



ENVIRONMENTAL COMMISSION

Wednesday, May 15, 2024 at 6:00 PM

City Hall, 10th Floor Conference Room

AGENDA

- 1. CALL TO ORDER**
- 2. ROLL CALL**
- 3. ADOPTION OF AGENDA**
- 4. APPROVAL OF MINUTES FOR THE 04-17-23 MEETING**
 - A. Minutes of 04-17-24 meeting.
- 5. NEW BUSINESS**
- 6. OLD BUSINESS**
 - A. EAP Expansion
- 7. CITIZEN COMMENTS**

(3-Minute Limit)
- 8. COMMISSIONER COMMENTS**
- 9. NEXT MEETING AT 6:00PM ON WEDNESDAY, 06-12-24**
- 10. ADJOURNMENT**

05-15-24 ENVIRONMENTAL COMMISSION MEETING AGENDA

PREPARED 04-22-24

PAGE 1 OF 1

Date: Wednesday, May 15, 2024

Time: 6:00 pm

Place: Conference Room on 10th 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 04-17-24 meeting

V. New Business

VI. Old Business

i. EAP Expansion

VII. Citizen Comments (3 minute limit)

VIII. Commissioner Comments

IX. Next Meeting – Wednesday, 06-12-24 at 6:00pm

X. Adjournment

ENVIRONMENTAL COMMISSION 04-17-24 MEETING

MINUTES (PREPARED 04-19-24)

PAGE 1 OF 3

Date: Wednesday, April 17, 2024

Time: 6:00 pm

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

I. Call to Order *Chairperson Kazmier called the meeting to order at 6:03 pm.*

II. Roll Call

Present: *Commissioner Kelsey Heck Wood
Commissioner Jacob Inosencio
Commissioner Andrew Johnson
Commissioner Kelli Kazmier*

Absent: *Commissioner Jane Flores*

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

III. Adoption of the Agenda

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve the agenda as presented approved unanimously.

IV. Approval of the minutes for the 02-21-24 and 03-17-24 meetings

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve the minutes for the 02-21-24 and 03-17-24 meetings as presented approved unanimously.

V. New Business

None.

VI. Old Business

i. Review of Environmental Action Plan (EAP) Expansion

Commissioner Kazmier related that she incorporated previously comments into the EAP and generated a completed first draft (attached). She spoke about the history of the EAP, the Mayor's request for a plan, and MSU graduate student Graham Diedrich's evaluation. Out of these, the format of the EAP was modified and the narrative was reorganized and expanded.

The draft document then reviewed section by section and chapter by chapter.

Executive Summary

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve the Executive Summary as presented approved unanimously.

Introduction and Overview

Commissioner Johnson suggested that page numbers be provided for each chapter for reference purposes.

There was general discussion regarding the inclusion of bike lanes in the narrative.

Motion made by Commissioner Inosencio and seconded by Johnson to approve the Introduction and Overview text with the addition of page numbers and reference to bikes lanes approved unanimously.

Chapter 1 – Water Resources

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve Chapter 1 as presented approved unanimously.

Chapter 2 – Air Quality

There was general discussion about the need to revise Section 2.A.IV include an investigation of eligibility for grant status.

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approved Chapter 2 with a chapter summary to be generated by Commissioner Kazmier and the above revision to Section 2.A.IV approved unanimously.

Chapter 3 – Energy Management

Motion made by Commissioner Heck Wood and seconded by Commissioner Inosencio with date in Section 3.B.V.a changed to 2040 for consistency with other sections approved unanimously.

Chapter 4 – Transportation

Motion made by Commissioner Heck Wood and seconded by Commissioner Inosencio to approve Chapter 4 with an introductory quote or line provided by Commissioner Johnson that is less bike specific approved unanimously.

Chapter 5 – Climate and Weather

Motion made by Commissioner Heck Wood and seconded by Commissioner Inosencio to approve Chapter 5 with the addition of text regarding air quality awareness and the need to open city-facilities for relief when a threshold is met approved unanimously.

Chapter 6 – Ecosystems

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve Chapter 6 as presented approved unanimously.

Chapter 7 – Solid Waste

Motion made by Commissioner Inosencio and seconded by Commissioner Heck Wood to approve Chapter 7 as presented approved unanimously.

Chapter 8 – Environmental Justice

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve Chapter 8 with the addition in section 8.B.IV.b of text relating to financial assistance for electrical updates to homes approved unanimously.

Chapter 9 – Accomplishments

Motion made by Commissioner Heck Wood and seconded by Commissioner Johnson to approve Chapter 9 with the addition of a list of 2023 accomplishments to be provided by Commissioner Inosencio approved unanimously.

Commissioner Kelli related that in previous discussions it was decided that the preference is for City Council to adopt the EAP rather than just receive it as has been done in the past. This will require communication with the Mayor and Councilmembers.

VII. Citizen Comments

None.

VIII. Commissioner Comments

Commissioner Kazmier requested that Mr. White discuss the appointment of a new City Council representative to the Environmental Commission with the Mayor's / City Manager's office.

Commissioner Kazmier also thanked Commissioner Inosencio for his service on the Commission and wished him the best in his future endeavors.

Commissioner Inosencio announced that Grow Jackson will donate a tree for an Arbor Day celebration on April 26th and will host an Earth Day celebration and Garden Cleanout on April 22, 2024.

Commissioner Inosencio related that it has been an honor and a pleasure to serve on the Environmental Commission.

IX. Next Meeting – Wednesday, 05-15-24 at 6:00pm

X. Adjournment

Motion made by Commissioner Inosencio and seconded by Commissioner Johnson to adjourn approved unanimously. Meeting ended at 7:21 pm.

City of Jackson Environmental Action Plan Draft: 04/17/24

Reaffirming Commissioners: Jane Flores, Kelsey Heck Wood, Jacob Inosensio, Andrew Johnson, Kelli Kazmier (Chair) and Troy White (City of Jackson Engineering)

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.

In 2023, at the request of Mayor Daniel Mahoney, this commission was asked to update this Environmental Action Plan to identify specific priorities and actionable recommendations for the City in the areas of waste management, water resources, urban forestry, energy management, and environmental health. In consultation with Graham Diedrich at Michigan State University, we have expanded recommendations to include air quality, sustainable transportation infrastructure, climate resilience and weather, and ecosystem health.

As a commission, 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 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

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: 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. Aging infrastructure and our community's history of industrial production leave our water resources vulnerable to pollution and other health hazards. While we are currently keeping up with these challenges it will be important to remain vigilant as we move to improve our community's water resources. We must continue to offer safe, affordable, reliable water access to our citizens while balancing the various and changing demands on our water resources.

Chapter 2: Air Quality

Air quality for the citizens of Jackson follow similar patterns for industrial communities in the midwestern United States with lower income neighborhoods concentrated around industrial centers with low air quality while more affluent neighborhoods have higher air quality with sufficient tree canopies and vegetation. While all citizens would benefit from better air quality from sustainability initiatives such as electric vehicles, zero emission energy, and sufficient tree canopies, low-income neighborhoods would see the biggest improvements in asthma, heart disease, and overall improvement in the standard of living.

Chapter 3: Energy Management

As citizens we use electricity, natural gas, gasoline, and oil to turn on lights, heat our homes, and power our cars. However, combustion of fossil fuels has led to a changing climate that will also have a direct impact on our community negative impacts on agriculture, infrastructure, and human health. 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. Recent developments have improved renewable energy production and distribution. Solar panels, wind turbines, and geothermal systems have become competitive in price to historical energy products and provide the added benefit of zero carbon emissions. While our historical energy products have brought us vast benefits over recent history, climate concerns require us to move to a more sustainable energy mix.

Chapter 4: Transportation

With its revitalized downtown, pedestrian trails, and public transportation system, Jackson already has many of the building blocks of a sustainable transportation future. Further encouragement of housing infill and density and connection of pedestrian trails will encourage pedestrian traffic connecting work, home, and play that is both environmentally-friendly and increases our quality of life. Expansion of public transportation and EV charging infrastructure will promote the future of environmentally-sustainable motorized transport. Together, we can build transportation infrastructure that support human and economic flourishing.

Chapter 5: Climate and Weather

Being surrounded by the Great Lakes, Jackson, and the entire state of Michigan will see dramatic effects from climate change over the coming decades. Rain events are predicted to be less frequent, but come in larger volumes, winters are expected to be shorter while summers will be hotter. These changes will challenge our storm management systems, the heating and cooling of our homes, our

farmers' crop schedules, and our everyday lives. Building Jackson's infrastructure to withstand less predictable and more extreme weather is a worthwhile preventative policy that will save lives and dollars rather than rebuilding after a disaster has occurred.

Chapter 6: Ecosystems

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. Recent research has suggested cities may contribute to biological diversity, ecological resilience, and agricultural sustainability through targeted urban landscaping ordinances. 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 7: Solid Waste

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. 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. 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 8: Environmental Justice

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 the 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 environmental 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.

Chapter 9: Environmental Accomplishments by Year

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

Chapter 1 – Water Resources

“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. As the Flint Water Crisis has shown, water is not only a vital resource but also a fragile one. Maintaining healthy water resources free of contaminants such as lead, PFAS, and other pollution is of great concern. Taking action to protect water resources is crucial to our wellbeing now and in the future.

1-A Improved Water Quantity and Quality

- I. Information base
 - a. Conduct system-wide assessment of water mains including age, leaks, and contaminants.
 - b. Assess environmental impact of County’s use of aquifer to feed pond at Cascades.
 - c. Research most up to date practices for water sterilization/treatment at water treatment plant.
 - d. Investigate locations of water wells and relative location to brownfields.
- II. Vision, goals, and objectives
 - a. Create plan for water main and service line replacements to reduce lead exposure.
 - b. Consider alternative approaches to challenges posed by Cascades pond.
 - c. Conduct water treatment in a more environmentally friendly manner.
 - d. Make plan to move water wells to safe, sustainable locations.
- III. Options and priorities
 - a. Prioritize and set targets for line replacements.
 - b. Advocate for environmentally-friendly alternatives to current situation at Cascades.
 - c. Make transition plan for new water treatment facilities and facility upgrades to consider potential light based sterilization.
 - d. Consider all potential current and future hazards to local water sources.
- IV. Actions
 - a. Replace water mains on a regular basis. Seek external funding for water line replacements. Promote water quality report to the public.
 - b. Decrease utilization of aquifer or implement water recycling program to decrease environmental impacts of Cascades water use.
 - c. Shift water treatment from chemical to UV sterilization
 - d. Execute plan to move wells from industrial areas and away brownfields.
- V. Implementation, monitoring, and evaluation
 - a. Continue to improve water service.
 - b. Monitor for further situations as they arise.
 - c. Implement water treatment plan.
 - d. Continue monitoring for future unforeseeable hazards.

Chapter 2 – Air Quality

2-A Improved Air Quality

- I. Information base
 - a. Research on air quality levels.

- II. Vision, goals, and objectives
 - a. Investigate potential sources of air pollution.
- III. Options and priorities
 - a. Assess air pollution mitigation strategies like HEPA filtration in business and residences.
- IV. Actions
 - a. Implement air pollution mitigation strategies.
- V. Implementation, monitoring, and evaluation
 - a. Continue with monitoring of air quality.

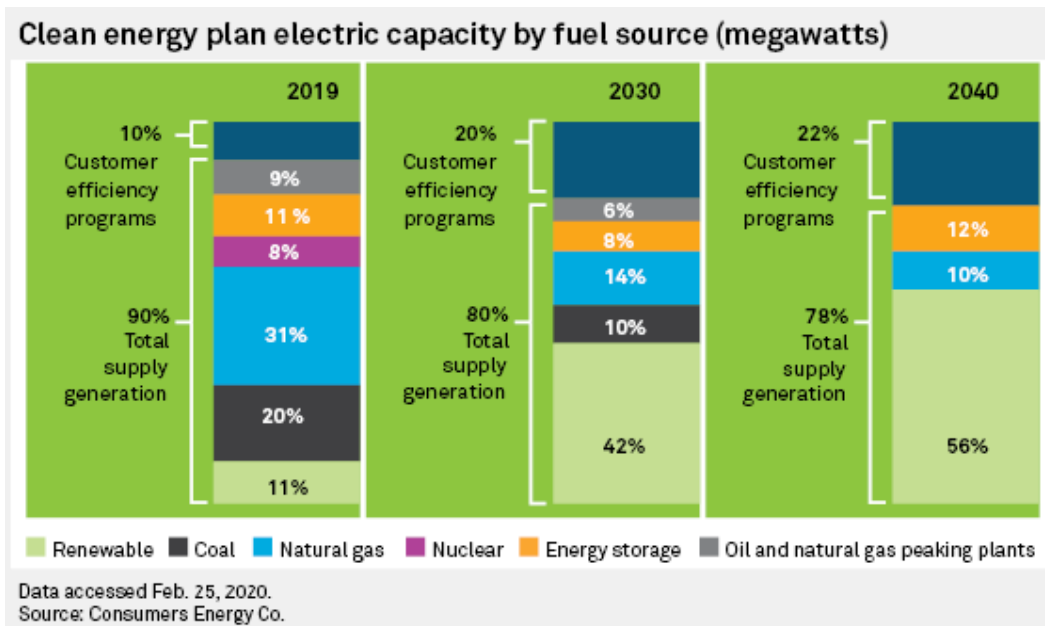
2-B Reduced GHG and other Gaseous Emissions

- I. Information base
 - a. Study local sources of greenhouse gas emissions.
 - b. Assess emission for city fleet vehicles.
- II. Vision, goals, and objectives
 - a. Identify opportunities and approaches to incentivize transition to low/no-carbon emission appliances and heating/cooling systems in residences, business, and public buildings and electric vehicles.
 - b. Create a plan to transition city fleet vehicles to cleaner fuels and EVs.
- III. Options and priorities
 - a. Identify highest priority transitions based on greatest magnitude change in emissions. Set targets for transition to reach net zero carbon emission by 2050.
 - b. Set targets for EV fleet transition. Consider which fleet classes should be prioritized.
- IV. Actions
 - a. Provide financial and regulatory framework to incentivize transition away from gasoline and natural gas-based products toward electrical appliances like heat pumps, stove/ovens, and water heaters and electric vehicles.
 - b. Begin replacing end of life vehicles with electric alternatives. Move toward biodiesel fuel for remaining fleet. Ensure availability of charging infrastructure for fleet.
- V. Implementation, monitoring, and evaluation
 - a. Set up a regulatory body to ensure transition to net zero emissions by 2050.
 - b. Create a plan to replace and maintain electrical vehicle fleet.

Chapter 3 – Energy Management

“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

Among the one hundred solutions proposed by the climate solutions group Project Drawdown, renewable energy occupies three of the top ten most impactful solutions. Toward this end, Jackson’s hometown power utility, Consumer’s Energy, has released a Clean Energy Plan built around an increase in renewable energy, storage, and efficiency. Through this effort Consumer’s Energy plans to achieve net-zero carbon emission by 2040. We can help our community meet these targets by promoting renewable sources of energy to power our public and private facilities and encouraging efficient uses of energy we produce.



3-A Increased Utilization of Clean Energy

- I. Information base
 - a. Conduct energy audit identifying sources of energy used to power public buildings/spaces.
 - b. Access most up to date clean energy plan for Consumer's Energy.
 - c. Investigate ordinances regarding roof codes and installation of rooftop solar.
 - d. Investigate regulatory issues with conversion of landfill/brownfield spaces into sites for renewable energy extraction.
- II. Vision, goals, and objectives
 - a. Identify opportunities for transition public buildings toward renewable energy sources.
 - b. Consider potential opportunities to incentivize local power utility transition to renewable sources.
 - c. Consider the potential for residential rooftop solar to hasten transition to a 100% renewable future.
 - d. Consider land use opportunities for renewable wind, solar, hydrogen-based projects.
- III. Options and priorities
 - a. Identify commercial partners and set targets to complete energy transition to 100% renewable sources by 2040.
 - b. Set targets for percentage of residential power being serviced through renewable energy sources aiming for 100% renewable by 2040.
 - c. Consider opportunities to incentivize residential rooftop solar.
 - d. Set land use guidelines for renewable energy extraction into master plan and zoning ordinances. Set benchmarks for local renewable energy production.
- IV. Actions
 - a. Implement rooftop solar on public buildings.
 - b. Implement incentivize for renewable energy transition.
 - c. Replace ordinance language that would restrict rooftop solar projects. Advocate for legislation incentivizing residential roof top solar. Seek funding sources for residential rooftop solar.
 - d. Implement land use conversions to increase local renewable energy production to meet benchmarks.
- V. Implementation, monitoring, and evaluation
 - a. Monitor and upgrade renewable energy capacity to meet future energy needs.
 - b. Set up a regulatory body to ensure transition to 100% renewable energy sources by 2040.

3-B- Reduced Energy Use through Efficiency Savings

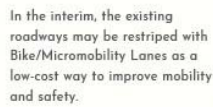
- I. Information base
 - a. Conduct energy efficiency inventory of city buildings/spaces and research requirements of Green Building Certification.
 - b. Evaluate potential for improving energy efficiency in private residential and commercial buildings.
- II. Vision, goals, and objectives
 - a. Identify opportunities for decreasing energy use in public buildings including transitioning to energy star rated appliances, retrofitting and weatherizing buildings, replacing street lights with LEDs, and education campaigns about decreasing energy use.
 - b. Consider opportunities to partner with local energy utilities and businesses to incentivize transitions to energy efficient appliances, decrease peak energy use, and retrofit and weatherize private buildings.
- III. Options and priorities
 - a. Set targets for energy efficiency in appliances, decreased energy use, and percentage of green buildings in city.
 - b. Set targets for city-wide energy consumption.
- IV. Actions
 - a. Apply for green building certifications where appropriate and enroll City of Jackson into the City LEED Certification program for monitoring, comparison to peer communities, and recommendations for future improvements.
 - b. Implement identified strategies and incentives to decrease energy consumption and increase energy efficiency in private buildings.
- V. Implementation, monitoring, and evaluation
 - a. Set up a regulatory body to monitor energy usage to ensure transition to net zero emissions by 2050.
 - b. Develop energy management plan.

Chapter 4 – 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 and bicycle infrastructure 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. The Jackson County Non-Motorized Plan proposes multiple bicycle and other use trails to connect 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.

Family
Friendly
Bike Route



- c. Consider further policy changes as automotive landscape changes.

4-B- Enhanced Opportunities for Human Powered Transportation

- I. Information base
 - a. Assess most up to date plan for City/County Non-Motorized Plan
 - b. Complete an assessment of accessibility to non-motorized network year-round, for all populations.
 - c. Investigate traffic calming design strategies and other and best planning practices for increasing non-motorized traffic.
 - d. Evaluate master plan and zoning for density and multi-use neighborhoods.
- II. Vision, goals, and objectives
 - a. Identify opportunities for increasing connectivity and distribution of trails and bike paths to waterways and other sites of recreational interest in the City.
 - b. Identify areas of concern for accessibility including lack of sidewalk access, unsafe runoff grates, unsafe or disability-inaccessible intersection infrastructure, or areas with frequent delinquent sidewalk clearing.
 - c. Identify locations with pedestrian-involved collisions and where foot-traffic feels unsafe.
 - d. Identify opportunities to create residential infill, upzoning, mixed-use zones.
- III. Options and priorities
 - a. Prioritize improvements to non-motorized network.
 - b. Set targets for percentage coverage of sidewalks and intersection upgrades. Consider Sidewalk Clearing and Safe Route to School Programs.
 - c. Consider implementation of traffic calming measures at problem areas to improve pedestrian traffic, safety, and commerce.
 - d. Consider potential locations for infill/mixed-use based on potential for increasing home opportunities within walking distance of work.
- IV. Actions
 - a. Implement and expand recommendations of Non-Motorized Plan including trail improvements, trail connectivity (e.g. Iron Belt-Lake to Lake), and increased bike lanes.
 - b. Increase coverage of sidewalks and intersection upgrades to meet established targets.
 - c. Increase the use of road dieting, speed bumps, roundabouts, chokers, raised intersections, and narrow roads to increase pedestrian safety.
 - d. Incentivize infill and mixed use through changes to zoning requirements and financial incentive programs.
- V. Implementation, monitoring, and evaluation
 - a. Re-evaluate non-motorized plan on a regular basis.
 - b. Allocate increased budgetary support for expanded sidewalks and intersection upgrades.
 - c. Seek funding opportunities for transition to pedestrian-safe infrastructure and reassess pedestrian safety on a regular basis.
 - d. Continuing monitoring for potential infill opportunities and prioritize distance between home and work as a zoning consideration.

Chapter 5 – Climate and Weather

A changing climate will require local resilience to extreme weather events and supply chain disruptions. According to the University of Michigan, storm frequency and intensity have and will continue to increase in response to our changing climate. Increased rainfall and precipitation can have a strong impact on water resources, but climate change can also put additional stresses on water supplies. 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.

Locally-sourced sustainable agriculture will likely be a key component of climate resiliency plans for communities around the country. As temperature increases, increased frequency and severity of drought is likely to impact all communities including current food-producing regions. Local sourcing of agricultural products will build skills and industries to be relied on in times of food shortage. Furthermore, local production reduces food transportation fuel usage which directly reduces the carbon footprint of food production. We seek to position Jackson as a community encourages local food production in the form of urban agriculture and forestry with resilient

5-A- Improved Resiliency toward Extreme Weather Events

- I. Information base
 - a. Conduct impervious surface survey.
 - b. Evaluate volume of storm water processing.
 - c. Evaluate current system of flood prediction, monitoring, mitigation, and communication.
 - d. Review current ordinances, zoning requirements, and master plan descriptions that regulate urban agriculture/husbandry in private lots.
 - e. Evaluate local food producers, urban agriculture incubators, healthy food purveyors, and urban agriculture support businesses like composting and hydroponic supply operators.
- II. Vision, goals, and objectives
 - a. Identify vulnerability in impervious surface for stormwater runoff.
 - b. Identify vulnerabilities in storm water runoff processing capacity and methods.
 - c. Design a flood response system to minimize danger.
 - d. Examine peer community ordinances regulating urban agriculture/husbandry to balance community needs with community health and resiliency priorities.
 - e. Identify potential local partners to support local food production and distribute fresh, healthy, local-grown food to neighborhoods within the city with an emphasis on underserved neighborhoods to support resiliency to food scarcity.
- III. Options and priorities
 - a. Identify set targets for city-wide impervious surface and green stormwater infrastructure and incorporate targets into a stormwater master plan.
 - b. Consider expansion of storm water processing capacity to meet needs of changing climate and consider alternative green processing methods.
 - c. Consider alternative flood prediction, monitoring, mitigation, and communication strategies.
 - d. Identify appropriate parameters for growing food, tending animals, and sale of agricultural goods of locally-produced agricultural products.
 - e. Identify funding opportunities for local food production infrastructure, workforce training, and economic development for urban agricultural support businesses.
- IV. Actions
 - a. Transition impermeable surface to green stormwater infrastructure prioritizing identified vulnerabilities.
 - b. Implement updates to storm water processing.
 - c. Update flood response plan.
 - d. Update ordinances/zoning/city plans to allow food to be grown locally and sold in appropriately-zoned districts.
 - e. Implement urban agriculture initiatives to connect local residents to locally-grown healthy food.
- V. Implementation, monitoring, and evaluation

- a. Assign budgetary support to maintain Continue monitoring new opportunities to transition surface in public areas and engage in community education efforts to encourage transition on private land.
- b. Update stormwater processing capacity to meet changing community needs.
- c. Continue to update flood response plan in light of changing climate.
- d. Use current public work resources to encourage implementation and adherence to updated urban agricultural/husbandry ordinances.
- e. Assess implementation and effectiveness of programming in line with funding expectations.

Chapter 6 – Ecosystems

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. On the 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. Afforestation is also one of the best ways to remediate carbon emission in a changing climate.

Human resilience to environmental challenges is only as strong as the strength of the ecosystems into which it is interconnected. According to the USDA, 35% of the world food supply relies of bees as pollinator. We must ensure that our communities are ensuring the success of wildlife as well as human through habitat protection and restoration.



6-A- Expanded Green Space and Urban Forests

- I. Information base
 - a. Conduct tree canopy survey.
 - b. Create/access map of public green spaces and urban heat islands city-wide.
- II. Vision, goals, and objectives
 - a. Identify local vulnerabilities in tree age, lifespan, and adaptability to climate change in region and identify inequities in tree canopy coverage across city.

- b. Evaluate deficiencies/inequities in public access to green spaces and concentrated heat island effects throughout the city.
- III. Options and priorities
 - a. Set targets for city-wide tree canopy percentage, species, and distribution and incorporate targets into updated tree plan.
 - b. Identify parcels for new, expanded, and rejuvenated green spaces in areas of need with emphasis on heat island mitigation into a city-plan.
- IV. Actions
 - a. Increase planting of identified tree species in identified regions to meet targets and promote better forestry on private lots through public education initiatives.
 - b. Increase quantity of green spaces in regions identified in city plan.
- V. Implementation, monitoring, and evaluation
 - a. Assign budgetary support for staff to regularly update tree canopy, tree health, and tree support.
 - b. Include new, expanded, or rejuvenated green spaces into monitoring plan of public works.

6-B- Improved Genetic, Species, and/or Ecosystem Diversity

- I. Information base
 - a. Access updated map of city-owned parcels.
 - b. Conduct ecological diversity and habitat assessments.
 - c. Evaluate current ordinances that regulate natural landscaping in private lots.
 - d. Evaluate local environmental and conservation education opportunities.
- II. Vision, goals, and objectives
 - a. Identify city-owned parcels amenable for medium-long term placement of cultivated natural spaces including beneficial insect support gardens, urban tree nurseries, community urban agriculture plots, and wildlife habitat.
 - b. Identify vulnerabilities in ecosystem health and identify areas for long-term restoration plans.
 - c. Examine peer community ordinances regulating natural landscaping to balance community needs with environmental priorities.
 - d. Identify potential local partners for conservation and environmental education initiatives.
- III. Options and priorities
 - a. Set targets for each type of natural space with a city-wide equitable distribution plan and identify species to planted in natural spaces with a plan to include native and climate-resilient species.
 - b. Identify and apply for grant funding opportunities to support restoration efforts.
 - c. Identify appropriate parameters for natural landscaping including species, height, and location requirements.
 - d. Identify funding opportunities for environmental and conservation education opportunities.
- IV. Actions
 - a. Increase placement of natural spaces in city to meet targets.
 - b. Implement ecological restoration plans including setting aside land for uncultivated natural space, eliminating invasive species, and native species reintroduction efforts.
 - c. Update ordinances to allow well-maintained natural spaces to be explicitly allowed on private lots in the city.
 - d. Implement place-based programming to engage community members with natural spaces and educate about natural landscaping.
- V. Implementation, monitoring, and evaluation
 - a. Assign budgetary support for staff to regularly assess implementation of natural space plan and health of natural spaces.
 - b. Implement habitat restoration plans.

- c. Use current public work resources to encourage implementation and adherence to updated natural landscaping ordinances.
- d. Assess implementation and effectiveness of programming in line with grant expectations.

Chapter 7 – Solid Waste

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. Much of this is plastic designed to be only used once and then thrown away. According to a 2019 study, 55% of plastic produced ended up discarded or in landfills in 2015. In response, many national, state, and local governments are taking action to reduce waste production through diverting materials to recycling and reuse programs, shifting toward reusable materials, and decreasing use of single use plastic products.

7-A Decreased Municipal Waste through Expansion of Recycling and Reuse

- I. Information base
 - a. Evaluate costs and accessibility to trash services for residents.
 - b. Assess community access to and participating in recycling and reuse efforts.
 - c. Conduct waste stream audit for city departments.
- II. Vision, goals, and objectives
 - a. Evaluate deficiencies/inequities in public access and affordability of trash services.
 - b. Identify issues with access to quality, affordable recycling and reuse services.
 - c. Identify areas of concern and opportunities for decrease in city waste production or diversion of produced waste.
- III. Options and priorities
 - a. Evaluate alternative public and private options for decreasing costs and achieving universal access to solid waste services toward the goal of ensuring healthy and clean public and private areas for residents and limiting costs of code enforcement.
 - b. Evaluate alternative approaches to implement universal curbside recycling and expand alternative recycling and reuse opportunities.
 - c. Assess alternative methods of such as waste reduction including sustainable procurement strategies, waste recovery, and biosolid management.
- IV. Actions
 - a. Implement updated city-wide solid waste solutions.
 - b. Implement city-wide curbside recycling and promote initiatives that facilitate the green circular economy including working with repair businesses and buy nothing groups.
 - c. Implement sustainable procurement ordinance and apply best practices to limit landfill waste.
- V. Implementation, monitoring, and evaluation
 - a. Assign budgetary support for staff to administer updated solid waste plan.
 - b. Assign budgetary support for staff to administer updated recycling and reuse plan.
 - c. Assign budgetary support for staff or consultants to evaluate and recommend updated practices on solid waste reduction.

Chapter 8 – Environmental Justice

Understanding the environmental challenges in our community will require constant communication and outreach. We must ensure that all voices in our community contribute to policy making to avoid mistakes that have led to environmental inequities that we see in our

community today. The City of Jackson and Jackson County is home to numerous organizations and non-profits, and coordination and networking with these organizations can promote our existing work and lead to future efforts of the Environmental Commission.

8-A Increased Community Involvement in Environmental Decision Making

- I. Information base
 - a. Identify opportunities to engage with Jackson residents around environmental issues.
 - b. Identify local environmentally-focused community organizations and environmental awareness
- II. Vision, goals, and objectives
 - a. Create a yearly schedule of events that bring awareness to environmental issues to public and get feedback on current environmental concerns.
 - b. Strengthen environmental commission integration with community partners to increase governmental – non-governmental communication to identify productive collaboration projects.
- III. Options and priorities
 - a. Prioritize most impactful engagement options.
 - b. Consider grant opportunities to develop City programming.
- IV. Actions
 - a. Encourage City events surrounding Earth Day, Arbor Day, National Pollution Prevention Day and organize Environmental Commission booths/tables at city events. Distribute pamphlets, articles, printed education material for education and feedback at booths.
 - b. Establish collaborations with the Grand River Environmental Action Team (GREAT), the Jackson District Library, Ella Sharp Museum, Dahlem Center, Active Jackson, Jackson County Conservation District, JPS, and Michigan Public Universities.
- V. Implementation, monitoring, and evaluation
 - a. Organize on a yearly recurring basis education events and public contact events. Monitor and update events yearly.
 - b. Determine through communication with City staff updates to City calendar and grant writing opportunities for programming.

8-B Establishment of Equitable Distribution of Environmental Resources, Benefits, and Costs

- I. Information base
 - a. Identify inequities experienced by residents in access to quality, environmentally-sustainable choices cutting across all previously defined areas of concern: water, air, energy, transportation, climate, ecosystems, and solid waste.
- II. Vision, goals, and objectives
 - a. Decrease environmental inequities in experienced by Jackson residents.
- III. Options and priorities
 - a. Prioritize potential changes to policy to decrease inequities. Ensure that new policies distribute environmental risks and benefits fairly. Integrate Environmental Commission with DEI commission.
- IV. Actions
 - a. Research peer community approaches to increasing water accessibility. Consider changes to City water funding structure to limit water shut offs and rate hikes for lead line replacement.
 - b. Identify funding sources for transitioning household to heat pumps and for household weatherization.

- c. Identify funding source for low income EV subsidies and EV charging infrastructure for multi-family residences.
 - d. Consider LED street light installation and replacement to improve pedestrian safety.
 - e. Encourage funding for lead paint remediation in residences
 - f. Transition to city-performing or single hauler solid waste to move to universal access to trash, recycling, and reuse services.
- V. Implementation, monitoring, and evaluation
 - a. Continue to assess environmental inequities with community engagement.

Chapter 9 – Environmental Accomplishments by Year

2023

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.

No 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 off Thomlinson St. 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.