

02-15-23 ENVIRONMENTAL COMMISSION MEETING AGENDA

MODIFIED 02-10-23

PAGE 1 OF 1

Date: Wednesday, February 15, 2023

Time: 6:00 pm

Place: Conference Room on 10<sup>th</sup> floor of City Hall, 161 W Michigan Avenue, Jackson, Michigan

I. Call to Order

II. Roll Call

III. Adoption of the Agenda

IV. Approval of the minutes for the 01-18-23 meeting.

V. New Business

VI. Old Business

a) Environmental Action Plan (EAP) Revisions/Updates

VII. 2023 Priority Issues (discussion)

a) Urban Forestry

b) Land use / pollinators

c) Energy efficiency and inventory

VIII. Citizen Comments (3 minute limit)

IX. Commissioner Comments

X. Next Meeting – Wednesday, 03-15-23 at 6:00pm

XI. Adjournment

# **ENVIRONMENTAL COMMISSION 01-18-23 MEETING**

## **MINUTES (PREPARED 01-30-23)**

### **PAGE 1 OF 4**

Date: Wednesday, January 18, 2023

Time: 6:00 pm

Place: Conference Room on 10<sup>th</sup> floor of City Hall, 161 W Michigan Avenue, Jackson, Michigan

*I. Call to Order Chairperson Kazmier called the meeting to order at 6:04 pm.*

#### **II. Roll Call**

**Present:** *Commissioner Jane Flores, Commissioner Kelsey Heck Wood, Commissioner Jacob Inosencio and Commissioner Kelli Kazmier.*

**Absent:** *Commissioner Will Forgrave (Sixth Ward Councilmember), Commissioner Kevin Lund.*

**Staff:** *Troy R White, City of Jackson Engineering*

#### **III. Adoption of the Agenda**

*Motion made by Commissioner Inosencio and seconded by Commissioner Flores to amend the agenda for Item IX (Revisions/Updates of Environmental Action Plan (EAP)) to be moved to in front of Item VI (Determination of 2023 Priority Issues). Motion approved unanimously.*

*Motion made by Commissioner Inosencio and seconded by Commissioner Flores to approve the agenda as amended. Motion approved unanimously.*

#### **IV. Approval of 11-16-22 meeting minutes**

*Motion made to Commissioner Inosencio to approve the minutes with the following corrections:*

*1) Item VIII, Citizen Comments: Mr. Bormuth's comment requires correction to read that the subject trees were marked for removal but not actually removed.*

*2) Item X, Next Meeting: requires correction to show that the December meeting was cancelled (not the November meeting).*

*Motion was seconded by Commissioner Heck Wood. Motion was approved with three yes votes, zero no votes and one abstention.*

## **V. Election of Officers**

### **i. Chair**

*Commissioner Heck Wood nominated Commissioner Kazmier to serve as chair. Commissioner Kazmier consented to serve. Commissioner Flores supported the nomination. Commissioner Kazmier was elected chair unanimously.*

### **ii. Vice Chair**

*Commissioner Flores nominated Commissioner Heck Wood to serve as vice chair. Commissioner Heck Wood consented to serve. Commissioner Inosencio supported the nomination. Commissioner Heck Wood was elected vice chair unanimously.*

### **iii. Secretary**

*Commissioner Kazmier nominated Mr. White to serve as Secretary. Mr. White consented to serve. Commissioner Inosencio supported the nomination. Mr. White was elected secretary unanimously.*

## **IX. Revisions/Updates to Environmental Action Plan (EAP)**

*Commissioner Kazmier suggested that discussions of the EAP be used to help determine priorities for 2023. She suggested that the process for this year follow that for last year – she will take notes for the update discussions and bring back text for an EAP amendment for approval by the Commission next month.*

*Commissioner Inosencio requested redlines of the proposed changes.*

*A question arose as to the need to revise the goals contained within the EAP to include numbers and metrics.*

*Commissioner Inosencio stated that numbers are necessary. Such as:*

*How much garbage does the City generate?*

*How many lead water services exist and what is the pace of replacement?*

*How much canopy cover do we have?*

*What are the City's CO<sub>2</sub> emissions?*

*What is the City's energy use?*

*Commissioner Inosencio then suggested that it may take time to determine current conditions, discuss goals and determine deliverables. Perhaps a year to collect data, a year after to develop a plan, and another year after to measure progress. The work may be of a quantity that a grant to fund it may be required.*

*Commissioner Kazmier suggested that the focus of 2023 be to gather data. She proposed that the Commission revisit at this time next year to do an inventory of collected data.*

*Commissioner Inosencio suggested that the Commission could advise the City to issue an RFQP for a study of those areas of concern.*

*Commissioner Kazmier suggested that the focus would have to be defined to those areas of most concern and that she could potentially support a grant request. She summarized discussion by stating that we need to know where we are currently to determine future goals.*

*Commissioner Kazmier volunteered to prepared EAP modifications for consideration by the Commission. She stated that she didn't see a need to change the organization of the document but accomplishments need to be updated.*

*There was discussion regarding each EAP chapter and revisions suggested. Commissioner Kazmier will make these revisions to the text and bring them back for Commission approval.*

## **VI. Determination of 2023 Priority Issues**

*Commissioner Kazmier suggested selecting three priority issues – but it could be more or less.*

*Commissioner Heck Wood related that her preferred priorities are urban forestry and urban gardening.*

*Commissioner Flores related that her preferred priorities are pollinators and related vegetation, urban forestry and the Cascades lagoons.*

*Commissioner Inosencio related that his preferred priorities are energy efficiency and inventory, urban forestry, and pollinators and plantings.*

*Commissioner Kazmier related that her preferred priorities are urban forestry, urban pollinator gardens and land use.*

*After discussion, the following were selected by consensus to be the 2023 priority issues:*

- 1) Urban forestry*
- 2) Land use for pollinators*
- 3) Energy efficiency and inventory*

## **VII. Committee Assignments**

*Commissioner Inosencio stated that as everyone on the Commission has an interest in all of the priority issues perhaps it would be better for all Commissioners to work on them together rather than in committees.*

*Commissioner Kazmier expressed support for the idea of not formalizing committees but rather using the regularly scheduled Commission meetings for work sessions. Perhaps at regular meetings, breakout meetings could be planed and scheduled for proper public notice on an “as-needed” basis.*

*Following discussion, it was agreed by consensus that there will be no committee assignments and work groups will be scheduled when needed.*

**VIII. 2023 Priority Issues Committee Discussions**

*As there are no committees, there was not committee discussions.*

**X. Old Business**

*None.*

**XI. New Business**

*None.*

**XII. Citizen Comments**

*Peter Bormuth of 142 W Pearl Street provided comments regarding the Cascades lagoons, solid waste management in Jackson County, millages, and cost-free energy audit options. He also commented that newly elected officials at the state level may make room for cities to govern.*

**XIII. Commissioner Comments**

*None.*

**XIV. Next Meeting – Wednesday, February 15, 2023 at 6:00pm**

**XV. Adjournment**

*Motion made by Commissioner Heck Wood and seconded by Commissioner Inosencio to adjourn. Motion approved unanimously. Meeting ended at 7:37 pm.*

# **City of Jackson Environmental Action Plan Date: 02/15/23**

*Reaffirming Commissioners: Jane Flores, Will Forgrave, Kelsey Heck Wood, Jacob Inosensio, Kelli Kazmier, Kevin Lund, and Troy White*

## **Executive Summary**

In February of 2018, the Jackson City Council created the Environmental Commission (EC) following the recommendation of Mayor Derek Dobies. The EC was tasked with helping to create a healthier, greener, and more sustainable future for the City of Jackson. The EC works to examine policy and make recommendations to the city council for implementation of strategies towards this end. The EC is composed of members with experience in natural resource management, environmental health and safety, sustainable energy use and urban development, the science of climate change, and environmental justice. It is the goal of the EC to engage with community of Jackson to set priorities and address challenges as we move toward improving the quality of life for our citizens.

Since its inception, this commission has sought to identify priorities and actionable recommendations for the city. We have listened to community stakeholders and organizations, brought together ideas based in our own areas of expertise, as well as incorporated best practices from our peer communities. While there is much to be done, we present this document as a summary of our goals for our work and for the future of the city. As a part of our work, we will continue to expand and reevaluate our progress on these goals. Furthermore, we seek to deepen our connections within our community to ensure that environmental issues are addressed and the possibility for productive collaborations are leveraged.

The City of Jackson has made good progress in recent years towards a more sustainable and cleaner future. This Environmental Action Plan is designed to provide a framework for continuing and expanding this legacy. Implementation of this plan will allow the city to:

- Make our community a more sustainable, resilient, affordable, and vibrant place to live
- Improve the health and wellbeing of the community and the environment
- Conduct our local government operations in a more energy and resource efficient manner
- Utilize our public spaces and resources in environmentally friendly ways

Provide the information necessary to prepare for the impacts of environmental challenges. This plan suggests many actions related to energy efficiency, renewable energy, recycling and waste reduction, transportation, and water management. It is the hope of the EC that the following recommendations will serve as a catalyst for Jackson to make progress on its environmental challenges and propel Jackson to become a state leader among environmentally-friendly cities.

## Introduction and Overview

This Environmental Action Plan is designed to recommend to City Council environmental best practices that simultaneously protect the prosperity and health of our citizens and our natural systems. All of the goals explained within support this overall objective. We have outlined specific areas of interest as our first priorities for the city in the following chapters.

### Chapter 1: Environmental Accomplishments by Year

As a community, we can only begin to make progress once an inventory of challenges and current efforts have been compiled. The City of Jackson has been making significant progress in a number of areas. These efforts deserve recognition for the positive effects they have had in our community. These initiatives also serve as the launching point for many of the initial efforts of the commission.

### Chapter 2: Waste Management, Reduction, and Recycling

According to the Environmental Protection Agency, 139 million tons of trash were sent to landfills and only 35.2 percent of municipal solid waste was recycled or composted in 2017.<sup>1</sup> Production of trash and in particular single-use plastics has caused serious environmental damage to ecosystems and wildlife resulting in the Great Pacific Garbage Patch increasing to an estimated surface area of 1.6 million square kilometers as of 2020.<sup>2</sup> Continuously increasing trash waste is unsustainable and developing methods to reduce trash production and remediate current environmental contamination are key goals for communities, like ours, world-wide.

### Chapter 3: Protection of Water Resources

The water crisis in Flint brought into stark relief the importance of protecting local water infrastructure and access for the health of communities<sup>3</sup>. Aging infrastructure and our community's history of industrial production leave our water resources vulnerable to pollution and other health hazards<sup>4</sup>. While we are currently keeping up with these challenges it will be important to remain vigilant as we move to improve our communities water resources. We must continue to offer clean, affordable water to our citizens while balancing the various demands on our water resources and planning for potential changes in climate.

### Chapter 4: Energy Efficiency, Resource Management, and Transportation

The changing climate affects us all, and is the result of growing greenhouse gas emissions in our atmosphere from a variety of sources. The changing climate will also have a direct impact on our communities and our citizens, such as more extreme rainfall events and flooding, combined with negative impacts on agriculture, infrastructure, and human health.<sup>5</sup> The IPCC 2018 Special Report recommends that to mitigate climate change and to keep the world under 1.5 degrees Celsius, carbon dioxide emissions need to be reduced by 45% by 2030, and should reach net-zero by 2050.<sup>6</sup> To reach this goal, cities, states, and nations will need to make large transformations in energy systems, transportation, land use, urban infrastructure and industrial systems. There is a unique opportunity for cities to take the lead in the mitigation and adaption effort, and this is a key goal of the Environmental Action Plan.

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1 <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

2 <https://theoceancleanup.com/great-pacific-garbage-patch/>

3 <https://www.nrdc.org/flint>

4 [www.infrastructurereportcard.org](http://www.infrastructurereportcard.org)

5 [http://glisa.umich.edu/media/files/Great\\_Lakes\\_NCA\\_Synthesis.pdf](http://glisa.umich.edu/media/files/Great_Lakes_NCA_Synthesis.pdf)

6 Section C.1 in IPCC 2018 SR Summary for Policy Makers <https://www.ipcc.ch/sr15/chapter/spm/>

## Chapter 5: Sustainable Land Use

Environmentally-friendly land use and the development of green spaces have well-established benefits in environmental management, energy consumption, property values, and quality of life for city residents<sup>7</sup>. Recent research has suggested cities may contribute to biological diversity, ecological resilience, and agricultural sustainability through targeted urban landscaping ordinances<sup>8</sup>. It has also become increasingly clear that cities have a role to play in ensuring access to healthy and sustainable food for its citizens. Environmental use policy provides ample opportunities for cities to simultaneously decrease their ecological footprint while improving the well-being and connectedness of their citizens to their natural environments.

## Chapter 6: Community Engagement

The strength of our community depends on a clean and healthy environment. While Jacksonians value our natural resources, we have a history of environmental degradation that we must address. As we address this history, we must engage with our community to leverage the talents and expertise already available here to build resources that can improve our lives. Furthermore, it is our role to ensure that our successes are communicated to people of our city to build trust in our ability to address the challenges that we face. Finally, it is critical that we recognize that across our community we do not face environment challenges equally. A key part of our work will be to ensure that environmental ordinances are not discriminatory and address historical inequalities that have resulted from economic, racial, and environmental injustices.

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<sup>7</sup> [Www.epa.gov](http://www.epa.gov)

<sup>8</sup> <https://www.ecologyandsociety.org/vol11/iss1/art34/>



## Chapter 1 – Environmental Accomplishments by Year

### 2022

#### Refuse and Recycling Service Presentation

The EC shared recommendations for reevaluating solid waste service in the City in a presentation to City Council. Research suggested that peer communities were provided higher quality services for lower prices when communities moved to single hauler or city performed services.

#### Now Mow May Recommendation

The EC made recommendations to the City Manager and Council to develop a “No Mow May” ordinance in the City. This nationwide effort has local communities encourage growth of natural spaces and discourage landscape enforcement during the critical feeding window for bees in early spring toward the goal of restoring bee populations.

#### City Arborist Recommendation

The EC made recommendations to the City Manager and City Council to allocate funds to establish a City Arborist position to maintain the wellbeing of our trees, establish science-based tree selection, and conduct a tree canopy survey. This would allow Jackson to earn TreeCity USA status.

#### Community Garden Expansion

One half acre of growing space has been added to the community gardens at the King Center by Grow Jackson. Plans for further expansion are underway.

#### EPA Adds Michner Plating Site to Superfund Priority List

In March 2022, the EPA added the Michner Plating site on Mechanic Street to its Superfund National Priorities List. This will provide access to state and federal resources to address the environmental contamination at the site.

#### New Parks and Trails Interactive Map

The City unveiled its new interactive map showing all 28 public parks and 4 pedestrian trails.

#### State funding for Equality Trail and The Cascades

MLK Equality trail has received \$300,000 in state funding to repair and expand services for hiking and biking. Sparks Foundation County Park as also received \$300,000 to renovate tennis courts into 8 pickleball courts.

### 2021

#### Sustainable Procurement Recommendation

The EC made recommendations to the City Manager to help inform City Hall staff about sustainability in purchasing and to consider sustainability as a key value in procurement.

#### Refuse and Recycling Recommendation

The EC made recommendations to the City Manager to transition toward a single hauler system for refuse and recycling. Based on preliminary research, cities with single hauler systems provide higher quality service for more affordable prices.

### Urban Farming Ordinance

The City Council passed an Urban Farming Ordinance allowing the keeping of chickens, bees, and miniature pigs within City limits. This ordinance would allow residents to better and more sustainably control their food supply.

### Electric Vehicle Ordinance

An electric vehicle ordinance is under consideration by City Council. If approved, the ordinance would require developers to make parking ready for conversion to charging station technology.

### Dredging Lagoons in Sparks Foundation Park

Jackson City Council requested County Official dredge the lagoons in Sparks Foundation Park. The County has received \$1 million dollars from the State for this purpose. This project is meant to address high water level for nearby residents.

### Community Gardens Planted at King Center

Community gardens have been initiated at the King center through a partnership with Grow Jackson. The goal of this project is to address food insecurity in our community.

### Establishment of People for the Parks and Trails Volunteer Group

A resident-based group has formed toward the goal of maintain City parks and trails. The group has successfully completed its first year in 2021.

### Lead Service Line Replacements

The City of Jackson has plans to replace over 11,000 lead service lines in the City over the next 35 years. In 2021, The City replaced 67 lead service lines and 6100 feet of water main in 2021.

## **2020**

### Efficiency Upgrades

City Hall has undergone many efficiency updates from automatic LED lighting in all offices to reduce energy waste in locations where lights remain on. A new heating system was engineered to heat and cool the City Hall building.

### Noxious Weed Ordinance Update

In February 2020, the Environmental Commission sent recommendations to the City Council to revise the Noxious Weed Ordinance to include invasive species. The City Council approved and adopted these recommendations in April 2020.

### Champion Trees

The City of Jackson is home to several 'Champion Trees', rated by their girth by The University of Michigan, Jackson Audubon Society, and are cataloged in a database and compete for state as well as national recognition.

### Lead Paint Rehabilitation Grant

The City of Jackson was awarded a grant of \$2.9 million in 2018 to help with removal and remediation of lead-based paint hazards. This grant expires at the end of 2020, and could help fund projects that improve public as well as environmental health.

### Lead Copper Rule Remediation

In 2018, the State of Michigan expanded the Michigan Safe Drinking Water Act. Michigan now has the strongest protections in the nation regarding lead in drinking water. These changes require the creation of inventories of lead service lines, implement plans for the removal of lead service lines, and lowered the allowable level of lead in drinking water.

### Covid-19 Relief No-Water Shutoff Funding

In September of 2020, the City Council voted to allocate additional funding to assist residents with unpaid water bills because of the Covid-19 pandemic.

## **2019 and Earlier**

### Crime Prevention through Environmental Design

With natural access control, the City approves plans or encourages development to reduce potential escape routes and allow opportunities for the public to see into an open space. This is achieved with the planting of natural foliage in the landscape design. The city encourages natural surveillance, low landscaped shrubs, and large clear windows of store fronts to reduce the opportunities of illegal activity.

### Environmental Protection Standards

The City of Jackson's Development team encourages new projects to have as much green space as possible for the public's use. Developments receive additional project "credits" for approval of the project if they preserve existing vegetation and requiring the replacement of vegetation should some be removed.

### Narrowing of Major Streets, Widening of Sidewalk Paths

With the new I-94 corridor improvement, MDOT installed new sidewalks large enough to connect to the bike trail and lead into the city. Five-foot paths encourage the public to walk or ride, in addition to connecting footpaths to bike trails, residents have more opportunity to safely enjoy the natural landscape.

### Tree Planting

Through creative planning the city continues to add new street trees during development. Our landscape standards also stipulate specifications on the city tree fund and the funds collected are not allowed in the city's General Fund and may only be used for the purchase and installation of planting trees and shrubs.

### Landscape Ordinance/Maintenance

This establishes minimum standards for the design, installation and maintenance of landscape improvement. It restricts the approval of any site plan development that does not adhere to city landscape standards. Developers may earn credits by preserving existing vegetation, moving the required vegetation elsewhere on the site, using larger plant materials or an equal alternative measure.

### Smart Energy District

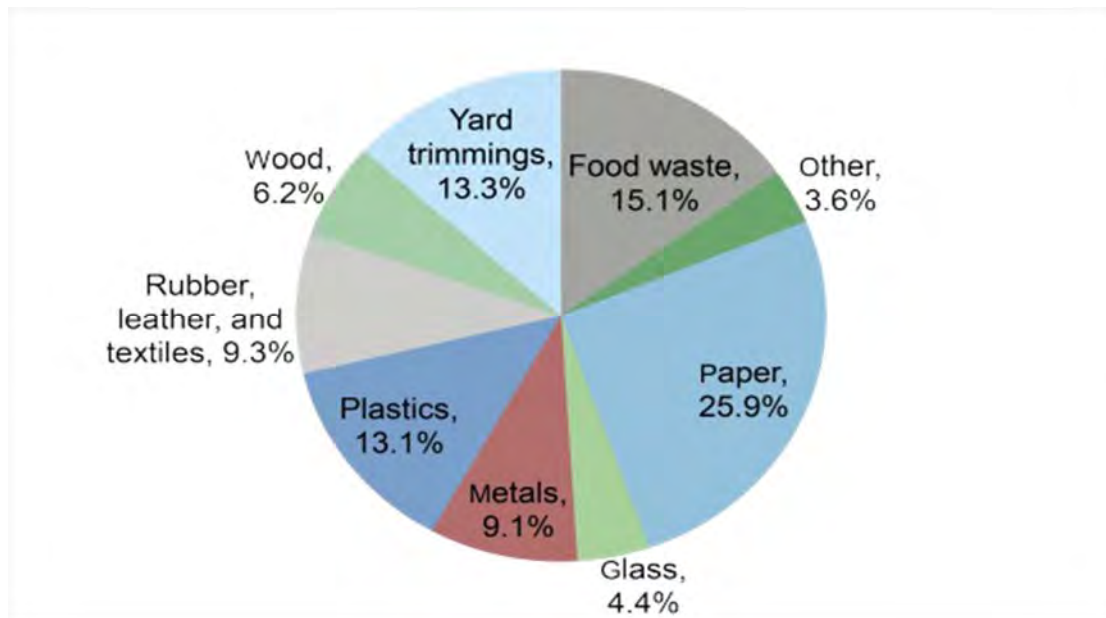
Consumers Energy requested community collaboration from the City of Jackson to create the Smart Energy District. The district will run from Michigan Ave, to Blackstone, to Pearl and ending at Jackson Street. The goal is to create a district that receives at least 40% of the energy from renewable energy resources.

## Chapter 2 – Waste Management, Reduction, and Recycling

### 2-A Waste Management and Recycling

“If we modernize our waste systems, enhance our recycling operations, and provide weekly, year round yard waste we truly will have greener, cleaner neighborhoods.” - Derek Dobies<sup>14</sup>

Municipal Solid Waste, more commonly known as trash or garbage, is a chronic feature of all cities and towns. It is produced from household, commercial, industrial, and government sources in the form of yard wastes, packaging, food scraps, appliances, and all other matter that is thrown away in the course of daily living.<sup>15</sup>



**Total U.S. MSW Generation by material for 2015. (EPA)**

There are many ideas for the sustainable management of municipal solid waste, including but not limited to: reduction of material at the source, landfills, combustion, composting and recycling. Composting<sup>16</sup> and recycling<sup>17</sup> are widely used across many cities in the United States.

In 2016, Jackson County amended their Solid Waste Management Plan. In this document, the County laid out details for three different scenarios for county-wide waste management, and ultimately selected a “hybrid” scenario for the county. This report could be a useful resource for the City of Jackson, and could provide guidance as to the creation of a city-wide waste management plan.<sup>18</sup>

<sup>13</sup> <https://medium.com/@derekdobies/mayor-dobies-2019-state-of-the-city-address-transcript-ba4aba05bd1b>

<sup>14</sup> <http://css.umich.edu/factsheets/municipal-solid-waste-factsheet>

<sup>15</sup> <https://www.drawdown.org/solutions/food/composting>

<sup>16</sup> <https://www.drawdown.org/solutions/materials/household-recycling>

<https://www.drawdown.org/solutions/materials/industrial-recycling>

<sup>17</sup> <https://www.co.jackson.mi.us/DocumentCenter/View/3086/Jackson-County-Solid-Waste-Management-Plan-Draft-2016-Amendment-of-the-1998-Update?bidId=>

**Tactics & Recommendation**

1. Support conversion of refuse and recycling services to affordable and accessible models.

## 2-B Reduce City Wide Plastic Use

“Plastic touches all of our lives, from the food packaging we buy to the computers we work with and the cars we drive. But many of the plastics you touch in your daily life are used only once and thrown away.” - Ocean Conservancy<sup>19</sup>

Plastics are all around us in our daily lives, from plastic bottles, to packaging, to medical equipment and cars. Much of this plastic is designed to be only used once and then thrown away. Mismanaged plastic can end up in inland waterways, and then make its way to the ocean. 55% of plastic produced ended up discarded or in landfills in 2015.<sup>20</sup>

At the global level, it is estimated that between 70 – 80% of all plastic waste found in the oceans originate from inland sources.<sup>21</sup>

However, many national, state, and local governments are taking action to reduce plastic waste and much of this action starts at the source. The best way to reduce the amount of plastic in circulation is to use less plastic products from the outset.

### Tactics & Recommendations

1. Request an emphasis on accessible recycling of plastics.
2. Promote use of water bottle refill stations.

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18 <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean/>

19 <https://ourworldindata.org/plastic-pollution>

20 <https://ourworldindata.org/plastic-pollution>

## **Chapter 3 – Protection of Water Resources**

### **3-A Water Resources Protection**

“No water, no life. No blue, no green.” - Dr. Sylvia Earle

Water resources are one of the most essential for life on this planet, and for life in the City of Jackson. The Grand River as an example, is deeply tied into the history of Jackson, and the identity of our community. The health of the river, and other water sources, is part of the health of the City of Jackson.

The health of our water is interconnected with the health of our communities, and the health of our environment. As the Flint Water Crisis has shown, as well as PFAs contamination throughout various site the state of Michigan, water is not only a vital resource but also a fragile one. Maintaining healthy water resources free of containment such as lead, pollution and other health issues is of great concern. Taking action to protect water resources and for water conservation are crucial to our wellbeing now, and into the future.

A changing climate can also put additional stresses on water supplies. Increased rainfall and precipitation is one likely culprit, and can have a strong impact on water resources. These impacts can range across storm water and drainage, foreign particles, agricultural and chemical runoff, as well as flooding and other issues that impact community as well as environmental wellbeing.

#### **Tactics and Recommendations**

1. Investigate and evaluate alternative models for city water access.
2. Provide City Council with feasible options to have no water shut-offs.
3. Investigate and promote lagoon dredging to address flooding issues.

## Chapter 4 – Energy Efficiency, Resource Management, and Transportation

### 4-A Recommend/Implementation of a Reforestation Initiative to Increase Local Tree Canopy

“By conducting the city’s first tree canopy survey, I hope we can study where to plant even more trees to not only beautify our neighborhoods and improve physical and mental health, but to clean and reduce stormwater runoff, decrease our cooling bills, and increase property values.” - Derek Dobies<sup>22</sup>

Trees and forests are vitally important for the health and sustainability of our city. Michigan was once completely covered in forests, but centuries of logging, development, and agricultural expansion have left us with far fewer trees and less resilient forests.<sup>23</sup>

Afforestation, creating forests where there are none, is one of the top ways to tackle carbon emissions, and a changing climate.<sup>24</sup> On a smaller and more local scale, trees are vital for sustainability as well as public health. Increasing the tree coverage and canopy of local cities can help to reduce the heat island effect, keep communities cool, retain water, and help reduce energy use.<sup>25</sup>



#### Tactics and Recommendations

1. Recommend that Council take necessary steps to receive Tree City USA designation.
2. Research and recommend local Tree Canopy Survey options and associated costs to implement City-wide Tree Survey.
3. Research opportunities for planting native trees and present findings to Council on ways that increased tree canopy.

21 <https://medium.com/@derekdobies/mayor-dobies-2019-state-of-the-city-address-transcript-ba4aba05bd1b>

22 <https://www.michiganradio.org/post/wilderness-wasteland-how-destruction-michigan-s-forests-shaped-our-state>

23 <https://www.drawdown.org/solutions/tree-plantations-on-degraded-land>, <https://www.drawdown.org/sectors/land-sinks>

24 <https://www.arboday.org/trees/climatechange/treeshelp.cfm>

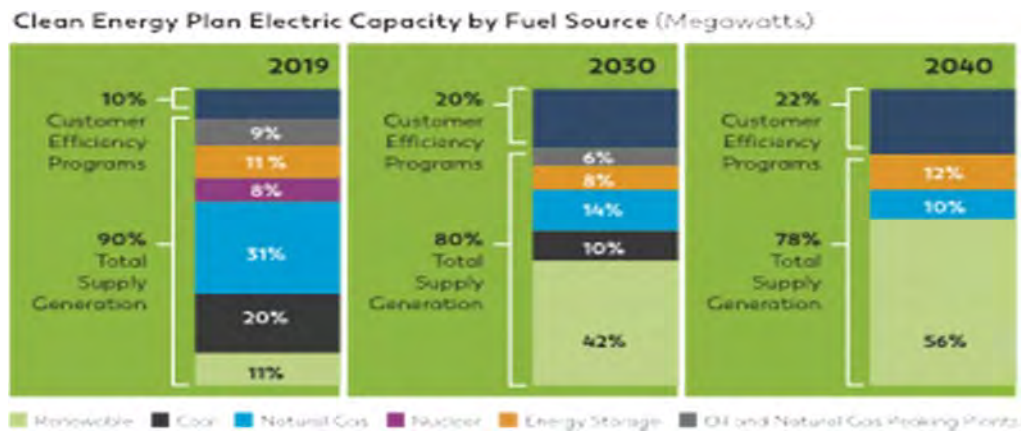


## 4-B Support Renewable Energy resources

“I have a simple hope for all of us in Michigan. When we look into the eyes of our grandchildren and they ask about climate change, I want us to be able to say, “that’s something we used to worry about.” - Patti Poppe<sup>26</sup>

Among the one hundred solutions proposed by Project Drawdown, renewable energy occupies three of the top ten most impactful solutions.<sup>27</sup> This includes onshore wind turbines, solar farms, and rooftop solar panels. There are many ways that this can be accomplished, including continued support for city renewable energy projects such as the proposed Smart District.

Consistent with the goals of this Climate Action Plan, much of Jackson's power comes from the Consumer's Energy grid system. Consumer's Energy has released a new Clean Energy Plan<sup>28</sup> in 2019. By meeting Consumer's own stated goals, Jackson has the potential to meet many of the goals of this Action Plan.



The Clean Energy Plan is built around an increase in renewable energy, storage, efficiency, as well as a 90% reduction in carbon emissions. Also of note is the decommissioning of coal based generation sources. In addition, many of Consumer's Energy stated goals are also consistent with the goals listed in the IPCC 2018 Special Report, granting a unique opportunity to simultaneously meet many goals related to renewable energy, as well as energy efficiency. (Section 4-C below.)

### Tactics and Recommendations

1. Meet with community stakeholders regarding Jackson Smart Energy District and determine the role the Environmental Commission will play in implementing renewable energy options.
2. Give recommendations to City Council how current commission can support increase of renewable energy or other carbon offsets.

<sup>25</sup> <https://www.mlive.com/news/2019/08/clean-energy-plan-is-consumers-energys-commitment-to-people-planet-prosperity.html>

<sup>26</sup> <https://www.drawdown.org/solutions>

<sup>27</sup> [www.Micleanenergy.com](http://www.Micleanenergy.com)

## 4-C Support City Wide Energy Efficiency Projects

“Energy efficiency is the unsung hero when it comes to reducing carbon dioxide emissions, because no matter how great our technological advancements are, the cheapest, cleanest kilowatt-hour will always be the one that is never used,” - US Senator Angus King<sup>29</sup>

Electricity generation accounts for almost 40% of annual global greenhouse gas emissions.<sup>30</sup> As such, one of the quickest routes to a cleaner, and greener city is to use electricity more efficiently. A reduction in the total use of electricity and energy has a measurable reduction in the corresponding emissions. Consumer's Energy, as in Section 4-B, has greater energy efficiency built into their long-term plans, and here too, the City can benefit from the cleaner grid.

In addition, there are many routes the City can take on its own to reduce energy consumption. Among them are more efficient buildings, lighting, and city infrastructure. Synergies could also exist from other places in this Plan, such as trees and green space, which notably reduce the heat island effect, and can lead to less energy needed for heating and cooling.

### Tactics and Recommendations

1. Research requirements of Green Building Certification.
2. Recommend to Council per the requirements, to enroll City of Jackson into the City LEED Certification program.
3. Conduct energy efficiency inventory of city buildings.
4. Recommend addition of solar panels to city properties.

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<sup>28</sup> <https://www.smith.senate.gov/us-sens-tina-smith-angus-king-jeff-merkley-press-enhance-nations-energy-efficiency-capabilities>

<sup>29</sup> <https://www.drawdown.org/solutions/electricity-generation>

## 4-D Support City Wide Efforts to Increase Walkability and Non-motorized Transportation

“A virtuous cycle is clear: With more infrastructure come more riders. Perhaps counterintuitively, with more infrastructure and more riders, safety improves. And the more bicycles there are traversing a city, the more it reaps numerous returns on investment, including the health benefits of cleaner air and greater physical activity.” - Drawdown “Bicycle Infrastructure”

With the goal in mind to reduce carbon emissions, low and zero-carbon transportation become an important consideration. Walkable cities<sup>31</sup> and bicycle infrastructure<sup>32</sup> are good ways to reduce the carbon impact of moving people around and supporting these efforts can have other effects on environmental impact as well as community health.

There is a draft called the Jackson City+ County Non-Motorized Plan<sup>33</sup> that proposes multiple bicycle and other use trails that connects the City of Jackson with other areas around the county, as well as multiple State Parks and other important areas of recreation including water trails and county parks.



(From Jackson City + County Non-Motorized Plan)

30 <https://www.drawdown.org/solutions/buildings-and-cities/walkable-cities>

31 <https://www.drawdown.org/solutions/buildings-and-cities/bike-infrastructure>

32 <https://walkbike.info/jackson/>

## **Tactics and Recommendations**

1. Recommend to Council to complete building family friendly network as defined in the Jackson City + County Non-Motorized Plan.
2. Research urban options to encourage more pedestrians in City of Jackson.
3. Recommend continuation of Iron Belt trail and Lake to Lake Trails.
4. Evaluate current JADA bus routes and consider recommendations to encourage use.
5. Consider changes to road diet and pedestrian conversions.

## Chapter 5 – Sustainable Land Use

### 5-A Sustainable Options for Vacant City-owned Lots

The creation of a sustainable plan for land-use has a huge number of benefits for environmental and human wellbeing. The proper management of land can sequester carbon, cool local areas, protect and conserve natural spaces, and enhance biodiversity. Similar in many ways to water resources, the sustainable management of land-based systems can support human and natural wellbeing.

In this section, there are huge number of possible routes and impactful solutions:<sup>34</sup>

- Urban gardens
- Farm to Table
- Forestry (Afforestation, restoration, preservation, etc)
- Parks/Green spaces
- Cultivated habitats

In context of public spaces, the City of Jackson has the potential to develop a comprehensive plan that enhances city beauty, environmental sustainability, and community health and wellbeing. Many ideas can enhance and support existing policies and ordinances such as:<sup>35</sup>

- To aid stabilizing the environment's ecological balance
- To provide visual buffering and enhance beautification of the city
- To encourage the preservation of existing trees and vegetation
- To conserve energy, and to protect the public health, safety, and general welfare

#### Tactics and Recommendations

1. Research options for re-purposing vacant lots (urban gardens, farm to table, forestry, etc).
2. Research Urban pollination efforts and options for lots and process for certification under Bee City USA program.
3. Recommend to Council to create pilot plan/implementation for possible re-purpose of vacant lots as suggested by the Commission.
4. Work to expand King Center gardens.

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<sup>33</sup> <https://www.drawdown.org/sectors/land-sinks>

<sup>34</sup> Landscape Standards Ordinance Sec 28-105

## **5-B Sustainable Options for Privately-owned Lots**

Cities are more than just buildings and public lots. Cities are made up of people, every day private citizens. It is impossible to create a viable climate plan without including residents, and especially privately owned lots. Community support is crucial for success, and so input and feedback is necessary. The City can work in conjunction with private citizens to help create sustainable neighborhoods and landscaping regulations that allow for the growth of private gardens, cultivated spaces, and a whole host of other ideas that boost community as well as environmental wellbeing.

Many of the ideas of Action Item 5-A can come into play here as well, with education and outreach that encourage citizens to create private and community gardens, grow natives trees and plants, and cultivate their own spaces in ways that serve environmental function, increase land value, as well as make the city more pleasing and beautiful.

### **Tactics and Recommendations**

1. Encourage planting of beneficial native plant species on private lots.
2. Review landscape ordinance to encourage natural landscaping.
3. Encourage passage of No Mow May ordinance.

## **Chapter 6 – Community Engagement**

The success of this action plan depends on interaction with the public. Education and outreach are the keys to this success. Through these effort citizens can remain informed and engaged with the environmental efforts of the city. The City of Jackson and Jackson County is home to numerous organizations and non- profits, and coordination and networking with these organizations can promote existing work and feedback into efforts of the Environmental Commission. Education and outreach are two-way streets. Engaging with the public is an essential part of the work, but so is feedback from citizens.

### **Tactics and Recommendations**

1. Environmental Commission booths/tables at city events (Earth Day, etc).
2. Pamphlets, articles, printed education material for distribution, education and feedback.
3. Establish collaborations with the Grand River Environmental Action Team (GREAT), the Jackson District Library, Ella Sharp Museum, Dahlem Center, Active Jackson, and Jackson County Conservation District.
4. Throughout the year, highlight different seasonal efforts such as National Pollution Prevention Day (September), Earth Day and Arbor Day (April).
5. Conduct citizen surveys.
6. Coordination with state level agencies such as EGLE to create informational and awareness efforts for public education.

## City of Jackson Environmental Action Plan Date: 02/156/232

Reaffirming Commissioners: Jane Flores, Will Forgrave, ~~Bethany Hersha~~, Kelsey Heck Wood, Jacob Inosensio, Kelli Kazmier, Kevin Lund, ~~and~~ Troy White

### Executive Summary

In February of 2018, the Jackson City Council created the Environmental Commission (EC) following the recommendation of Mayor Derek Dobies. The EC was tasked with helping to create a healthier, greener, and more sustainable future for the City of Jackson. The EC ~~will works to~~ examine policy and make recommendations to the city council for implementation of strategies towards this end. The EC is composed of members with experience in natural resource management, environmental health and safety, sustainable energy use and urban development, the science of climate change, and environmental justice. It is the goal of the EC to engage with community of Jackson to set priorities and address challenges as we move toward improving the quality of life for our citizens.

Since its inception, this commission has sought to identify priorities and actionable recommendations for the city. We have listened to community stakeholders and organizations, brought together ideas based in our own areas of expertise, as well as incorporated best practices from our peer communities. While there is much to be done, we present this document as a summary of our goals for our work and for the future of the city. As a part of our work, we will continue to expand and reevaluate our progress on these goals. Furthermore, we seek to deepen our connections within our community to ensure that environmental issues are addressed and the possibility for productive collaborations are leveraged.

The City of Jackson has made good progress in recent years towards a more sustainable and cleaner future. This Environmental Action Plan is designed to provide a framework for continuing and expanding this legacy. Implementation of this plan will allow the city to:

- Make our community a more sustainable, resilient, affordable, and vibrant place the live
- Improve the health and wellbeing ~~for of~~ the community and the environment
- Conduct our local government operations in a more energy and resource efficient manner
- Utilize our public spaces and resources in environmentally friendly ways

~~Allow our community to better~~ Provide the information necessary to prepare for the impacts of ~~environmental challenges~~ climate change

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This plan suggests many actions related to energy efficiency, renewable energy, recycling and waste reduction, transportation, and water management. ~~This plan includes objectives to:~~

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~~Reduce landfill waste by 10% in 5 years by 2025~~

~~Protect public water resources and water infrastructure~~

~~Reduce city wide carbon emissions by 90% by 2050~~

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~~Implement a healthy and sustainable food initiative by 2025~~

~~Incorporate public education and communication into all work~~

It is the hope of the EC that the following recommendations will serve as a catalyst for Jackson to make progress on its environmental challenges and propel Jackson to become a state leader among environmentally-friendly cities.

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## Introduction and Overview

This Environmental Action Plan is designed to recommend to City Council environmental best practices that simultaneously protect the prosperity and health of our citizens and our natural systems. All of the goals explained within support this overall objective. We have outlined specific areas of interest as our first priorities for the city in the following chapters.

### Chapter 1: ~~Recent~~ Environmental Accomplishments by Year

As a community, we can only begin to make progress once an inventory of challenges and current efforts have been compiled. The City of Jackson has been making significant progress in a number of areas. These efforts deserve recognition for the positive effects they have had in our community. These initiatives also serve as the launching point for many of the initial efforts of the commission.

### Chapter 2: Waste Management, Reduction, and Recycling

According to the Environmental Protection Agency, 139 million tons of trash were sent to landfills and only 35.2 percent of municipal solid waste was recycled or composted in 2017.<sup>1</sup> Production of trash and in particular single-use plastics has caused serious environmental damage to ecosystems and wildlife resulting in the Great Pacific Garbage Patch increasing to an estimated surface area of 1.6 million square kilometers as of 2020.<sup>2</sup> Continuously increasing trash waste is unsustainable and developing methods to reduce trash production and remediate current environmental contamination are key goals for communities, like ours, world-wide.

### Chapter 3: Protection of Water Resources

The water crisis in Flint brought into stark relief the importance of protecting local water infrastructure and access for the health of communities<sup>3</sup>. Aging infrastructure and our community's history of industrial production leave our water resources vulnerable to pollution and other health hazards<sup>4</sup>.

While we are currently keeping up with these challenges it will be important to remain vigilant as we move to improve our communities water resources. We must continue to offer clean, affordable water to our citizens while balancing the various demands on our water resources and planning for potential changes in climate.

### Chapter 4: Energy Efficiency, Resource Management, and Transportation

The changing climate affects us all, and is the result of growing greenhouse gas emissions in our atmosphere from a variety of sources. The changing climate will also have a direct impact on our communities and our citizens, such as more extreme rainfall events and flooding, combined with negative impacts on agriculture, infrastructure, and human health.<sup>5</sup> The IPCC 2018 Special Report recommends that to mitigate climate change and to keep the world under 1.5 degrees Celsius, carbon dioxide emissions need to be reduced by 45% by 2030, and should reach net-zero by 2050.<sup>6</sup> To reach this goal, cities, states, and nations will need to make large transformations in energy systems, transportation, land use, urban infrastructure and industrial systems. There is a unique opportunity for cities to take the lead in the mitigation and adaption effort, and this is a key goal of the Environmental Action Plan.

1 <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>

2 <https://theoceancleanup.com/great-pacific-garbage-patch/>

3 <https://www.nrdc.org/flint>

4 [www.infrastructurereportcard.org](http://www.infrastructurereportcard.org)

5 [http://glisa.umich.edu/media/files/Great\\_Lakes\\_NCA\\_Synthesis.pdf](http://glisa.umich.edu/media/files/Great_Lakes_NCA_Synthesis.pdf)

6 Section C.1 in IPCC 2018 SR Summary for Policy Makers <https://www.ipcc.ch/sr15/chapter/spm/>

#### Chapter 5: Sustainable Land Use

Environmentally-friendly land use and the development of green spaces have well-established benefits in environmental management, energy consumption, property values, and quality of life for city residents<sup>7</sup>. Recent research has suggested cities may contribute to biological diversity, ecological resilience, and agricultural sustainability through targeted urban landscaping ordinances<sup>8</sup>. It has also become increasingly clear that cities have a role to play in ensuring access to healthy and sustainable food for its citizens. Environmental use policy provides ample opportunities for cities to simultaneously decrease their ecological footprint while improving the well-being and connectedness of their citizens to their natural environments.

#### Chapter 6: Community Engagement

The strength of our community depends on a clean and healthy environment. While Jacksonians value our natural resources, we have a history of environmental degradation that we must address. As we address this history, we must engage with our community to leverage the talents and expertise already available here to build resources that can improve our lives. Furthermore, it is our role to ensure that our successes are communicated to people of our city to build trust in our ability to address the challenges that we face. Finally, it is critical that we recognize that across our community we do not face environment challenges equally. A key part of our work will be to ensure that environmental ordinances are not discriminatory and address historical inequalities that have resulted from economic, racial, and environmental injustices.

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<sup>7</sup> [www.epa.gov](http://www.epa.gov)

<sup>8</sup> <https://www.ecologyandsociety.org/vol11/iss1/art34/>

## Chapter 1 – Recent Environmental Accomplishments by Year

### 2022

#### Refuse and Recycling Service Presentation

The EC shared recommendations for reevaluating solid waste service in the City in a presentation to City Council. Research suggested that peer communities were provided higher quality services for lower prices when communities moved to single hauler or city performed services.

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#### Now Mow May Recommendation

The EC made recommendations to the City Manager and Council to develop a “No Mow May” ordinance in the City. This nationwide effort has local communities encourage growth of natural spaces and discourage landscape enforcement during the critical feeding window for bees in early spring toward the goal of restoring bee populations.

#### City Arborist Recommendation

The EC made recommendations to the City Manager and City Council to allocate funds to establish a City Arborist position to maintain the wellbeing of our trees, establish science-based tree selection, and conduct a tree canopy survey. This would allow Jackson to earn TreeCity USA status.

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#### Community Garden Expansion

One half acre of growing space has been added to the community gardens at the King Center by Grow Jackson. Plans for further expansion are underway.

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#### EPA Adds Michner Plating Site to Superfund Priority List

In March 2022, the EPA added the Michner Plating site on Mechanic Street to its Superfund National Priorities List. This will provide access to state and federal resources to address the environmental contamination at the site.

#### New Parks and Trails Interactive Map

The City unveiled its new interactive map showing all 28 public parks and 4 pedestrian trails.

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#### State funding for Equality Trail and The Cascades

MLK Equality trail has received \$300,000 in state funding to repair and expand services for hiking and biking. Sparks Foundation County Park as also received \$300,000 to renovate tennis courts into 8 pickleball courts.

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### 2021

#### Sustainable Procurement Recommendation

The EC made recommendations to the City Manager to help inform City Hall staff about sustainability in purchasing and to consider sustainability as a key value in procurement.

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#### Refuse and Recycling Recommendation

The EC made recommendations to the City Manager to transition toward a single hauler system for refuse and recycling. Based on preliminary research, cities with single hauler systems provide higher quality service for more affordable prices.

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Urban Farming Ordinance

The City Council passed an Urban Farming Ordinance allowing the keeping of chickens, bees, and miniature pigs within City limits. This ordinance would allow residents to better and more sustainably control their food supply.

Electric Vehicle Ordinance

An electric vehicle ordinance is under consideration by City Council. If approved, the ordinance would require developers to make parking ready for conversion to charging station technology.

Dredging Lagoons in Sparks Foundation Park

Jackson City Council requested County Official dredge the lagoons in Sparks Foundation Park. The County has received \$1 million dollars from the State for this purpose. This project is meant to address high water level for nearby residents.

Community Gardens Planted at King Center

Community gardens have been initiated at the King center through a partnership with Grow Jackson. The goal of this project is to address food insecurity in our community.

Establishment of People for the Parks and Trails Volunteer Group

A resident-based group has formed toward the goal of maintain City parks and trails. The group has successfully completed its first year in 2021.

Lead Service Line Replacements

The City of Jackson has plans to replace over 11,000 lead service lines in the City over the next 35 years. In 2021, The City replaced 67 lead service lines and 6100 feet of water main in 2021.

~~Urban Farming Ordinance~~

~~The City Council passed an Urban Farming Ordinance allowing the keeping of chickens, bees, and miniature pigs within City limits. This ordinance would allow residents to better and more sustainably control their food supply.~~

~~Electric Vehicle Ordinance~~

~~An electric vehicle ordinance is under consideration by City Council. If approved, the ordinance would require developers to make parking ready for conversion to charging station technology.~~

**2020**

Efficiency Upgrades

City Hall has undergone many efficiency updates from automatic LED lighting in all offices to reduce energy waste in locations where lights remain on. A new heating system was engineered to heat and cool the City Hall building.

Noxious Weed Ordinance Update

In February 2020, the Environmental Commission sent recommendations to the City Council to revise the Noxious Weed Ordinance to include invasive species. The City Council approved and adopted these recommendations in April 2020.

Champion Trees

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The City of Jackson is home to several 'Champion Trees', rated by their girth by The University of Michigan, Jackson Audubon Society, and are cataloged in a database and compete for state as well as national recognition.

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Lead Paint Rehabilitation Grant

The City of Jackson was awarded a grant of \$2.9 million in 2018 to help with removal and remediation of lead-based paint hazards. This grant expires at the end of 2020, and could help fund projects that improve public as well as environmental health.

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Lead Copper Rule Remediation

In 2018, the State of Michigan expanded the Michigan Safe Drinking Water Act. Michigan now has the strongest protections in the nation regarding lead in drinking water. These changes require the creation of inventories of lead service lines, implement plans for the removal of lead service lines, and lowered the allowable level of lead in drinking water.

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Covid-19 Relief No-Water Shutoff Funding

In September of 2020, the City Council voted to allocate additional funding to assist residents with unpaid water bills because of the Covid-19 pandemic.

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2019 and Earlier

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Crime Prevention through Environmental Design

With natural access control, the City approves plans or encourages development to reduce potential escape routes and allow opportunities for the public to see into an open space. This is achieved with the planting of natural foliage in the landscape design. The city encourages natural surveillance, low landscaped shrubs, and large clear windows of store fronts to reduce the opportunities of illegal activity.

Environmental Protection Standards

The City of Jackson's Development team encourages new projects to have as much green space as possible for the public's use. Developments receive additional project "credits" for approval of the project if they preserve existing vegetation and requiring the replacement of vegetation should some be removed.

Narrowing of Major Streets, Widening of Sidewalk Paths

With the new I-94 corridor improvement, MDOT installed new sidewalks large enough to connect to the bike trail and lead into the city. Five-foot paths encourage the public to walk or ride, in addition to connecting footpaths to bike trails, residents have more opportunity to safely enjoy the natural landscape.

Tree Planting

Through creative planning the city continues to add new street trees during development. Our landscape standards also stipulate specifications on the city tree fund and the funds collected are not allowed in the city's General Fund and may only be used for the purchase and installation of planting trees and shrubs.

Landscape Ordinance/Maintenance

This establishes minimum standards for the design, installation and maintenance of landscape improvement. It restricts the approval of any site plan development that does not adhere to city landscape standards. Developers may earn credits by preserving existing

vegetation, moving the required vegetation elsewhere on the site, using larger plant materials or an equal alternative measure.

Smart Energy District

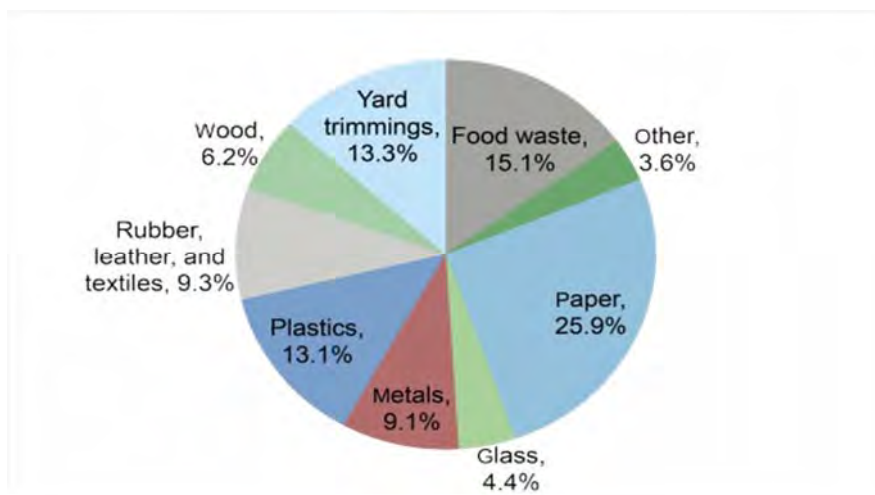
Consumers Energy requested community collaboration from the City of Jackson to create the Smart Energy District. The district will run from Michigan Ave, to Blackstone, to Pearl and ending at Jackson Street. The goal is to create a district that receives at least 40% of the energy from renewable energy resources.

## Chapter 2 – Waste Management, Reduction, and Recycling

### 2-A Waste Management and Recycling

“If we modernize our waste systems, enhance our recycling operations, and provide weekly, year round yard waste we truly will have greener, cleaner neighborhoods.” - Derek Dobies<sup>14</sup>

Municipal Solid Waste, more commonly known as trash or garbage, is a chronic feature of all cities and towns. It is produced from household, commercial, industrial, and government sources in the form of yard wastes, packaging, food scraps, appliances, and all other matter that is thrown away in the course of daily living.<sup>15</sup>



**Total U.S. MSW Generation by material for 2015. (EPA)**

There are many ideas for the sustainable management of municipal solid waste, including but not limited to: reduction of material at the source, landfills, combustion, composting and recycling. Composting<sup>16</sup> and recycling<sup>17</sup> are widely used across many cities in the United States.

In 2016, Jackson County amended their Solid Waste Management Plan. In this document, the County laid out details for three different scenarios for county-wide waste management, and ultimately selected a “hybrid” scenario for the county. This report could be a useful resource for the City of Jackson, and could provide guidance as to the creation of a city-wide waste management plan.<sup>18</sup>

<sup>13</sup> <https://medium.com/@derekdobies/mayor-dobies-2019-state-of-the-city-address-transcript-ba4aba05bd1b>

<sup>14</sup> <http://css.umich.edu/factsheets/municipal-solid-waste-factsheet>

<sup>15</sup> <https://www.drawdown.org/solutions/food/composting>

<sup>16</sup> <https://www.drawdown.org/solutions/materials/household-recycling>

<https://www.drawdown.org/solutions/materials/industrial-recycling>

<sup>17</sup> <https://www.co.jackson.mi.us/DocumentCenter/View/3086/Jackson-County-Solid-Waste-Management-Plan-Draft-2016-Amendment-of-the-1998-Update?bidId=>



## Tactics & Recommendation

- ~~1. Provide City Council with a report that detail best options for city wide Waste Management. Create a waste inventory for the City of Jackson (such as the EPA chart above).~~
- ~~2. Recommend to Council to create an ordinance to maintain and manage resident waste including a single hauler and requiring residents to subscribe to a service.~~
- ~~3. Provide City Council with recommendation of financially feasible options for recycling receptacles on public property.~~
1. Support conversion of refuse and recycling services to affordable and accessible models.

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## 2-B Reduce City Wide Plastic Use

“Plastic touches all of our lives, from the food packaging we buy to the computers we work with and the cars we drive. But many of the plastics you touch in your daily life are used only once and thrown away.” - Ocean Conservancy<sup>19</sup>

Plastics are all around us in our daily lives, from plastic bottles, to packaging, to medical equipment and cars. Much of this plastic is designed to be only used once and then thrown away. Mismanaged plastic can end up in inland waterways, and then make its way to the ocean. 55% of plastic produced ended up discarded or in landfills in 2015.<sup>20</sup>

At the global level, it is estimated that between 70 – 80% of all plastic waste found in the oceans originate from inland sources.<sup>21</sup>

However, many national, state, and local governments are taking action to reduce plastic waste and much of this action starts at the source. The best way to reduce the amount of plastic in circulation is to use less plastic products from the outset.

### Tactics & Recommendations

1. Request an emphasis on accessible recycling of plastics. Promote use of water bottle refill stations.

<sup>18</sup> <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean/>

<sup>19</sup> <https://ourworldindata.org/plastic-pollution>

<sup>20</sup> <https://ourworldindata.org/plastic-pollution>

## Chapter 3 – Protection of Water Resources

### 3-A Water Resources Protection

“No water, no life. No blue, no green.” - Dr. Sylvia Earle

Water resources are one of the most essential for life on this planet, and for life in the City of Jackson. The Grand River as an example, is deeply tied into the history of Jackson, and the identity of our community. The health of the river, and other water sources, is part of the health of the City of Jackson.

The health of our water is interconnected with the health of our communities, and the health of our environment. As the Flint Water Crisis has shown, as well as PFAs contamination throughout various site the state of Michigan, water is not only a vital resource but also a fragile one. Maintaining healthy water resources free of containment such as lead, pollution and other health issues is of great concern. Taking action to protect water resources and for water conservation are crucial to our wellbeing now, and into the future.

A changing climate can also put additional stresses on water supplies. Increased rainfall and precipitation is one likely culprit, and can have a strong impact on water resources. These impacts can range across storm water and drainage, foreign particles, agricultural and chemical runoff, as well as flooding and other issues that impact community as well as environmental wellbeing.

#### Tactics and Recommendations

1. ~~Plan for protection of our natural source water.~~ Investigate and evaluate alternative models for city water access.
2. Provide City Council with feasible options to have no water shut-offs.
3. ~~Petition stakeholders to place charges for water usage on rental properties on tenant/user.~~ Investigate and promote lagoon dredging to address flooding issues.

## Chapter 4 – Energy Efficiency, Resource Management, and Transportation

### 4-A Recommend/Implementation of a Reforestation Initiative to increase local tree canopy

“By conducting the city’s first tree canopy survey, I hope we can study where to plant even more trees to not only beautify our neighborhoods and improve physical and mental health, but to clean and reduce stormwater runoff, decrease our cooling bills, and increase property values.” - Derek Dobies<sup>22</sup>

Trees and forests are vitally important for the health and sustainability of our city. Michigan was once completely covered in forests, but centuries of logging, development, and agricultural expansion have left us with far fewer trees and less resilient forests.<sup>23</sup>

Afforestation, creating forests where there are none, is one of the top ways to tackle carbon emissions, and a changing climate.<sup>24</sup> On a smaller and more local scale, trees are vital for sustainability as well as public health. Increasing the tree coverage and canopy of local cities can help to reduce the heat island effect, keep communities cool, retain water, and help reduce energy use.<sup>25</sup>



#### Tactics and Recommendations

1. Recommend that Council take necessary steps to receive Tree City USA designation.
2. Research and recommend local Tree Canopy Survey options and associated costs to implement City-wide Tree Survey.
3. Research opportunities for planting native trees and present findings to Council on ways that increased tree canopy.

21 <https://medium.com/@derekdobies/mayor-dobies-2019-state-of-the-city-address-transcript-ba4aba05bd1b>

22 <https://www.michiganradio.org/post/wilderness-wasteland-how-destruction-michigan-s-forests-shaped-our-state>

23 <https://www.drawdown.org/solutions/tree-plantations-on-degraded-land>, <https://www.drawdown.org/sectors/land-sinks>

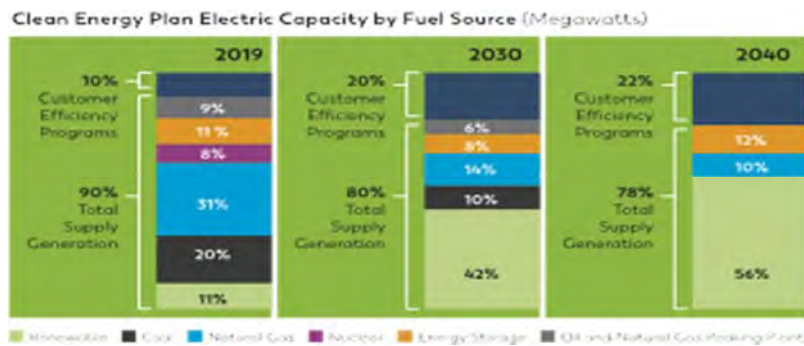
24 <https://www.arboday.org/trees/climatechange/treeshelp.cfm>

## 4-B Support Renewable Energy resources

“I have a simple hope for all of us in Michigan. When we look into the eyes of our grandchildren and they ask about climate change, I want us to be able to say, “that’s something we used to worry about.” - Patti Poppe<sup>26</sup>

Among the one hundred solutions proposed by Project Drawdown, renewable energy occupies three of the top ten most impactful solutions.<sup>27</sup> This includes onshore wind turbines, solar farms, and rooftop solar panels. There are many ways that this can be accomplished, including continued support for city renewable energy projects such as the proposed Smart District.

Consistent with the goals of this Climate Action Plan, much of Jackson's power comes from the Consumer's Energy grid system. Consumer's Energy has released a new Clean Energy Plan<sup>28</sup> in 2019. By meeting Consumer's own stated goals, Jackson has the potential to meet many of the goals of this Action Plan.



The Clean Energy Plan is built around an increase in renewable energy, storage, efficiency, as well as a 90% reduction in carbon emissions. Also of note is the decommissioning of coal based generation sources. In addition, many of Consumer's Energy stated goals are also consistent with the goals listed in the IPCC 2018 Special Report, granting a unique opportunity to simultaneously meet many goals related to renewable energy, as well as energy efficiency. (Section 4-C below.)

### Tactics and Recommendations

1. Meet with community stakeholders regarding Jackson Smart Energy District and determine the role the Environmental Commission will play in implementing renewable energy options.
2. Give recommendations to City Council how current commission can support increase of renewable energy or other carbon offsets.

~~Recommend that City Council support Consumer's Energy Clean Energy Plan, which incorporates 90% clean energy sources (56% from renewable energy), and 90% reduction in carbon emissions by 2040.~~

<sup>25</sup> <https://www.mlive.com/news/2019/08/clean-energy-plan-is-consumers-energys-commitment-to-people-planet-prosperity.html>

<sup>26</sup> <https://www.drawdown.org/solutions>

<sup>27</sup> [www.Micleanenergy.com](http://www.Micleanenergy.com)

## 4-C Support city wide energy efficiency projects

“Energy efficiency is the unsung hero when it comes to reducing carbon dioxide emissions, because no matter how great our technological advancements are, the cheapest, cleanest kilowatt-hour will always be the one that is never used,” - US Senator Angus King<sup>29</sup>

Electricity generation accounts for almost 40% of annual global greenhouse gas emissions.<sup>30</sup> As such, one of the quickest routes to a cleaner, and greener city is to use electricity more efficiently. A reduction in the total use of electricity and energy has a measurable reduction in the corresponding emissions. Consumer's Energy, as in Section 4-B, has greater energy efficiency built into their long-term plans, and here too, the City can benefit from the cleaner grid.

In addition, there are many routes the City can take on its own to reduce energy consumption. Among them are more efficient buildings, lighting, and city infrastructure. Synergies could also exist from other places in this Plan, such as trees and green space, which notably reduce the heat island effect, and can lead to less energy needed for heating and cooling.

### Tactics and Recommendations

1. Research requirements of Green Building Certification.
2. Recommend to Council per the requirements, to enroll City of Jackson into the City LEED Certification program.
- ~~3. Recommend Council Support the Consumer's Energy Clean Energy Plan, which includes a 22% reduction in energy use by 2040. Conduct energy efficiency inventory of city buildings.~~
3. Recommend addition of solar panels to city properties.

<sup>28</sup> <https://www.smith.senate.gov/us-sens-tina-smith-angus-king-jeff-merkley-press-enhance-nations-energy-efficiency-capabilities>

<sup>29</sup> <https://www.drawdown.org/solutions/electricity-generation>

#### 4-D Support city wide efforts to increase walkability and non-motorized transportation

“A virtuous cycle is clear: With more infrastructure come more riders. Perhaps counterintuitively, with more infrastructure and more riders, safety improves. And the more bicycles there are traversing a city, the more it reaps numerous returns on investment, including the health benefits of cleaner air and greater physical activity.” - Drawdown “Bicycle Infrastructure”

With the goal in mind to reduce carbon emissions, low and zero-carbon transportation become an important consideration. Walkable cities<sup>31</sup> and bicycle infrastructure<sup>32</sup> are good ways to reduce the carbon impact of moving people around and supporting these efforts can have other effects on environmental impact as well as community health.

There is a draft called the Jackson City+ County Non-Motorized Plan<sup>33</sup> that proposes multiple bicycle and other use trails that connects the City of Jackson with other areas around the county, as well as multiple State Parks and other important areas of recreation including water trails and county parks.



30 <https://www.drawdown.org/solutions/buildings-and-cities/walkable-cities>

31 <https://www.drawdown.org/solutions/buildings-and-cities/bike-infrastructure>

32 <https://walkbike.info/jackson/>

(From Jackson City + County Non-Motorized Plan)

**Tactics and Recommendations**

1. Recommend to Council to complete building family friendly network as defined in the Jackson City + County Non-Motorized Plan.
2. Research urban options to encourage more pedestrians in City of Jackson.
3. Recommend continuation of Iron Belt trail and Lake to Lake Trails.
4. Evaluate current JADA bus routes and consider recommendations to encourage use.
- 2.5 Consider changes to road diet and pedestrian conversions.



## Chapter 5 – Sustainable Land Use

### 5-A Sustainable options for vacant city owned lots

The creation of a sustainable plan for land-use has a huge number of benefits for environmental and human wellbeing. The proper management of land can sequester carbon, cool local areas, protect and conserve natural spaces, and enhance biodiversity. Similar in many ways to water resources, the sustainable management of land-based systems can support human and natural wellbeing.

In this section, there are huge number of possible routes and impactful solutions:<sup>34</sup>

- Urban gardens
- Farm to Table
- Forestry (Afforestation, restoration, preservation, etc)
- Parks/Green spaces
- Cultivated habitats

In context of public spaces, the City of Jackson has the potential to develop a comprehensive plan that enhances city beauty, environmental sustainability, and community health and wellbeing. Many ideas can enhance and support existing policies and ordinances such as:<sup>35</sup>

- To aid stabilizing the environment's ecological balance
- To provide visual buffering and enhance beautification of the city
- To encourage the preservation of existing trees and vegetation
- To conserve energy, and to protect the public health, safety, and general welfare

#### Tactics and Recommendations

1. Research options for re-purposing vacant lots (urban gardens, farm to table, forestry, etc).
2. Research Urban pollination efforts and options for lots and process for certification under Bee City USA program.
3. Recommend to Council to create pilot plan/implementation for possible re-purpose of vacant lots as suggested by the Commission.
4. Work to expand King Center gardens.

<sup>33</sup> <https://www.drawdown.org/sectors/land-sinks>

<sup>34</sup> Landscape Standards Ordinance Sec 28-105

## 5-B Sustainable options for privately owned lots

Cities are more than just buildings and public lots. Cities are made up of people, every day private citizens. It is impossible to create a viable climate plan without including residents, and especially privately owned lots. Community support is crucial for success, and so input and feedback is necessary. The City can work in conjunction with private citizens to help create sustainable neighborhoods and landscaping regulations that allow for the growth of private gardens, cultivated spaces, and a whole host of other ideas that boost community as well as environmental wellbeing.

Many of the ideas of Action Item 5-A can come into play here as well, with education and outreach that encourage citizens to create private and community gardens, grow natives trees and plants, and cultivate their own spaces in ways that serve environmental function, increase land value, as well as make the city more pleasing and beautiful.

### Tactics and Recommendations

1. Encourage planting of beneficial native plant species on private lots.
- ~~2. Investigate status of current ordinances for urban farming (Keeping bees & chickens).~~
2. Review landscape ordinance to encourage natural landscaping.
3. Encourage passage of No Mow May ordinance.

## Chapter 6 – Community Engagement

The success of this action plan depends on interaction with the public. Education and outreach are the keys to this success. Through these effort citizens can remain informed and engaged with the environmental efforts of the city. There are a lot of forms this education and outreach can take:

- Environmental Commission booths/tables at city events (Earth Day, etc)
- Pamphlets, articles, printed education material for distribution, education and feedback
- The City of Jackson and Jackson County is home to numerous organizations and non-profits, and coordination and networking with these organizations can promote existing work and feedback into efforts of the Environmental Commission. Such organizations include those such as the Grand River Environmental Action Team (GREAT), the Jackson District Library, Ella Sharp Museum, Dahlem Center, Active Jackson, and Jackson County Conservation District.
- ~~Each month~~ Throughout the year, provides numerous options to highlight different seasonal efforts, such as National Pollution Prevention Day (September), Earth Day and Arbor Day (April)
- Education and outreach are two way streets. Engaging with the public is an essential part of the work, but so is feedback from citizens. Surveys, citizen feedback and input are all vital components.
- Coordination with state level agencies such as EGLE to create informational and awareness efforts for public education.