Total annual local government renewable energy generation. (kWh)
5. Total annual local government renewable energy purchased. (kWh)
6. Number of certified green buildings within the boundaries of the local government, including commercial and residential. (LEED, ENERGY STAR, or other similar certification programs)
7. Most recent communitywide greenhouse gas emissions inventory. (MTCO₂e)

Resource Management:

8. Materials recycled communitywide. (tons/year)
9. Materials composted communitywide. (tons/year)
10. Materials landfilled or incinerated by local government. (tons/year)
11. Percent impervious surface communitywide.
12. Percent tree canopy cover communitywide.
13. Annual municipal water consumption. (gallons)
14. Annual communitywide water use. (gallons)
15. Annual communitywide wastewater. (gallons)
16. Total acres of parkland.

Transportation:

17. Number of vehicles in government fleet.
18. Number of hybrid electric and electric vehicles in government fleet.
19. Number of alternative-fuel vehicles in government fleet.
20. Annual fuel savings through green fleet upgrades. (gallons of petroleum-based fuel reduction)
21. Installed non-motorized infrastructure (e.g., bike lanes, sidewalk). (miles)
22. Percent sustainable commutes by mode type. (% walked, % biked, % public transportation)