



2021 SUSTAINABILITY PLAN



CITY OF MAHTOMEDI
—
2021 SUSTAINABILITY PLAN

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01 VISION

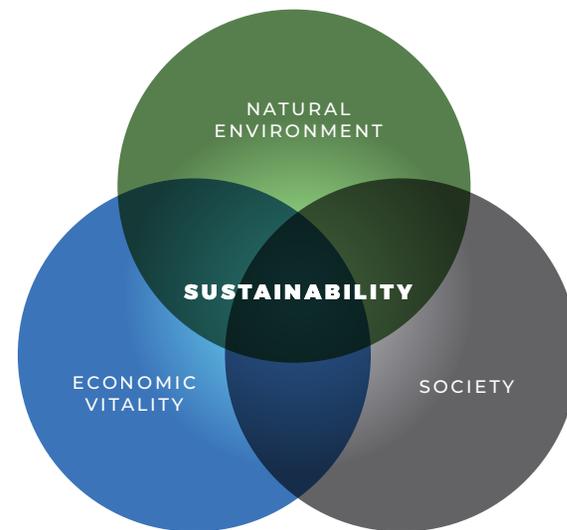
Sustainability is built into the City of Mahtomedi's core vision, "A Vision to Sustain Our Small Town." Mahtomedi residents have strong connections with each other, the natural environment, and the local businesses, creating a small-town atmosphere. The community's unique culture stems in part from the historic Chautauqua Associations, the Wildwood Amusement Park, streetcar transportation, and summer cottages along White Bear Lake. Mahtomedi is widely recognized for outstanding schools, community celebrations, local businesses, and natural beauty. These "Small Town" qualities are valued by the residents. To sustain this way of life, it is important that future planning and development promote healthy living opportunities, sustainable energy infrastructure, the use of renewable resources, preservation and protection of natural resources, and resiliency practices in decision making throughout the community.

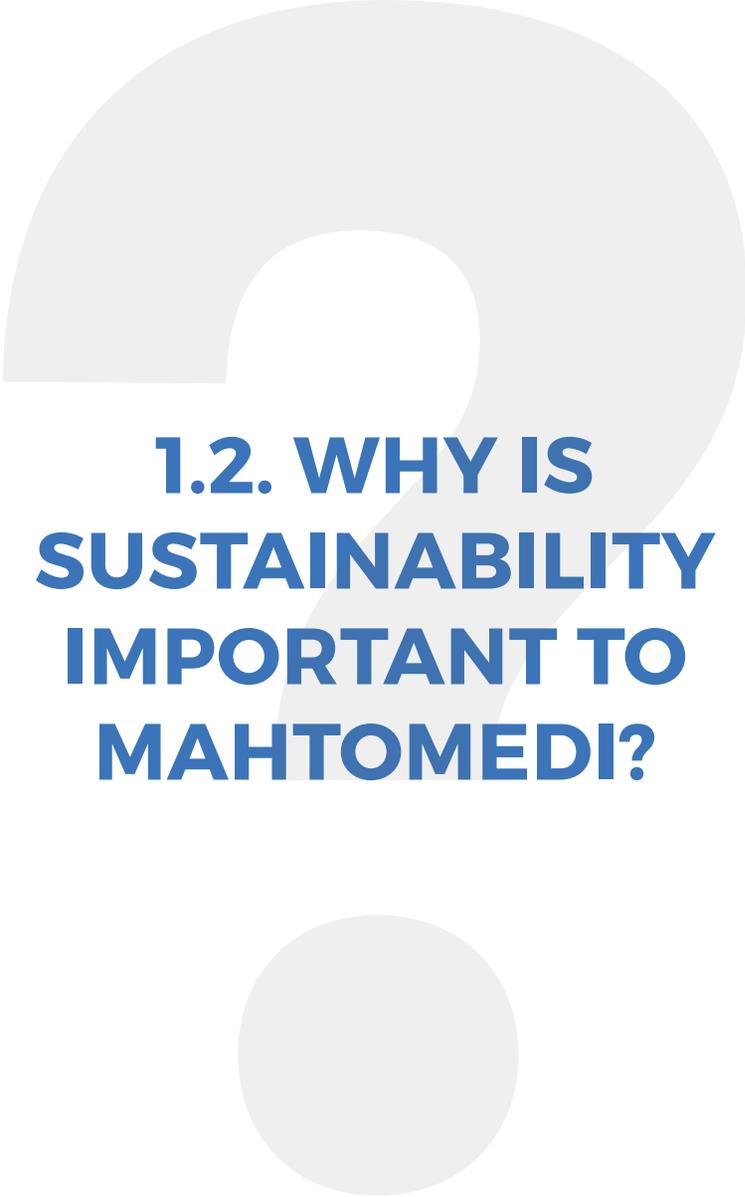
1.1. WHAT DO WE MEAN BY “SUSTAINABILITY”?

A Sustainability Plan declares a "Vision Towards a Sustainable Future" by taking actions that are ecologically sound, economically viable, and socially just and humane to continue the long-term cultural, ecological, and economic health and vitality of the City and the planet indefinitely.

For this plan, sustainability is based on the principle that everything that we need for survival and well-being depends, either directly or indirectly, on the natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations (NEPA, 1969).

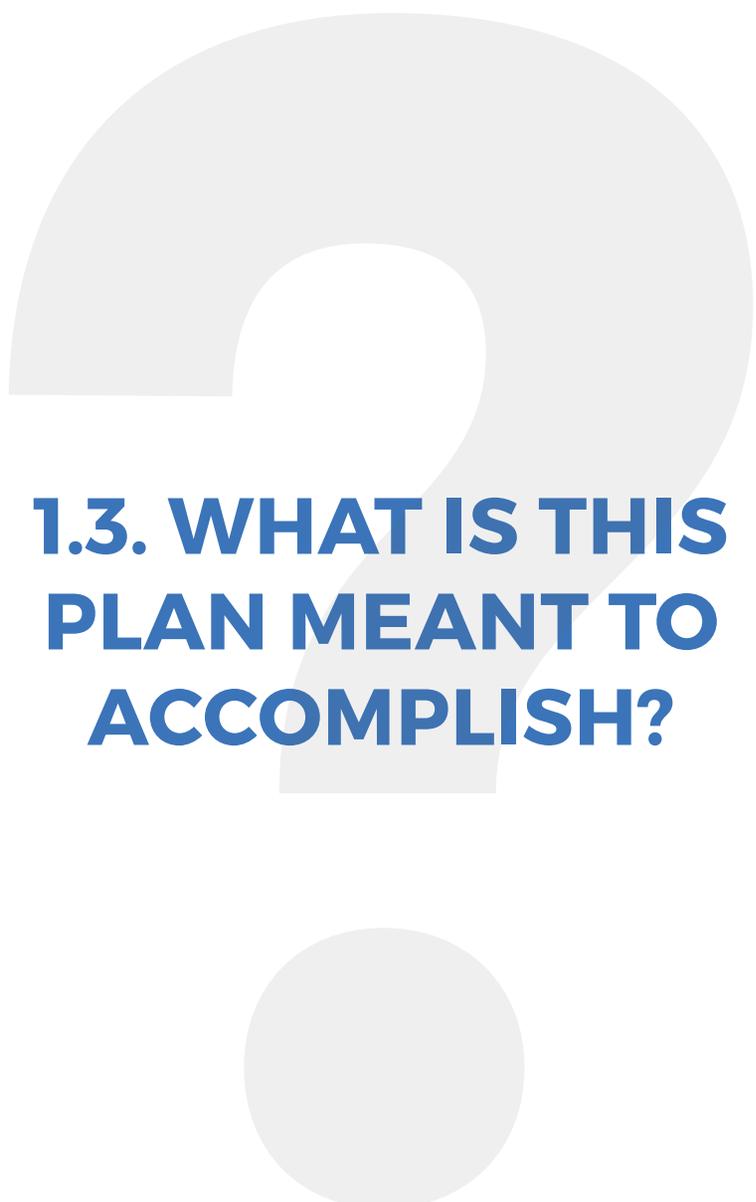
Sustainability is based on three pillars: environment, economy, and society. The environment includes all of earth's natural systems and the use of resources by humans. Economy refers to communities being able to maintain their independence and have access to the resources that they require to meet their needs. Society includes the universal human rights and necessities that all people require to keep their families and communities healthy and secure. All these pillars must be considered together to find a lasting balance. (World Commission, 1987).





1.2. WHY IS SUSTAINABILITY IMPORTANT TO MAHTOMEDI?

- Resident surveys consistently yield high response rates to environmental concern questions.
- Public engagement process during the Comprehensive Plan update included input on sustainability.
- Goals need to be actionable and measurable.
- Goals need to be prioritized.
- Sustainability chapter of the Comprehensive Plan guides to an updated standalone Sustainability Plan.



1.3. WHAT IS THIS PLAN MEANT TO ACCOMPLISH?

Mahtomedi’s City staff and dedicated Environmental Commission have held a long-standing commitment to environmental stewardship within the community, and to efforts that will reduce greenhouse gas (GHG) emissions and be a part of the solution for climate change. The Mahtomedi Sustainability Plan was originally adopted in 2011 and has come a long way since then. This Sustainability Plan details how Mahtomedi will collectively carry out the vision towards a sustainable future and provides guidance on how Mahtomedi will become a healthier more sustainable community. This will be achieved by providing direction for City priorities. This plan is divided into a series of six sustainability indicators that form a community-wide approach, allowing the City to improve upon all aspects of community life. These indicators include ecological health, energy, water, travel, community, and waste. Climate and resource consumption are overarching topics amongst each of these indicators and are incorporated into each.

The Sustainability Plan was created by extracting and integrating a series of past planning efforts that have resulted in goals for the City. Strategies were developed by integrating the following plans and programs: Mahtomedi Comprehensive Plan Update 2040, Xcel Energy’s Partners in Energy - Energy Action Plan, the 20 actions achieved in Green Step Cities Level 3 certification, the Metropolitan Council resiliency planning tools, recommendations from University of Minnesota undergraduate students who completed an assessment for the City, Tree City USA, Mahtomedi Area Green Initiative (MAGI), MN Department of Transportation Safe Routes to School Program, and specific sustainability

1.4. HOW TO USE THIS PLAN

This plan is divided into six indicator sections. Under each section is an overarching vision and goals to achieve that vision. Only a few goals are listed in detail under each indicator with the intent that they will be the focus of this plan for the next three to five years. New goals will be added to each indicator as prior ones are achieved. Some goals will be ongoing with a future target date. The goals are designed to be specific, measurable, achievable, relevant, and timely (SMART). Each indicator also includes a Community Action section with ideas for how the community can collectively make progress under each indicator. The efforts of everyone- the City government, citizens, and local businesses - are needed to reach the achievement of the goals. Starting points for future goals are included in Table 1 of Appendix A.

EACH GOAL IN THIS SUSTAINABILITY PLAN WILL BE ACHIEVED THROUGH THE FOLLOWING STRATEGY:



Compile community baseline data.



Consider barriers to engagement and implementation.



Identify an implementation strategy for each policy.

- Identify strategies to continually engage the community throughout implementation of each policy.
 - Identify strategies to overcome barriers.
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Include a process to review progress on goals and outcomes.



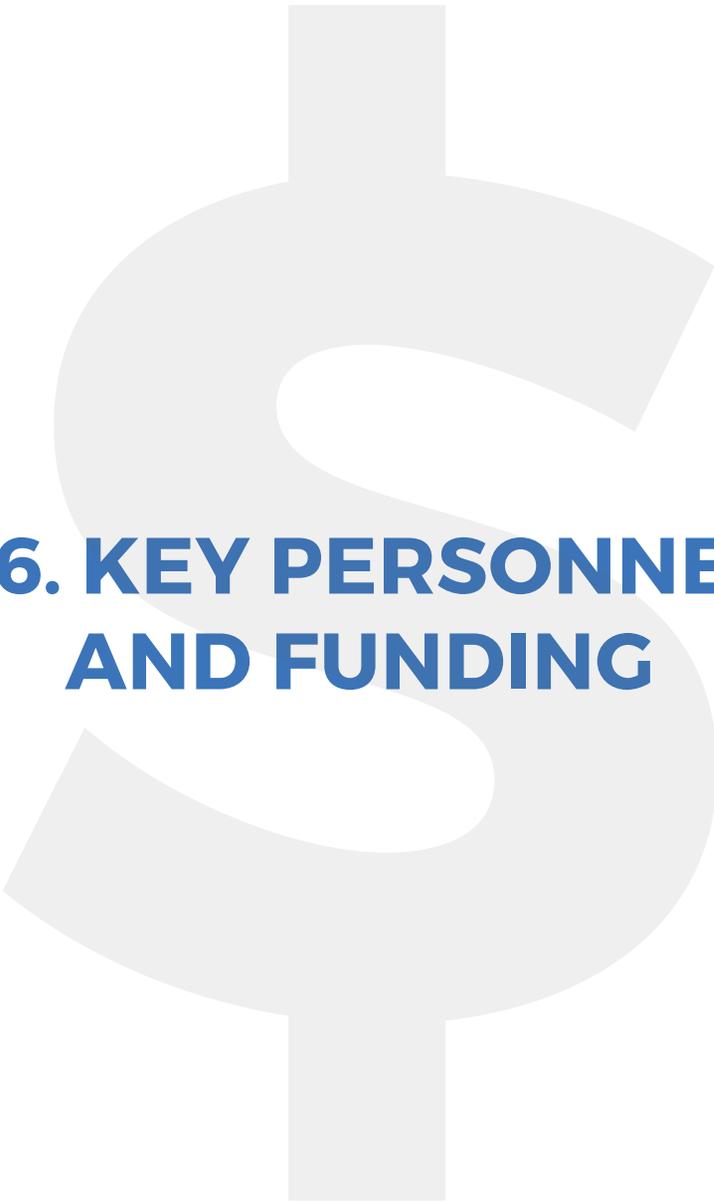
Assess staff and financial resources.



1.5. TIME HORIZON AND PLAN UPDATES

This plan is intended to be dynamic and updated as needed by the City as the City progresses through and achieves their sustainability goals. In general, the goals outlined in this plan have a three to five-year outlook, from planning, to implementation, to achievement. The intent is the goals and strategies will be updated to replace those that have been completed. Being dynamic, this plan can and will be amended and evolve at any time as new or unforeseen challenges arise. Having flexibility to rework the plan is key to its success for achieving the City's sustainability goals.

This Sustainability Plan will be hosted on the City's webpage. Updates to the plan will be included on the City webpage, in City mailings, and the Green Talk newsletter.



1.6. KEY PERSONNEL AND FUNDING

A staff person, commission member, or key personnel should be assigned as the City's Sustainability Manager. This person would coordinate this Sustainability Plan, including the application for grants, seeking out public and private partners, and preparing sustainability proposals for Council consideration. This person can delegate tasks to the Environmental Commission, consultants, University students, volunteers, etc., but should be the one to organize the efforts.

FUNDING IS IMPORTANT TO THE SUCCESS OF DEVELOPING SUSTAINABILITY PRACTICES. THE FOLLOWING HIERARCHY SHOULD BE USED TO PRIORITIZE THE USE OF FUNDING SOURCES WHEN IMPLEMENTING THIS PLAN:

1. Grant funding.
2. Existing funding sources that have been committed to sustainability in the past.
3. Cost-sharing with other public or private entities.
4. Investments that have a reliable payback for the initial investment.
5. City's annual budget.



1.7. CLIMATE FOCUS

The global threat of climate change includes rising temperatures that are fueling environmental degradation, natural disasters, weather extremes, food and water insecurity, economic disruption, and conflict worldwide. Sea levels are rising, the Arctic is melting, coral reefs are dying, oceans are acidifying, and forests are burning. Billions of tons of CO₂ are released into the atmosphere every year because of coal, oil, and gas production. Human activity is producing GHG emissions at a record high. The Intergovernmental Panel on Climate Change (IPCC) released a report in August 2021 warning that limiting global warming to 1.5 degrees Celsius or even 2 degrees Celsius above pre-industrial levels will be beyond reach in the next two decades without immediate, rapid and large-scale reductions in GHG emissions (IPCC, 2021).

Greenhouse gas emission reduction is an overarching theme of this Sustainability Plan, and each indicator includes ideas and goals that will reduce the overall carbon footprint of the City and allow the City to reach carbon neutrality by 2050.



1.8. WHY DOES CLIMATE CHANGE MATTER TO MAHTOMEDI?

Climate change is apparent in Minnesota and has increased the City's awareness of how these changes will impact the community into the future. According to the Metropolitan Council, temperatures in the Twin Cities area have increased by 3.2o F between 1951 and 2012 with more elevated temperature days above 90o F. Similar changes have occurred with rain and snow fall, increasing by 5.5 inches and more frequent heavy rain events causing flooding or long-term ponding in low areas. Increased temperatures have had effects on the natural ecosystem of the state as well. Warming surface waters have led to significant loss of fish habitat, and heavy rain events combined with surface water runoff is increasing the amount of sedimentation and algae blooms. As the climate warms, northern tree species liked paper birch, quaking aspen, balsam fir, and black spruce may start to die, with other species shifting further north and warmer-climate tree species, like maples, oaks, and hickories could take their place. These impacts to tree cover are accompanied by changes in the understory and soil, meaning that habitat for wildlife is changing along with the trees. The warming trends have also started to shift the patterns of migratory or hibernating species. Birds are showing up and breeding earlier in the spring and bees and other insects are emerging from hibernation earlier in the season. These patterns are risky for species that are not adjusted to the differences in habitat and food availability and could lead to severe impacts to populations. (MPCA, 2021).

Greenhouse gas emissions data

Total GHG emissions and goals	Sources of 2018 emissions	Change in emissions by sectors, 2005-2018	Interactive sector details	Indicators of GHG intensity	Filterable data table	Documentation
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Minnesota's GHG emissions 1990-2018 and Next Generation Energy Act goals

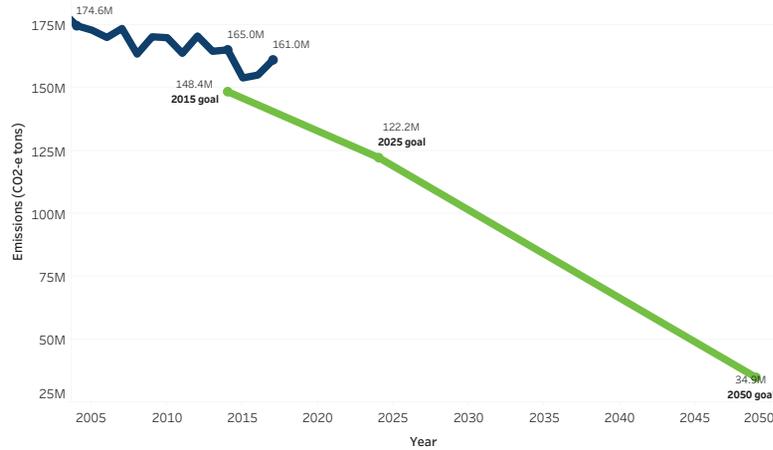


Figure 1.

The Next Generation Energy Act, under Minn. Stat. Chapter 216H, requires the state to reduce GHG emissions by 80% between 2005 and 2050 while supporting clean energy, energy efficiency, and supplementing renewable energy standards in Minnesota (Figure 1). At the state level, GHG emission reductions are needed in the industrial, residential, and commercial sectors as these areas of the economy have been trending higher emissions (Figure 2). These emissions sources should be of focus to the City.

At the local level, the human health and economic costs of climate change pose a challenge to the community. Climate change can adversely affect human health through poor air quality, severe heat and drought, and emergence of new diseases. Mahtomedi is built upon a historic culture focused on a “small town feel” and the natural landscape where this community was built, along the shore of White Bear Lake. To sustain the small-town historic feel, preserve the lake that we love, the forests at Katherine Abbot Park, fish and backyard wildlife, clean drinking water, economic health, and viability as a community, Mahtomedi needs to be a leader in the current climate crisis.

Greenhouse gas emissions data

Total GHG emissions and goals	Sources of 2018 emissions	Change in emissions by sectors, 2005-2018	Interactive sector details	Indicators of GHG intensity	Filterable data table	Documentation
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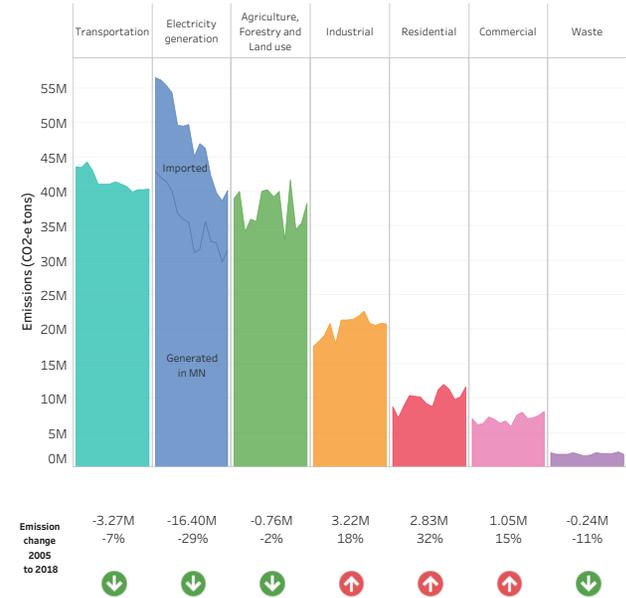


Figure 2. Changes of GHG emissions in Minnesota by sector between 2005 and 2018 (MPCA, 2021).



1.9. CLIMATE BASELINE AND GREENHOUSE GAS EMISSION GOALS

The City completed a carbon footprint analysis in May 2009. Software was used from the International Council for Local Environmental Initiatives (ICLEI), an organization that helps with local government and community sustainable development. ICLEI provides 'Clean Air and Climate Protection Software' to be used as the carbon footprint calculator. Based on the results of the study, Municipal buildings were the leading contributor to energy use for the City. Subsequently, an audit was conducted for the City to determine the steps necessary to reduce energy use by 20% in 2020. This audit can be used in conjunction with the GreenSteps Program to understand which public facilities need the most attention.

In 2017, Mahtomedi developed an Energy Action Plan through the Xcel Energy Partners in Energy program. This plan focusses on three priority strategies: Residential Focus Area, Business and Institutional Focus Area, and Renewable Energy Focus Area. The Energy Action Plan developed baseline data from 2014 to 2016 to understand where energy is used in the City; the year 2016 was established as the baseline for the plan. In 2016, residents consumed three-quarters of the City's total energy, including 62% of all electricity used and 77% of natural gas used.

GREENHOUSE GAS EMISSIONS

community-wide greenhouse gas emissions from building energy, vehicle travel, and the management of municipal solid waste

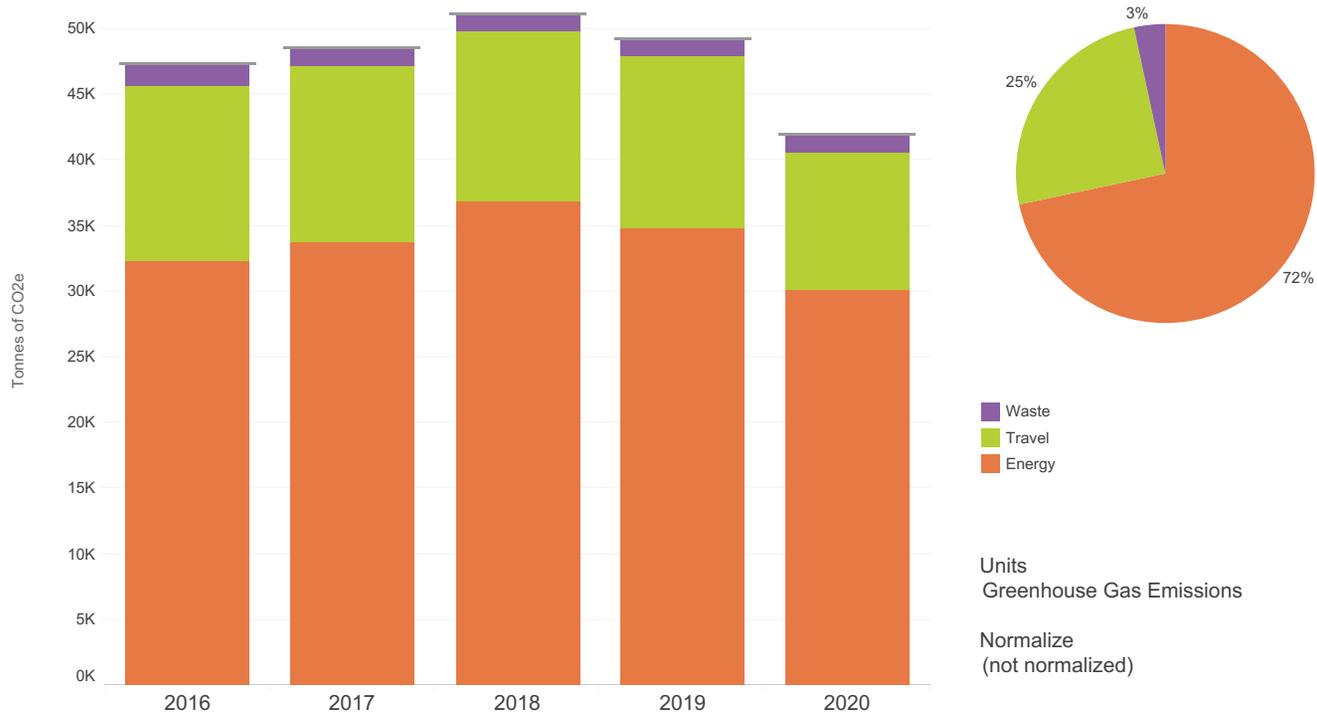


Figure 3. Community-wide greenhouse gas emissions from building energy, vehicle travel, and management of municipal solid waste in the City of Mahtomedi (RII, 2021).

Mahtomedi has joined the Regional Indicators Initiative (RII) to get an annual measure of performance metrics that inform the City’s overall efficiency and level of sustainability. The RII measures annual performance metrics for Minnesota cities committed to increasing their overall efficiency and level of sustainability (RII, 2021). Data was collected across four primary indicators that comprise over 90% of the City’s total grGHG emissions including energy, water, travel, and waste. The baseline for GHG emissions in Mahtomedi from 2016 – 2019 based on the RII data are included in Figure 3.

ENERGY

energy use in the built environment

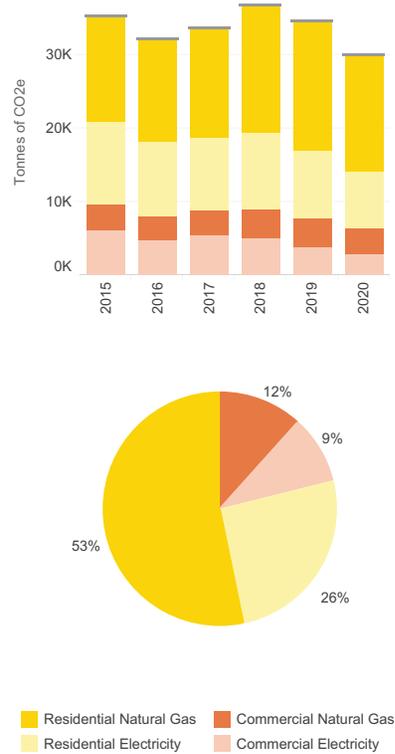
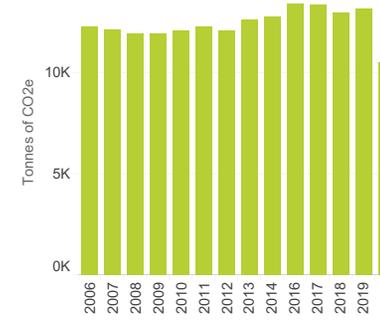


Figure 4. Mahtomedi CO2e emissions from energy use in the built environment (RII, 2021).

TRAVEL

vehicle miles traveled within city boundaries



WASTE

management of municipal solid waste generated within city boundaries

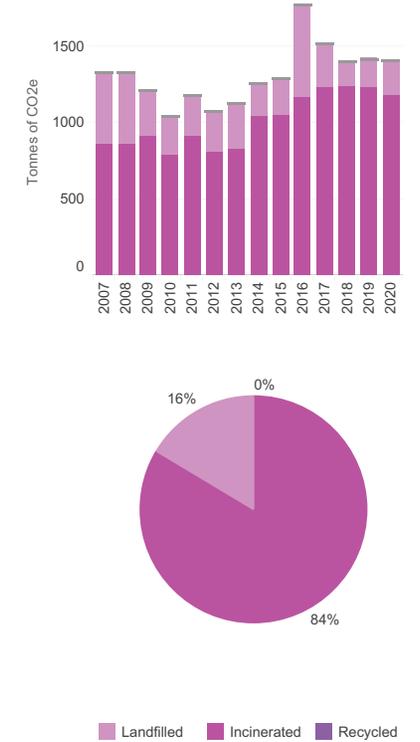


Figure 5. Vehicle miles traveled within the City boundaries and management of municipal solid

As of 2019, GHG emissions totaled 50,063 Tonnes of CO2e in Mahtomedi. CO2e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints and providing a common metric to compare across indicators. Of this total, energy is contributing to 71% of emissions (Figure 4). Residential natural gas use is the highest contributor to the energy emissions followed by residential electric. Travel contributed to 26% of the GHG emissions and waste contributed 3% (Figure 5).

Mahtomedi Greenhouse Gas Emissions

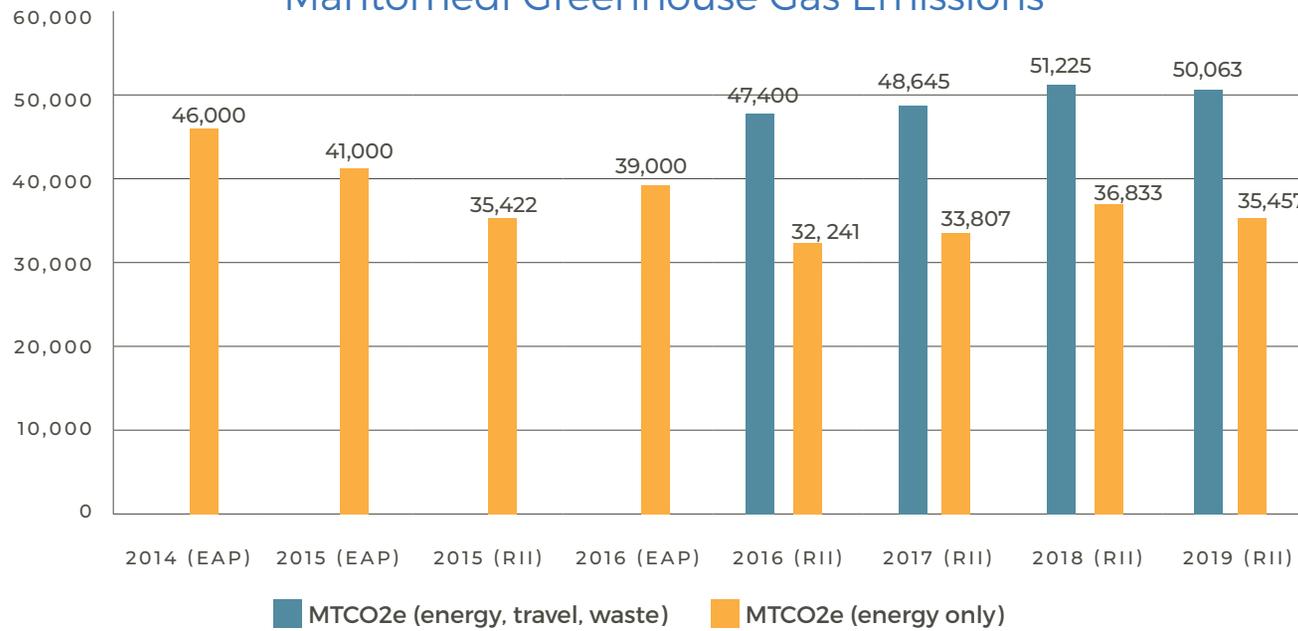


Figure 6. Mahtomedi greenhouse gas emissions (MTCO2e) between 2014 and 2019 from the Xcel Energy Partners in Energy – Energy Action Plan (EAP) and the Regional Indicators Initiative (RII).

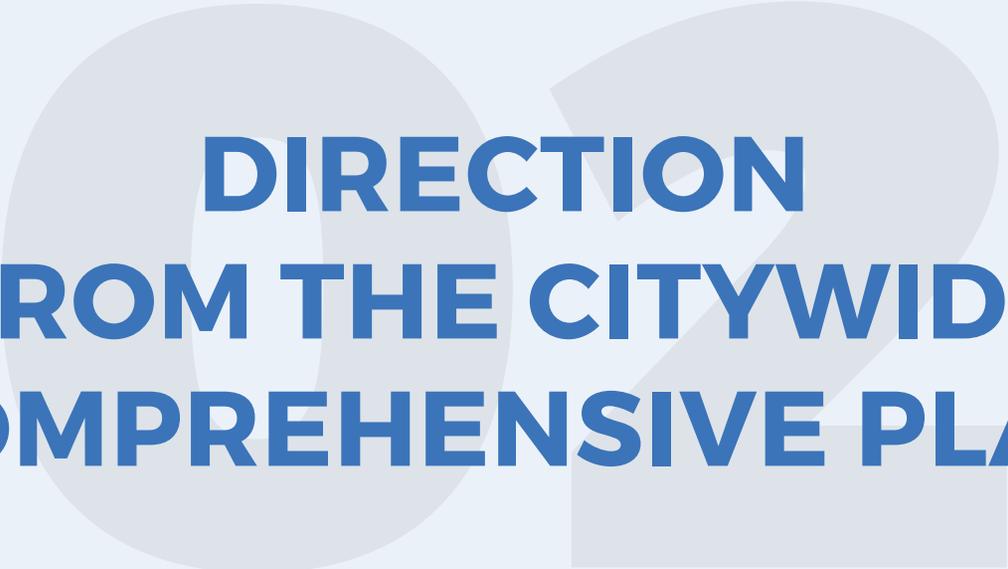
Based on the data from both the Climate Action Plan and the RII, the baseline trend for GHG emissions from Mahtomedi are shown in Figure 6.

Based on this vision, Mahtomedi has committed the following GHG emissions reduction goals:

- 30 percent reduction in energy related GHG emissions by 2030 and a 100 percent reduction (carbon neutrality) by 2050.
- 1.4 percent average annual energy savings to reduce consumption 19 percent below the 2016 baseline by 2030.

The Energy Action Plan includes a vision for Mahtomedi’s energy future of:

Mahtomedi residents, schools, congregations, and businesses will work collaboratively to dramatically reduce our carbon footprint and position our community as a regional energy leader by engaging in activities that conserve energy, save money, and use renewable energy.



DIRECTION FROM THE CITYWIDE COMPREHENSIVE PLAN



2.1. RECAP OF PUBLIC ENGAGEMENT

In a 2017 survey of Mahtomedi residents about the quality of life in the community, several questions shed light on residents' priorities related to sustainability. Three-quarters of residents surveyed say that the City protects the environment about the right amount. The most critical issues of concern to residents were lake levels, air quality, water quality and littering.



2.2. COMPREHENSIVE PLAN GOALS

The City's 2040 sustainability strategies, objectives, and tactics are structured using categories identified by the Metropolitan Council's resilience guidelines for communities (Metropolitan Council, 2021b). Outlined below are four focus areas in the Comprehensive Plan Chapter 8, highlighting existing achievements and new approaches. This Sustainability Plan has combined these focus areas from the Comprehensive Plan into the six indicator categories: ecological health, energy, water, travel, community, and waste.

FOCUS AREA 1 - INFRASTRUCTURE AND ENVIRONMENTAL ASSETS

- Water: infrastructure and quality
- Road infrastructure
- Environmental assets: Air, biodiversity, and forests

FOCUS AREA 2 - ENERGY INFRASTRUCTURE AND EFFICIENCY

- Renewable energy infrastructure
- Energy efficiency and conservation

FOCUS AREA 3 - HEALTHY COMMUNITIES

- Engagement: general, citizens, businesses
- Parks and trails
- Healthy food access
- Walkability/Mobility
- Housing
- Applied creativity and community resilience

FOCUS AREA 4 - ECONOMY AND SOCIETY

- Ideas of well-being and progress
- Race and equity
- Vulnerable populations
- Climate change vulnerability



2.3. DIRECTION FROM GREEN STEP CITIES

Mahtomedi reached Step 5 status of the Green Step Cities program in June 2020. Each year the City reports on metrics to show improvements or maintenance of sustainability goals.

Several of the goals selected in this plan are derived from the Green Step Cities program. If a goal aligns with the program, the Step number is indicated.

03

INDICATORS

This plan is divided into six indicators that will provide a community-wide approach to achieving a sustainable future. These indicators include goals that target the three pillars of sustainability: environment, economy, and society. Each of the following sections is dedicated to one of the six indicators and the City's goals for achieving sustainable development and working towards carbon neutrality. The six indicators include: ecological health, energy, water, travel, community, and waste.



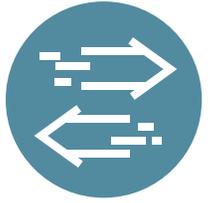
ECOLOGICAL HEALTH



ENERGY



WATER



TRAVEL

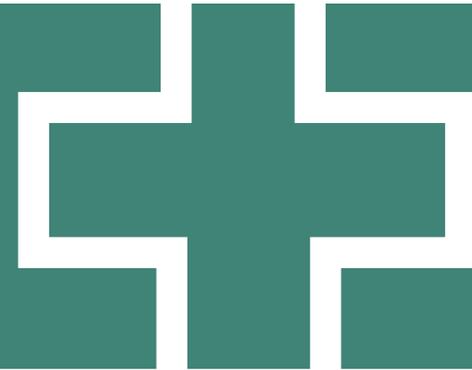


COMMUNITY



WASTE

3.1 ECOLOGICAL HEALTH



3.1.1 INTRODUCTION

The City of Mahtomedi has 21 named parks and open space areas that total 144 acres. Open space and conservation areas include lands set aside for preserving natural resources, unique landscapes, buffers, and trail corridors. Preservation and restoration of natural resources benefits the wildlife and environment within the community.

Historically, the natural environment of Mahtomedi consisted of hardwood forests (oak, maple, basswood, and hickory trees) and areas of tallgrass prairie or oak savanna. Today, much of the landscape is developed with small portions of forest. The canopy coverage within the City is about 55% excluding lake areas. Preserving and increasing the canopy cover within the City will not only return the landscape to its native condition, but urban trees also play an essential role in reducing the main contributor to climate change, CO₂. Trees act as a CO₂ sink by sequestering and storing CO₂ and using it for photosynthesis to produce more oxygen. An average sized tree can store hundreds of pounds of CO₂ over its lifetime, and planting more trees reduces the overall concentration of CO₂ in the atmosphere. Not only do trees reduce CO₂ but shading from their canopy reduces heating of the ground and can help to reduce energy costs from staying cool. Mahtomedi has been listed as a Tree City USA for 12 years and the City has made a commitment to a tree management program.

Furthermore, having a diversity of native plants and plant communities within the City will help to balance the ecosystem and provide places for wildlife to live and forage. Portions of Mahtomedi are located within the high potential zone of occurrence for the state endangered rusty-patched bumble bee (*Bombus affinis*). Species like this

one rely on a diversity of flora for food resources and open patches of sandy soil for hibernation. Inclusion of native flowers and grasses throughout the City provides habitat within the already developed landscape. Providing flowering resources that bloom in the spring, summer, and fall throughout the City will benefit the rusty-patched bumble bee, monarch butterflies (*Danaus plexippus*) and other pollinator species.

One common related challenge is that within a developed landscape it is common for opportunistic invasive and noxious weed species to flourish. Invasive and noxious species provide a limited benefit to wildlife and compete with native beneficial plants for space and resources. Adequate control and spreading prevention are important to increase land quality and provide habitat, shelter, and food for wildlife, as well as to enhance the natural spaces within the City.

The heavily developed suburban landscape provides challenges for creating a natural environment that supports ecological functions and wildlife. Most of the unbuilt land within the community is located on private property as lawns. Community action will be important in helping Mahtomedi achieve more biological diversity and density of native plants.

3.1.2 OVERARCHING GOAL

Sustain a healthy ecosystem that supports a balance between native species, sensitive ecological resources, and the human population.



Goal 1 (Green Step 19.5): Establish 1,600 linear feet of un-mowed native vegetated buffer strips adjacent to wetlands on public and private lands by 2026.

BASELINE DATA:

A vegetated buffer is a strip of land between a wetland or other water resource and any upland development or manicured yard space. Wetland buffers provide functions and values including improved water quality and quantity. Buffer strips use long-rooted native plants to filter pollutants out of the water, hold soil in place to reduce erosion and sedimentation, and increase infiltration of precipitation to help reduce flooding potential. Other benefits of buffers are that they offer habitat protection, minimize human impact, and create pollinator habitat.

The City currently enforces the Wetland Buffer Ordinance (Section 11.07) during site plan review (development on all lands) or preliminary plats. These buffer widths are based on the functional classification of the wetlands as defined in the Mahtomedi Wetlands Inventory that was updated in 2021. This ordinance provides a means to enforce buffer establishment in some areas of the City, but only applies to site plan applications and preliminary plat reviews. This goal will allow the City to identify other locations throughout the City that need buffer establishment. There are approximately 32,000 linear feet of wetland edge in the City that could have an established, un-mowed native vegetated buffer.

BARRIERS:

Buffers tend to be lost when mowing or development occurs adjacent to the wetlands. Many wetlands in need of buffers are located on private land. Outreach and partnership with private homeowners will be key to successful buffer establishment. Wetland buffers on public land are generally only established when accompanied by an adjacent infrastructure project, but the City could begin to establish un-mowed buffers on all public lands regardless of a development application.

IMPLEMENTATION:

1. Identify the targeted 5% (1,600 linear feet) of wetland edge that should receive buffers, starting with wetlands on public property.
2. Plant native vegetation adjacent to wetlands that were identified as needing buffer protection. Planting can be native riparian seed mixes, plugs, or trees and shrubs. Incorporation of seed mixes with flowerings species will provide a benefit to pollinators as well.
3. Partner with watershed districts, Washington Conservation District, Board of Water and Soil Resources (BWSR), or other entities, to perform outreach to private homeowners about the benefits of wetland buffers and provide information about incentive programs.
 - Provide onsite consultation with homeowners to assess potential buffer installation. This may be completed by partner organizations.
 - Encourage private landowner participation in established programs to create their buffer, such as: Lawns to Legumes (BWSR, 2021) or watershed district programs.
 - Offer services to assist landowners in the application process for various incentive programs.
4. Apply for grant funding for habitat restoration on public lands, if applicable.



PROGRESS REVIEW:

YEAR 1:

Select targeted buffer areas on both public and private lands. Form partnerships and develop funding ideas or incentive programs.

YEAR 2:

Implement buffer establishment on public lands as an example for residents to complete similar practices on private lands.

YEAR 3:

- Complete public outreach to homeowners adjacent to wetlands with an enrollment/interest feedback component.
- Develop a list of invested homeowners. If total wetland buffer length will not meet the goal with the public lands and the invested homeowners, identify additional lands and perform outreach at those locations.
- Develop a timeline and review program for private homeowners.
- Apply for grant funding for buffer establishment on public lands. Possibly include a Natural Resources Inventory in the grant proposal.

YEAR 4:

Reassess wetlands throughout the City and establish a new wetland buffer goal if needed.

FUNDING AND PROGRAMS:

Potential funding sources for buffer establishment include the Lawns to Legumes program for homeowners, Rice Creek Watershed Mini Grant program for residents, Valley Branch Watershed District BMP cost-share program, and the Conservation Partners Legacy (CPL) Grant for the City. Annually, funds become available for projects through the Department of Natural Resources (DNR), (BWSR), and the Pollution Control Agency (MCPA). The Washington Conservation District is available to provide technical assistance.



Goal 2: Complete a Citywide Natural Resources Inventory (NRI) of City Parks.

BASELINE DATA:

A Natural Resources Inventory includes an assessment of the remaining open spaces and natural features present in the City. The inventory is a great tool to identify native species diversity and abundance, invasive species, and locations for enhancement and restoration projects. The NRI provides baseline data of the City's lands and guides how the land should be managed as well as identifies priority areas for management. An NRI will allow the City to identify natural features (wetlands, riparian areas, open space, species diversity) that have the potential for enhancement, restoration, or preservation through recommendations derived from the data. An NRI was completed within Katherine Abbott Park in 2013 so this area could be updated or excluded from the citywide NRI to focus on other parks instead.

The City of Mahtomedi once consisted of hardwood forest and patches of grassland or oak savannah. Remnants of old growth trees exist in the northeast portion of the City as well as within City parks, such as Katherine Abbott. The City has a wetland inventory that was updated in 2021 for all wetlands within the City, and the City tracks tree plantings and maintenance projects annually. The Washington Conservation District (WCD) is working on Natural Resources Planning within the County which will identify high priority areas for long-term land protection and management of natural resources. Mapping includes core habitats and potential habitat corridors within the City.

BARRIERS:

Funding sources are not readily available to complete an NRI so will need to be included in the City's budget or incorporated into another project grant proposal. Private natural areas will require landowner access authorization.

IMPLEMENTATION:

1. Present cost and recommendation to Council.
2. Complete NRI by collaborating with the Washington Conservation District for technical assistance and data sharing. Obtaining data from the WCD may reduce the number of areas that need to be reviewed during the NRI.
3. Review recommendations for next steps of enhancement, preservation, restoration, invasive species control, and supplemental native species plantings.
4. Develop new goals based on NRI report recommendations; align goals with those of the WCD and the watershed districts.

PROGRESS REVIEW:

YEAR 1:

- Seek proposals and partnerships.
- Present proposals to Council and gain authorization.

YEAR 2:

- Obtain existing data from partner groups (e.g., WCD, watershed, County, etc.)
- Complete NRI.
- Review recommendations and establish next steps.

FUNDING:

The City could include the NRI in a CPL grant proposal for another project, such as establishing wetland buffers, as a form of collecting baseline data. The City could also include funding for the NRI in the annual budget for the portion that is not covered by grants.



Goal 3: Remove common buckthorn (*Rhamnus cathartica*) and Tartarian honeysuckle (*Lonicera tatarica*) from City-owned parks by 2030.

BASELINE DATA:

The City has not completed an NRI to gain a baseline condition for the locations of common buckthorn throughout the City. Completing the NRI will identify where invasive species are a problem on public lands in the City. An NRI was completed within Katherine Abbot Park in 2013. The City has started to remove common buckthorn from Katherine Abbott Park per the Natural Resource Management Plan and Park Master Plan.

BARRIERS:

Work on controlling terrestrial invasive species cannot be fully addressed until there is baseline data identifying where these species occur. Control of invasive species typically requires ongoing maintenance.

IMPLEMENTATION:

1. Identify City parks that contain common buckthorn and Tartarian honeysuckle.
2. Identify priority order for City parks based on abundance of these species.
3. Determine who will be responsible for removal and coordinate efforts.

- a. City maintenance staff or seasonal staff can be used to complete removal. In some circumstances, it may be necessary to have a certified herbicide applicator license.
 - b. Consider utilizing goat grazing for buckthorn control.
 - c. Conservation Corps will complete invasive and noxious species removal for a fee and volunteer groups could include Mahtomedi Area Green Initiative (MAGI), student groups, master gardeners.
4. If City maintenance or seasonal workers are completing the work, host a training on the identification and removal methods. The City could partner with another organization who has expertise in this area.
 5. Document where and when removals occur to keep track of progress. Some species will require continued maintenance throughout the growing season, and possibly for several years such as common buckthorn.
 6. Revisit maintenance schedules annually until species is eradicated. Work through the City parks in priority order.

PROGRESS REVIEW:

YEAR 1 (AFTER NRI IS COMPLETED):

- Create priority order list of City parks.
- Select who will be completing maintenance.
- Develop maintenance schedules.
- Host training for City staff and seasonal workers.

YEARS 2-4:

- Park invasive species removal, maintenance, and tracking.
- Revisit goals for each park. If species have been removed, develop maintenance plan for next priority park.

FUNDING:

Conservation Partners Legacy grant, Department of Agriculture grants, Cooperative Weed Management Area Program grant in partnership with local SWCD, Conservation Corps.



Goal 4: Adopt a sustainable vegetation management ordinance which allows for tall native grass plantings or woodland lawns by 2025.

BASELINE DATA:

The City's existing ordinance states that grass at all properties needs to be kept to a maximum height of six inches, cut at least every two weeks between May 15 and October 15 and weeds kept under control.

IMPLEMENTATION:

1. Review other Minnesota cities' ordinances regarding native plantings.
2. Develop parameters for Native Landscape Permit application criteria such as the following:
 - a. Site plan showing proposed plantings.
 - b. A specific management and maintenance plan that includes a planting diagram, overall mature plant heights, how species will be maintained, estimated transitional period, and weed control plan.
 - c. Types of plants allowed.
 - d. When a permit will be revoked.
 - e. Consider edging of natural areas to provide a more landscaped look.
 - f. Consider not allowing tall grass within a certain buffer distance from a public street or sidewalk.

- g. Consider not allowing tall grass within a certain buffer distance from a side or rear lot line unless consent is provided in writing.
- h. Inspections and abatement by the City.
3. Perform education and outreach to residents about the benefits of native landscaping. Include information about aesthetics, pollinators, and changing preferences and perspectives.

PROGRESS REVIEW:

YEAR 1:

- Consider a community survey gauging interest about grass height regulations.
- Review similar sustainable vegetation management ordinances in other cities in Minnesota.
- Discuss how this ordinance will best apply to the City and develop ordinance language.
- Write and approve ordinance language for native landscaping.

YEAR 2:

- Complete quarterly outreach and education to residents and local businesses, such as:

- New ordinance
- Benefits of native landscaping
- Pollinators
- Changing preferences and perspectives
- Water quality and water use

FUNDING:

Residents may benefit from funding opportunities such as Lawns to Legumes program for homeowners, Rice Creek Watershed Mini Grant program for residents, and Valley Branch Watershed District BMP cost-share program. The non-profit Metro Blooms works with neighborhoods and cities to install projects for residents. They also host numerous native landscaping workshops and offer landscape designs. Metro blooms offers partnership programs such as Neighborhood of Raingardens.



Goal 5 (Green Step Cities 18.5): Implement City or Park land management standards that maximizes at least one of the following:

1. Low maintenance turf management; native landscaping, organic or integrated pest management; pollinator/monarch-safe policies.
2. Recycling/compostable collection; use of compost as a soil amendment.
3. Sources of non-potable water or surface/rainwater for irrigation.

BASELINE DATA:

Most of the City is developed, however there are several parks within the City that contain or have the potential to contain native plants. The City has begun to make efforts towards restoring the native vegetation within Katherine Abbott Park. However, there are no designated pollinator or monarch-safe gardens within the City.

The City is establishing a community compost drop off site at the fire station. The compost will be picked up by a certified hauler.

BARRIERS:

Many of these techniques for land management are more involved and require additional training for maintenance staff. Staff will need an understanding of maintenance practices that minimize risks to people while understanding their effects on the environment.

IMPLEMENTATION AND PROGRESS REVIEW:

YEAR 1:

- Review current City land management standards.
- Determine which standards are most appropriate for the City to maximize.
- Discuss ideas with City maintenance.
 - Consider no-mow lawns with species such as fescues like tall fescue.
 - Identify areas to reduce mowing and install native plants.
 - Implement policies that protect pollinators and their habitat such as strategic and rotational mowing, timed mowing (no-mow between May 15 and September 30), conservation mowing to enhance floral habitat, no-spray zones, etc.

YEAR 2:

- Develop language for land management standards that can be added to an existing land management plan or develop a land management plan.
- Gain Council approval of the land management standards.

FUNDING AND PROGRAMS:

The University of Minnesota offers an Integrated Pest Management Program and information about no-mow lawns and species. The Monarch Working Group and the Monarch CCAA Program have numerous resources about how to protect and manage lands for pollinators.



Goal 6: Focusing on resiliency and the dynamic nature of changing climate and ecology, increase areal tree cover by 400 native trees by 2026, and increase tree diversity by establishing at least 4 different species of tree per year that will be successful in a changing climate.



BASELINE DATA:

The canopy coverage in the City of Mahtomedi was calculated using ArcGIS NLCD 2011 30-meter canopy data. There are 3,600 acres within the City limits, and of these 2,000 acres are green space or canopy. One medium sized tree produces an aerial coverage of approximately 900 square feet. Based on these data, 400 trees will provide an additional eight acres of canopy coverage. Mahtomedi has been a member of Tree City USA since 2009 by meeting four core standards.

Climate change and resulting warmer temperatures may shift the species of trees that are typically seen within the City to those that prefer warmer climates. Establishing a diversity of trees that will be resilient against changing temperatures will be important for the future canopy cover within the City. The Minnesota DNR has information about which tree species will be most suited for the changing conditions: <https://www.dnr.state.mn.us/treecare/best-native-yard-trees.html>.

SPECIES TO CONSIDER WITHIN THE CITY OF MAHTOMEDI GIVEN THE CURRENT CLIMATE CONDITIONS INCLUDE:

- American elm
- Basswood
- Black oak

- Black walnut
- Bur oak
- Cottonwood
- Hackberry
- Shagbark hickory
- Silver maple
- White oak

BARRIERS:

The list of species to consider can change over time as the climate changes, making this area a moving target. Plans will need to adapt. Also, much of the open space available within the City is located on private property, often within lawns. Community participation will be critical in establishing a higher aerial canopy coverage.

IMPLEMENTATION:

1. Provide education and training on tree care for residents.
2. Explore incentives, programs, and requirements for new development or redevelopment to retain mature trees, replace lost trees, and plant more trees if none were originally on site.

3. Host a tree event (such as on Arbor Day) for residents to inform and provide tree saplings at cost. Advertise the City goal of increasing aerial coverage to reduce atmospheric carbon.
4. Consider offering a tree sale at a low cost to residents, developing Green Zones for prioritization of distribution each year. Green Zones identify areas of the City that will be disproportionately affected by climate change. For example, these were established in the City of Minneapolis and can provide a good reference for Mahtomedi as they develop their own policy.

PROGRESS REVIEW:

Annually assess tree planting totals and select number of trees and species for next planting season.

FUNDING AND PROGRAMS:

The Washington Conservation District offers an annual tree sale each spring. This offers bare-root seedlings to County residents at a low cost. The DNR also offers an annual tree sale and information about tree planting at their seedling sales website. The Washington Conservation District can also connect residents with cost-share programs. Tree City USA provides direction and technical assistance for cities as well.



ACTION



3.1.3 COMMUNITY ACTION

Community members can help improve ecological health by doing some of the following example activities:

- Collect and plant native seeds.
- Plant native plants on your property such as trees, flowers, and grasses.
- Adopt a local street or trail to clean up trash.
- Monitor wildlife in your yards.
- Control weeds on your property using minimal amounts of herbicide.



3.2. ENERGY



3.2.1 OVERARCHING GOAL

Dramatically reduce the carbon footprint and position the community as a regional energy leader by engaging in activities that conserve energy, save money, and use renewable energy.

3.2.2 EXISTING CONDITIONS

Mahtomedi has shown a commitment to achieving energy goals laid out in the framework of the City's Energy Action Plan with focus areas on energy conservation and renewable energy. Through workshops and planning efforts, the City developed an energy vision and plan detailing specific strategies to implement that will reduce energy use within the City.

Regarding energy conservation, Mahtomedi chose to focus on the following priorities to achieve a 30 percent reduction in energy related GHG emissions by 2030 and a 100 percent reduction (carbon neutrality) by 2050. The City will also achieve 1.4 percent average annual energy savings to reduce energy consumption 19 percent by 2030. The baseline energy analysis was detailed in Section 2 Climate Focus of this Plan. Overall, residential electricity (62%) and natural gas (77%) makes up most energy use in the City. Energy-related GHG emissions in 2016, the Energy Action Plan baseline, were 39,000 MTCO₂e. In 2019, energy related GHG emissions were 35,457 MTCO₂e. Residents can participate in several energy incentives programs such as Home Energy Audit, Home Energy Squad, Insulation Rebate, Residential Saver's Switch, Water Heater Rebate, Refrigerator Recycling, and Appliance/Toilet Rebate.

Regarding renewable energy, the City is currently subscribed to a renewable energy program and has started to install electric vehicle charging stations within the City. Mahtomedi also supports the Zephyr Wind Project, a turbine installation at the Mahtomedi Area High School.

Residential Focus Area	STRATEGIES: <ul style="list-style-type: none">· Residential Outreach Campaign· Energy Efficient Construction
Business & Institutional Focus Area	STRATEGIES: <ul style="list-style-type: none">· Congregational Energy Workshops· Business & Institutional Energy Leadership
Renewable Energy Focus Area	STRATEGIES: <ul style="list-style-type: none">· Renewable Energy Adoption

3.2.3 CITY STRATEGIES

Goal 1: Increase on-site renewable energy to 2% of residential and commercial electricity use within the City by 2026. Implement new incentives such as cost-share grant funds and reduced permit fees for initial renewable energy installations for residents and businesses by 2030.



BASELINE DATA:

As of the date of this plan, the City has 24 single family homes, two commercial, and three institutional (Century College) solar permits. In 2019, residential electric use was 93,050 MMBtu and commercial electric use was 37,685 MMBtu. This equates to approximately 38M kWh per year.

Based on the data in the 2040 Comprehensive Plan, there are 2,356 single family detached homes in the City. Energy production of solar panels varies by many factors, but assuming one solar panel can produce 500 kWh per year, 1,532 solar panels would need to be installed to achieve 2% of the residential and commercial electricity consumption. If each installation includes 20 panels, approximately 75 residents and businesses would need to participate in installations. The City code provision lists solar as an allowable accessory use in every zoning district.

BARRIERS:

- Cost of renewable infrastructure for residents is a barrier to installation. Limited access to incentives information and program eligibility complexity may deter people from pursuing renewable energy.
- Allocation of funds to purchase and install panels. Finding space with adequate sunlight to house all panels needed to reach the goal. Maintenance (cost, learning, etc.) of panels by City staff.
- The City's zoning ordinance only allows small-scale installations (ground-mounted) as an accessory use in every zoning district. The ordinance may need to be amended based on the type and size of the proposed solar installations.

IMPLEMENTATION:

1. Consider establishing a City incentive or cost-share grant funds for initial installation for residents and businesses to install renewable energy such as rooftop solar.
2. Target residents who show interest to have more in-depth discussions about options.
3. Partner with or focus efforts on large commercial and industrial buildings that can produce solar energy via rooftop installations (e.g., FedEx, Century).
4. Develop and distribute outreach tools that provide information about clean energy opportunities and connecting residents with actionable resources.
5. Determine an incentive for solar installation, such as a match rate per kWh for the first year of solar production or paying a percentage of initial installation costs with a set grant amount per installation.
6. Utilize the Clean Energy Resources Team has a step-by-step guide to solar procurement.
7. Utilize technical assistance from organizations such as SolSmart.

PROGRESS REVIEW:

YEARS 1-2:

- Complete public engagement.
- Develop City incentive or cost-share.
- Establish marketing method.
- Research potential project partners that can help with outreach, funding, or installations.

YEARS 3-5:

- Contact institutional and commercial businesses to gauge interest and partnership.
- Contact interested residents.
- Assist with implementation of installations through a streamlined permitting process, educational resources, connecting residents to installers, and cost-sharing incentive.
- Annually track installation numbers and amount of electricity produced from panels.

FUNDING AND PROGRAMS:

CERTS provide resources for understanding solar installation and solar contractors. Xcel Energy Solar Rewards program or similar incentive programs. MinnPACE is one option for commercial property owners to install renewable energy systems. Also, the Minnesota Clean Energy Association provides a Minnesota Power Payback Program for most zip codes.

Goal 2: Increase resident and business purchases of clean energy through subscriptions such as through their utility provider or community solar gardens by 25% by 2030.



BASELINE DATA:

There was a total of 238 non-city entities participating in renewable energy purchasing/green power programs in 2020. Assuming 3,141 households are located within the City, 7% of the City is participating in renewable energy purchasing/green power programs. Increasing purchases by 50% would require an additional 119 entities to participate in green power purchasing.

BARRIERS:

Cost can equate to an average of \$3.27 to \$3.60 per month to participate in the Renewable*Connect program through Xcel Energy. This program is also currently subscribed, so unless that changes, the main option available will be community solar garden subscriptions.

IMPLEMENTATION:

1. Identify entities within the City that already participate in renewable energy purchasing/green power programs.
2. Develop a strategy to highlight residents and businesses that participate in these programs.
3. Develop a targeted campaign focused on green power purchasing.
4. Continue to promote Xcel Energy Windsource enrollments for its residents.
5. Consider developing a page on the City website that focuses on renewable energy within the City. Outline resources for both renewable energy purchasing and installations. Show how many people in the City are participating in either purchasing or generation, as well as the City's goal for residents and businesses.

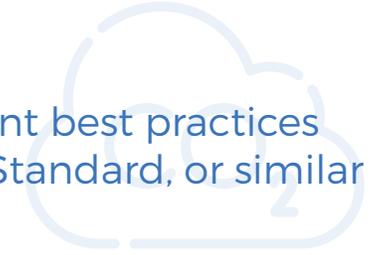
PROGRESS REVIEW:

Bi-annually, review the targeted campaign initiatives and how many entities have shown interest in green power purchasing. Review number of purchases by contacting Xcel Energy (also reported in Green Step Cities) or asking for feedback regarding participation in community solar gardens in a survey.

FUNDING AND PROGRAMS:

There are several resources with information about green power purchasing including: CERTS, Fresh Energy, and WINDEXchange.

Goal 3: Increase energy conservation in City operations by using the most relevant best practices such as the B3 Guidelines, the B3 Sustainable Buildings 2030 (SB2030) Energy Standard, or similar guidelines in all City building upgrades, enhancements, or renovations by 2026.



BASELINE DATA:

The B3 Guidelines are required for all projects receiving obligation bond funding from the State of Minnesota and can be used voluntarily by all other projects. B3 guidelines are designed to be compatible with the national Leadership in Energy and Environment Design (LEED) guidelines while maintaining regional values. The B3 guidelines applies to the design of new developments or renovations to meet sustainability goals for water, energy, indoor environment, materials, and waste. Using the B3 Guidelines automatically applies the B3 Sustainable Building 2030 (SB2030) Energy Standards, making this program more encompassing than the SB2030.

The SB2030 Energy Standard is also compulsory for all state funded projects but focuses only on energy and carbon reduction in commercial, institutional, and industrial buildings. The goal is for all buildings to be net zero greenhouse gas emissions by 2030. Energy efficiency in City buildings saves taxpayer money, reduces GHG emissions, and establishes the City as a leader in energy efficiency.

The City is already tracking performance in the B3 Benchmarking Tool. The City currently uses LED lighting in 90% of municipal lighting fixtures, uses Variable Frequency Drive (VFD) rooftop units for energy management, integrated irrigation controls that use web-based weather data to limit water use, limited water use during drought conditions, and makes an effort to use environmentally friendly products.

BARRIERS:

Applying guidelines for conservation best practices requires an understanding of the design parameters and may require an engineer or architect familiar with the programs.

IMPLEMENTATION:

1. Conduct efficiency testing of existing structures to assess current state of City buildings.
2. Enforce energy audits for all City facilities to track energy usage.
3. Replace mechanical systems, appliances, and light fixtures in City buildings with energy efficient options whenever possible.
4. Renovate and retrofit existing structures to improve energy efficiency.
5. Utilize the B3 Benchmarking Database for all City buildings to evaluate City building energy performance. Consider tracking more than what is currently done at the City.

PROGRESS REVIEW:

Evaluate sustainable program guidelines and determine which metrics can be met by the City when completing upgrades, enhancements, or renovations. Develop a review process for building improvements that ensures sustainable guidelines are being met for all projects at municipal buildings by the year 2026.

FUNDING AND PROGRAMS:

Center for Energy and the Environment, Xcel Energy, and Center Point energy.

Goal 4: Increase participation in energy conservation programs by residents and businesses through community engagement with the goal of increasing 5% participation by 2026.



BASELINE DATA:

The City of Mahtomedi has its Mahtomedi Energy Challenge; its goal is to increase the City's energy conservation and reduce its carbon footprints. The City partners with Xcel Energy and CenterPoint Energy for a Home Energy Squad program. The City pays half the cost of a visit from the Home Energy squad for residents and offers free energy smart and turnkey assessments for businesses and faith communities.

BARRIERS:

Some residents' previous experience interacting with program providers was less than ideal, fear of enrollment with outside agencies, cultural barriers, and lack of understanding benefits are all barriers to enrollment in energy conservation programs.

IMPLEMENTATION:

Focus implementation on well-established and popular programs among residents or programs that have gained support in similar communities. Concentrate on low-cost or free programs for small businesses such as One Stop Efficiency Shop through the Center for Energy and Environment, or Lighting Efficiency (CEE, 2021). Consider using community

connectors such as City staff, local clubs, or townhome or lake associations, and other community-based organizations that work with communities of color, diverse populations and that can also help with language differences. Utilize communication channels such as the webpage, social media, tabling events, newsletters, and volunteers.

1. Engage residents annually with home energy efficiency information.
2. Engage energy burdened households annually with energy efficiency programs for income-eligible utility customers.
3. Target older homes.
4. Engage small and medium-sized businesses annually through utility programs to save money on energy bills.

PROGRESS REVIEW:

YEAR 1:

Locate energy burdened households and older homes. Promote core conservation programs individually, one per quarter. Focus on programs that are applicable to the weather and time of year, such as AC rebates during June and July, or Home Energy Squad during

September – November, and heating rebates during December – February. The City of Roseville's Energy Action Plan has an implementation work plan example.

YEAR 2:

Repeat the efforts from year 1, raising awareness of program benefits.

FUNDING AND PROGRAMS:

The City has an incentive for its Home Energy Squad program. Businesses can sign up for Energy Smart and get a free assessment and contact Xcel Energy's Business Solutions Center. Faith Communities can complete a full-service turnkey assessment and attend a Congregation Energy Workshop spearheaded by the City.

Goal 5: Replace 10% of City-owned gasoline powered equipment with electric equipment by 2026.



BASELINE DATA:

An inventory of gasoline powered equipment will need to be completed to achieve this goal. Equipment used for landscaping, building maintenance, and public works should all be considered.

BARRIERS:

Cost, changes in technology, and functionality of low-polluting equipment. Lack of familiarity with new equipment and learning curves to get trained to use the new models.

IMPLEMENTATION AND PROGRESS REVIEW:

YEAR 1:

- Complete an inventory of all gasoline powered equipment owned by the City.
- Identify equipment that could be replaced with an electric alternative.
 - The MN Department of Veterans Affairs has converted to mostly electric landscaping equipment and may provide guidance for the transition.
- Develop a replacement schedule for all equipment with target replacement dates.
- Discuss phasing and needs with the City's Public Works.

YEARS 2-5:

- Implement phasing out of gasoline powered equipment as new models become available.

FUNDING AND PROGRAMS:

Annually, the MN Pollution Control Agency has grants for Alternative Landscaping Equipment. The grant offers up to a 50% match to replace and scrap equipment.



ACTION



3.2.4 COMMUNITY ACTION

Ways that the community can help conserve energy include:

- Make your home energy efficient. Consider participating in a Home Energy Squad visit and visit the City webpage for shared costs.
- The MinnPACE program allows commercial property owners to invest in energy saving projects with no money down.

3.3 WATER



3.3.1 OVERARCHING GOAL

To provide exemplary water use efficiency and enhanced water quality through efforts that ensure enough clean water for the future community's health and recreation.

3.3.2 EXISTING CONDITIONS

The City supports efforts that will lead to clean water and the development of sustainable water use practices that will protect the water resources within and adjacent to the community. Lake levels and water quality of White Bear Lake are of high importance to the City because the Lake provides much of the community's history. Mahtomedi is located within two watershed districts: Rice Creek Watershed District (RCWD) and Valley Branch Watershed District (VBWD). These districts regulate development impacts on water resources. Surface water in the City drains to one of five large water bodies: White Bear Lake, Lost Lake, Echo Lake, Washington Lake, and Long Lake. Many of Mahtomedi's residents use the City's lakes for recreation like boating, fishing, and swimming. Water is a valuable resource to the City and the City is committed to ensuring that the water will remain clean and abundant into the future.

The City currently has a lawn and garden watering restriction between May 1 and September 30 between the times of 11 am and 6 pm every other day to reduce outdoor water use by residents. Restrictions also apply during times of drought.

The City updated their Local Water Management Plan in 2018 to meet the requirements of Minnesota Statutes 103B, Minnesota Rules 8410, the Rice Creek

Watershed District Watershed Management Plan, and the Valley Branch Watershed District Watershed Management Plan.

THE CITY HAS ADOPTED THE FOLLOWING WATER ORDINANCES:

- Shoreland Overlay District which requires setbacks from shoreland areas and limits the type of development, number of impervious surfaces, and use of the City's shoreland areas.
- Floodplain Management which regulates developments, land alterations and uses within each of the floodway, flood fringe, and general floodplain districts.
- Wetland Buffer Ordinance which requires new developments to provide buffers from existing wetlands according to their quality and classification.

Sanitary sewer and water service are provided throughout the City. Storm sewers, ditches, curbs and gutters provide drainage for the City. Details regarding the public utilities, surface waters, and water quality data can be found in the Mahtomedi Local Water Management Plan available on the City's webpage. The Local Water Management Plan also includes an assessment of existing and potential local water resource-related problems and projects.



3.3.3 CITY STRATEGIES

Goal 1: Educate residents about the benefits of rain gardens or living streets for water quality, and provide support and guidance on installation of these practices.

BASELINE DATA:

This goal aligns with Problem 4.7.A of the Local Water Management Plan. The City currently provides occasional water updates to its residents and businesses via the City webpage, mailings, and Green Talk new letters.

Living Streets are streets where people are active, and nature is accommodated. According to the Metropolitan Council, Living Streets provide multiple modes of transportation and reduce environmental impacts by having less impervious surfaces, managing stormwater, and providing shade. They enhance walking or biking conditions, improve safety and security of streets, calm traffic, create livable neighborhoods, improve water quality, enhance urban forest, reduce road lifecycle costs, and improve neighborhood aesthetics (Metropolitan Council, 2021a).

BARRIERS:

Gaining interest from residents may be challenging in neighborhoods or areas with small lawns. Producing consistent and new information to residence on a regular schedule may be challenging for the City with limited staff time. Finding groups and organizations willing to assist with this effort will be useful during implementation. The installation of rain gardens requires installation costs and requires some annual maintenance.

IMPLEMENTATION:

Provide educational content to residents, businesses, developers, and others. These efforts may include notices in the City's monthly newsletter, articles in the local paper, postings on the City website, and flyers in utility bills. The City may work with the watershed districts to improve the efficiency of educational efforts and reduce duplication. Educational topics may include but are not limited to:

- Wetland buffers
- Yard/pet waste management
- Illicit discharge to stormwater
- Utility easements
- Stormwater pond function
- Controlling invasive species
- Sustainable groundwater and recharge
- Rain garden installation
- Infiltration
- Lawn watering
- Rebate programs for water reduction fixtures

Programming may include virtual or in-person training about the installation and establishment of rain gardens or living streets. Partner with other organizations who will provide technical assistance and trainings (Metro Blooms, Blue Thumb, Washington Conservation District). Consider doing a multi-part workshop for locals including information about water quality, design, and installation. Consider providing cost-sharing incentives for residents who want to use a professional installer.

PROGRESS REVIEW:

YEAR 1:

- Form partnerships with outside organizations who can provide education and training for residents and local businesses.
- Identify locations within the City that could benefit from the installation of rain gardens or living streets, particularly in conjunction with street improvement project areas. Consider residential, institutional (e.g., Century College), and commercial (e.g., FedEx).
- Develop content and schedule for educational outreach.

YEAR 2:

- Implement programming.
- Host installation and volunteer event days.
- Deliver ongoing educational outreach content on a reoccurring schedule.

FUNDING AND PROGRAMS:

The Washington Conservation District provides technical assistance to County residents and can partner with the City for local programming events. The RCWD and VBWD may provide presentations regarding the importance and installation of rain gardens. Consider partnering with Metro Blooms or Blue Thumb groups, who will partner with communities to host workshops and educational events. The Minnesota Water Let's Keep It Clean outreach program also work to inspire people to protect water quality in the watershed and may have resources available to residents. Funding resources can be from the Local Water Management Fund, RCWD, and grant funding per the City's Local Water Management Plan.



Goal 2: Identify highest water use residential customers in the City and work with them to reduce consumption and adopt restrictions and incentives to reduce water use across all residential uses for irrigation

BASELINE DATA:

The City has met with the highest water users in the past which have been institutional or commercial facilities. These entities were identified from water utility bills. They met regularly to identify solutions to reduce water use such as use of high efficiency appliances. Large-scale water reuse projects were not discussed. The City has not completed this process with residents specifically.

In-home devices that use the largest amount of water are toilets, clothes washing, and showers. Residential water use can be elevated due to leaking toilets, dripping faucets, filling or topping off a swimming pool or hot tub, watering lawns/new grass/trees, humidifiers attached to furnaces that are not appropriately adjusted or working correctly, sump pumps that have water powered back up, water-cooled air conditioners, a broken water pipe or leak, water softener problems like continuous cycles, and running water to avoid freezing pipes. Working with residents to identify these various causes of high-water uses and to change water use patterns can save hundreds of gallons of water.

BARRIERS:

Water is priced very low which does not send a market-based signal to conserve this natural resource. Also, some residents may not be amenable to changing their ways without an incentive. Collaboration and solutions to high water use takes time and may not be addressed immediately.

IMPLEMENTATION AND PROGRESS REVIEW:

YEAR 1:

- Review water bills for highest water use residential and institutional/commercial users. Compare water usage between winter and summer billing cycles to determine if over-irrigation is an issue.
- Explore options for partnering with the watershed district to help gain traction with private entities. Review past efforts of water use outreach that have been completed by the watershed districts.
- Create a list of home audit resources and funding opportunities that may be used by residents to reduce water use footprint.
- Develop content for initial outreach with high water use residents, including a schedule/timeline for meetings and discussion topics.
- Consider zoning for requirement for auto shut off/automated systems.
- Consider water meter distribution for educational purposes.

YEAR 2:

- Complete initial outreach with residents, potentially inviting them to a virtual or in-person open house with discussions about water use and resources.
- Schedule follow-up meetings with interested community members to work through water use savings projects in-home.

FUNDING AND PROGRAMS:

Large-scale water reuse/water saving projects can be funded through grants such the Clean Water Fund and watershed district funding. In the past, funding has also been available through other organizations like the Metropolitan Council.

Goal 3: Adopt and implement guidelines or design standards for at least one of the following: rain gardens/infiltration practices, rainwater harvesting practices, tree trenches/tree boxes, incorporate compost and/or native plants into landscape design, green alleys/parking lots, pervious surfaces to increase water infiltration rates (Green Step 17.5).

BASELINE DATA:

The City does not currently have design standards for these sustainable development practices.

BARRIERS:

Implementing design standards can dictate creative design solutions during development and redevelopment. Having guidelines or design standards does not require the use/installation of these types of practices and the City may need to implement development review practices or ordinances that require the consideration of these installations.

If the City wants to allow these types of installations on private properties, the ordinance should indicate that an agreement is required and will be recorded against the property (preferred). Maintenance requirements should also be listed.

IMPLEMENTATION AND PROGRESS REVIEW:

YEAR 1:

- Review current constructed facilities within the City and choose the two most used practices to create a design standard for. One of these practices will be chosen each year to have a design standard completed for it.
- Utilize resources such as the Minnesota Stormwater Manual and local watershed district resource to create the design standards.
- Design standards should be specific to typical soil, land use conditions, and vegetation types that exist within the City.
- The design standards should be 1-2 pages long, include figures and best practices. The design standard should be accessible to both technical and non-technical readers. It is anticipated to be used by both engineering and development staff, and residents and landowners without technical backgrounds.

YEAR 2:

- Complete a second design standard, following the same requirements as Year 1.

Annually in November (or a time selected by the City) the City will review the design practice that has been created and adopt it as part of their Local Water Management Plan. The City intends to create two design standards with this Sustainability Plan and may choose to add additional standards during future years if public works, City staff, and the public find there is a need.

FUNDING AND PROGRAMS:

Rice Creek Watershed District provides grants up to \$500 for landowners within the watershed district boundaries to implement water quality projects including native plants, small buffer strips, turf alternatives, and more. This grant program is on a first come first serve basis and is in reimbursement form. This grant opportunity should be noted in the design standards. The City intends to pay for the creation of design standards through their stormwater utility program.

Goal 4: Complete a water reuse or rainwater harvesting project to reduce water use within public lands.

BASELINE DATA:

The City has identified potential water reuse projects in the Local Storm Water Management Plan.

BARRIERS:

Implementing water reuse or rainwater harvesting projects require a consistent water source and a large area to irrigate to achieve water quality and volume reduction goals. Irrigation systems constructed in established green spaces can be cost prohibitive depending on alignment of irrigation lines and the cost benefit of providing water to the area.

IMPLEMENTATION:

The City has planned to complete a Reuse project at Wildwood Park to irrigate the existing ballfield.

PROGRESS REVIEW:

YEAR 1:

- Identify potential funding sources for the project.

YEAR 2:

- Complete a feasibility study for the stormwater reuse and irrigation system. The feasibility study shall include water quality improvement estimates, volume reduction estimates, and cost estimates for the project construction. Following the City's Local Stormwater Management Plan, the Wildwood Park Reuse System is anticipated to be constructed in 2024.

FUNDING AND PROGRAMS:

Rice Creek Watershed District provides funding for feasibility and construction of water reuse projects annually. The City intends to utilize funding from RCWD and their stormwater utility fund to pay for the feasibility and construction of the Wildwood Park System.



Goal 5: Remove and prevent excess impervious surfaces, based on current parking demand, by 2026 to improve water infiltration and quality.

BASELINE DATA:

The City Code includes off-street parking space requirements based on the land use. With changes in driver and consumer habits over the years the parking demands may be lower and warrant lower parking requirements. Additionally, the City may want to consider on-street parking to satisfy some of a property's parking requirement or reduce the parking requirement.

BARRIERS:

- Removal costs of existing excess impervious surface, particularly if the work is not associated with a site improvement project.
- On-street parking may be challenging if streets are narrow, higher volume/speed, or if there is neighborhood opposition.

IMPLEMENTATION AND PROGRESS REVIEW:

YEAR 1:

- Research current parking demands for each property use. Evaluate properties with large parking areas.
- Evaluate where on-street parking or shared parking may be practical.
- Identify City properties where impervious surfaces can be reduced.
- Identify grants that private property owners may be eligible for to incentivize reduction of impervious surfaces.

YEAR 2:

- Public engagement for neighborhoods where on-street parking is being considered.
- Update ordinances to require less impervious surface during development or alternative methods of parking requirements, as needed.

YEAR 3:

- Identify properties that are willing to partner with the City in removal of excess impervious surface.
- Develop projects.

YEAR 4:

- Complete excess impervious removal projects where possible.
- Restore removal areas with un-mowed native landscaping and vegetation.



ACTION



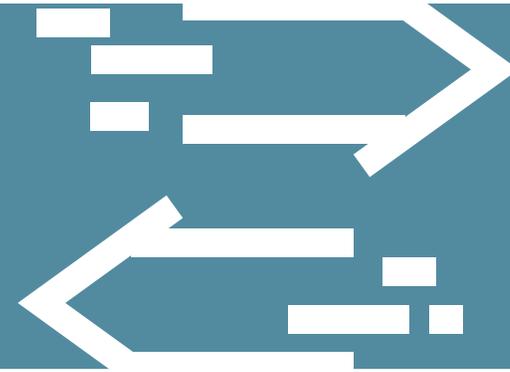
3.3.4 COMMUNITY ACTION

WAYS THAT THE COMMUNITY CAN TAKE ACTION TO SAVE WATER:

- Consider replacing unused portions of the lawn with native grasses that do not require irrigation.
- Check toilets and faucets for leaks and fix any that are in disrepair.
- Consider replacing older toilets, showerheads and washing machines with low flow/energy efficient models.
- Check sprinkler system to ensure that spray heads are properly oriented. Every year check to see how long the system needs to operate to provide one inch of water over the service and set the weekly timer accordingly.
- Consider replacing unused portions of the lawn with native grasses that do not require irrigation.
- Install rain barrels to store runoff from the downspout system and reuse the water.
- Pick up pet feces promptly from your yard.



3.4. TRAVEL



3.4.1 OVERARCHING GOAL

To have a comprehensive, multimodal transportation system that provides safe, healthy, efficient, environmentally sensitive, and economical movement of people and goods.

3.4.2 EXISTING CONDITIONS

The transportation sector is now the number one source of greenhouse gas emissions. The City includes a transportation element in their 2040 Comprehensive Plan. The goal in this plan is to help the City achieve a sustainable transportation system that meets the mobility and access needs of the community. Objectives include a) working to provide a wide range of transportation options including transit, walking, and biking in addition to driving; b) Ensure that Mahtomedi's transportation system operates safely, smoothly, and efficiently; c) Provide a transportation system that supports a vibrant economy; d) Ensure that Mahtomedi's transportation system helps enhance Mahtomedi's high quality of life. Promote transportation options, including walking and biking infrastructure that reflects the natural environment and helps reduce the burning of fossil fuels and the production of greenhouse emissions. The goal in this plan is to help the City achieve a sustainable transportation system that meets the mobility and access needs of the community.





Goal 1: When City vehicles are replaced, default to electric vehicles or plug-in hybrid as models are available.

BASELINE DATA:

As the City is ready to replace vehicles in its fleet, it plans to also right-size or down-size the existing City fleet with the most fuel-efficient vehicles that are of optimal size and capacity for their intended functions. The City is committed to adopting electric vehicles (EVs) to its City's fleet and has plans to have a fully electric fleet by 2050. EV's provide air quality improvements, eventual costs savings and climate benefits. Electrifying a City fleet shows public sector leadership and motivates residents to adopt EVs as well. There are currently no electric vehicles within its fleet but there are two EV charging stations being installed at: Veterans Memorial Park and the Mahtomedi City Hall.

BARRIERS:

The adoption of electric vehicles to the City's fleet will include upfront costs for the purchase of vehicles, installation of charging infrastructure and some O & M expenses. The City also does not currently have the charging stations necessary to fully electrify the fleet, although charging stations are starting to be installed. The technology available for large diesel replacements may not be able to replace total functionality of fueled vehicles.

IMPLEMENTATION:

1. Survey City fleet vehicle by type and right-size or downsize wherever possible.
2. Adopt a vehicle purchasing policy, prohibiting purchases of passenger vehicles with a GHG rating lower than 7, and other types of vehicles as the needs can be met with the model availability.
3. Purchase new vehicles.
4. Install new charging stations (solar powered where possible) to accommodate the increase of electric vehicles.
5. Consider Minnesota's Cooperative Purchasing Program that allows organizations to purchase directly from vendors for the purchase of electric vehicles.

PROGRESS REVIEW:

YEAR 1:

- Draft a vehicle purchasing policy and a cost/benefit analysis plan.
- Complete an inventory of all City vehicles, highlighting vehicles due for replacements.

YEAR 2:

- Phase in new Electric Vehicles into City fleet.
- Right size/downsize City fleet with most fuel-efficient vehicles for their intended functions. (Green Step 13.2.)
- Install new charging stations.

YEAR 3:

- Report vehicle reductions and improvements in the fleet's average MPG.
- Check in on progress needed to meet Commission's goal of 100% electrified City fleet by 2050.

FUNDING AND PROGRAMS:

The adoptions of electric vehicles for City fleets can be funded through grants provided by the MPCA, US Department of Energy and financed by programs like the Minnesota State Infrastructure Bank. Beam and Forteva Solar offers solar EV charging stations.



Goal 2: Increase City resident and business adoption of electric vehicles by developing an outreach plan that raises awareness about rebates, charging station availability and other EV benefits.

BASELINE DATA:

According to Minnesota Public Utilities Commission, in February 2020 there were 13,000 electric vehicles registered in Minnesota. As of June 12, 2021, the Minnesota Department of Transportation recognizes 860 battery electric vehicles (BEV) and 549 (plug-in hybrid electric vehicles (PHEV) within Washington County. Tracking is available on their Electric Vehicle Dashboard (MNDOT, 2021a).

BARRIERS:

Limited EV charging infrastructure, lack of knowledge about climate change and climate projections, lack of knowledge or concerns about how EVs can help climate change, concerns about charging locations and vehicle range, impact of local weather on battery life, and concerns about charging length and times.

IMPLEMENTATION:

1. During development plan reviews for new homes and buildings,

comment about including and EV conduit in the plans.

2. Explore partnering with electrical vendors to see if there are cost savings for bulk purchases of charging stations at garages.
3. Provide resources about EV technology updates, incentives, and rebates. Incentives to investigate include the Federal Tax Credit, MnPASS Incentive, and Utility company incentives. Xcel Energy offers Electric Vehicle Charging Programs.
4. Provide links from the City webpage to resources that provide information about electric vehicle charging station locations, such as links to chargehub, PlugShare, etc.
5. Investigate programs that provide shared electric vehicles, such as HourCar, with hubs stationed especially near lower-income communities. Encourage EV charging station installation at multi-family housing complexes.

6. Host an electric vehicle event. The City of Wayzata partnered with Fresh Energy and Shift2Electric to host an in-person event allowing participants to check out vehicles and talk with EV owners about their experiences owning them. A Tesla Overnight Voucher was awarded to two people allowing them to take a Tesla home for the night as a trial.
7. Reward investments in EVs by the private sector through participation in the ReCharge program.

PROGRESS REVIEW:

YEAR 1:

Establish a baseline for the number of residents that currently own or support electric vehicles, such as complete a City survey assessing community interest in electric vehicles and whether residents currently own electric vehicles.

YEAR 2:

Follow major contributors to electric vehicle adoption in Minnesota such as the Department of Transportation, Pollution Control Agency, MN Public Utilities Commission, Drive Electric MN, and Shift2Electric.

- Develop an outreach plan and implementation schedule.

YEARS 3-5:

Implement outreach efforts.

YEAR 5:

Resurvey or evaluate effectiveness of outreach and number of electric vehicle adoptions in the community.

FUNDING:

Partnering with organizations such as Fresh Energy or Shift2Electric can provide technical and informational assistance for outreach.

Goal 3: Provide public EV charging spaces such as at parks, City facilities, and schools by adding 10 charging stations by 2026. Seek to accommodate multiple charging ports at these stations.

BASELINE DATA:

Access to EV charging is a major challenge for cities wanting to become EV ready. Providing public charging spaces can serve as incentives for residents to purchase EVs. The availability of multiple port charging stations in cities can revive City spaces, offer popular services for residents and visitors, long term revenue stream, and have measurable reductions in carbon emissions for the City. The City of Los Angeles carried out the strategic installation of EV charging stations directly to light poles within busy streets to encourage residents to purchase EV and achieve the cities EV adoption goals. Mahtomedi does not currently have public charging spaces with multiple ports or stations that are powered by solar energy.

BARRIERS:

The cost for charging infrastructure, time to work with and select vendors for charging stations and identifying spaces needed.

IMPLEMENTATION AND PROGRESS REVIEW:

1. Identify interest in EVs.
2. Estimate number of charging stations needed and cost of installation.
3. Identify vendors for charging stations.
4. Include funding in City budget for charging stations.
5. Designate public parks as zero emission areas.
6. Highlight zones in the City that will benefit from multiple public chargers.
7. Acquire public spaces that can provide solar power if possible.

FUNDING AND PROGRAMS:

The Minnesota Pollution Control Agency has occasional grants to fund EV charging station installations in public places. CERT is a resource for grant information. Beam and Forteva Solar offers solar EV charging stations.



Goal 4: Create a map by 2025 to identify gaps between City streets and off-road trail/bike trails to better facilitate walking/biking and work to address gaps (Green Step 11.5).

BASELINE DATA:

The City of Mahtomedi has a multitude of public trails, and its trail system is well connected to the County and regional trail systems. The City currently has a proposed routing of trail that will be a combination of off-road and on-road trail to further connect the City. The City is committed to promoting healthy, efficient, and environmentally sensitive living amongst its residents and realizes that creating a trail gap map will aid and motivate residents in their walking and or biking travels as well as alert the City to trails that require resources.

BARRIERS:

The data needed for the mapping of City trails may be outdated or non-existent.

IMPLEMENTATION:

1. Map the City trails using GPS units for ground-level accuracy.
2. Update GIS data and house online for resident use.
3. Review trail gaps during street reconstruction and development application reviews.

PROGRESS REVIEW:

Determine which year the initial mapping will occur and incorporate into the budget.

FUNDING AND PROGRAMS:

Transportation Alternatives is the largest federal source for trail funding, Urban and Community Forestry and Economic Development Administration provides funding and technical mapping support.



Goal 5: Increase active transportation and alternatives to single-occupancy car travel through coordinated outreach and collaboration with local and regional partners (Green Step 12).

BASELINE DATA:

A sustainable City offers multimodal transportation for residences and businesses. Approximately 84.3% of Mahtomedi residents drive to work alone and only 0.7% walk to work (US Census, 2019).

BARRIERS:

Encouraging residents to carpool, walk, bike, or telecommute. Residents may work far from home.

IMPLEMENTATION:

1. Develop a Safe Route to School (SRTS) program.
2. Develop City days to promote active living i.e., “walk to school day” or “biking day.”
3. Consider partnering with Willernie to boost the walkability of the downtown area.
4. Develop programs like “community walk day or community carpool day.”
5. Host a rideshare event where residents can connect with other that work in the same regions of cities. Promote residents to sign up for a carpool matching service.
6. Invest in public electric bikes for City travel.

PROGRESS REVIEW:

YEAR 1

Form partnerships and generate project ideas. Develop strategies.

YEARS 2-5

Implementation.

FUNDING AND PROGRAMS:

Mini Grants gives small grants to communities to start or expand SRTS programs (MNDOT, 2021b). Local Coordinator Grant is a federally funded grant for an employee for three years. SRTS Boosts grant is a non-infrastructure grant that funds local walking and bicycle efforts.



Goal 6: Adopt a complete street or living streets policy by 2023 which addresses landscaping and stormwater (Green Step 11.1).

BASELINE DATA:

Complete Streets are streets designed and operated to prioritize safety, comfort, and access to all destinations and make it easier to walk, bike, and allow buses to run on time. The design prioritizes safer slower speeds for all people who use the road to accommodate all forms of transportation. Each Complete Street is unique for its community. It may include sidewalks, bike lanes, special bus lanes, accessible transportation stops, frequent and safe crossing opportunities, median islands, pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more.

Living Streets are streets where people are active, and nature is accommodated. According to the Metropolitan Council, Living Streets provide multiple modes of transportation and reduce environmental impacts by having less impervious surfaces, managing stormwater, and providing shade. They enhance walking or biking conditions, improve safety and security of streets, calm traffic, create livable neighborhoods, improve water quality, enhance urban forest, reduce road lifecycle costs, and improve neighborhood aesthetics (Metropolitan Council, 2021a).

BARRIERS:

Right-of-way constraints, partnerships with Willernie and adjacent communities needed to be successful, community participation.

IMPLEMENTATION:

1. Investigate Living Streets or Complete Streets policies in similar communities, such as Maplewood, Roseville, St. Louis Park, or Edina.
2. Consider setting construction guidelines for rebuilding streets, updating the City code, creating a tree plan for street reconstruction, and providing incentives for rain garden participation.
3. Develop design templates to ensure that specific needs are accounted for such as biking, walking, and greening.

PROGRESS REVIEW:

YEAR 1:

Collect baseline data, review Living Streets/Complete Streets Plans that have been developed in similar sized cities, determine the policies that match the vision for Mahtomedi.

YEAR 2:

Develop a Living Streets Plan or a Complete Streets Plan, and associated policy.

FUNDING AND PROGRAMS:

Development of a Living Streets Plan can be completed in partnership with the Washington Conservation District.

ACTION

3.4.4 COMMUNITY ACTION

Ways the community can promote sustainable travel:

- If you drive to work, consider telecommuting or carpooling at least one day per week.
- Invite colleagues to split commute costs and reduce your carbon footprint by carpooling or vanpooling.
- If you purchase a vehicle, consider EV.
- Allow the installation of a rain garden on your property.
- If you are a local business, install EV charging stations or designated EV parking spaces.
- If you are a local business, institution, or commercial operation, remove excess impervious surface and replace with vegetation.



3.5. COMMUNITY



3.5.1 OVERARCHING GOAL

Mahtomedi promotes and fosters opportunities that provide efficient, healthy, and environmentally aware lifestyles.

3.5.2 EXISTING CONDITIONS

Currently, Washington County has been ranked the 2nd healthiest county in the state of Minnesota. Although Mahtomedi ranks at the top for healthy residents, negative health outcomes can remain. The City has a goal of creating and promoting opportunities to live a healthy lifestyle.

Mahtomedi strives to be a regional leader in sustainability through example, education, and community involvement. For example, the City of Mahtomedi hosts a variety of events such as a weekly farmers market to promote access to local healthy food options, and the RITE of Spring Event to encourage sustainable waste management and explore other sustainable opportunities for resident participation like the Mahtomedi Trail Walk, beekeeping information, chicken keeping and solar gardening. Additionally, the City supports the Mahtomedi Area Green Initiative (MAGI), a grassroots organization of residents of Mahtomedi who work to reduce use of nonrenewable carbon-emitting fuels, produce renewable energy, and encourage an enduring community commitment to sustainability.

Community members are who will be impacted by the outcome of this plan, it is essential to involve them in the process of becoming sustainable. This plan addresses

the need to build and sustain broad-based community support and provide resources and opportunities for residents to live a healthy sustainable lifestyle. The City can enhance community connection by:

- Connect with local schools, retirement communities, and pre-education programs to promote sustainable practices such as environmental education programs, and local foods access.
- Provide engagement events and educational opportunities for the residents to provide feedback on their health needs.
- Highlight local businesses that are being sustainable with their business practices. This can be through marketing measures or business assistance.
- Increase public visibility with sustainability decisions made by the City of Mahtomedi.
- Connect with local environmental groups from churches or other community organizations to work together on environmental efforts.
- Connect with the community through various public health festivals and/or initiatives that promote physical activity and healthy food access such as youth neighborhood 5k, mobile grocery stores, or a community garden week.
- Connect with community-based groups with diverse populations including those with primary languages other than English.



3.5.3 CITY STRATEGIES

Goal 1: Integrate climate resilience into City planning, policy, operations, and budgeting processes and expand climate adaptation capacity and preparedness within the community (Green Step 29.2).

BASELINE DATA:

Sustainable communities strive to achieve economic stability, environmental health, and social wellbeing for all without compromising opportunities for future generations to enjoy the same. By integrating climate resilience into City planning, policy, operations, and budgeting processes, City planners, engineers, residents, and other key stakeholders can create safe, healthy and sustainable communities for all.

BARRIERS:

Unknown future disturbances related to climate, limited experience with climate change scenario analysis.

IMPLEMENTATION:

1. Conduct a high-level assessment of strategic climate vulnerabilities and vulnerable populations. Identify important assets and key adaptation/resilience opportunities.
2. Adopt a stand-alone climate adaptation/resilience plan; incorporate climate adaptation and resilience goals and strategies into the City's comprehensive plan using public engagement processes which must involve proactive outreach, stakeholder involvement, and meaningful engagement of vulnerable and underrepresented populations.
3. Integrate identified climate adaptation/resilience strategies directly into City ordinances (such as strong land use and/or storm water regulations to protect or create resilient assets), operating procedures, and capital improvement or other budgets.

PROGRESS REVIEW:

YEAR 1:

Perform a climate assessment and existing conditions study.

YEAR 2:

Based on data from an assessment, integrate identified climate resilience strategies into City ordinances.

FUNDING AND RESOURCES:

The BWSR webpage identifies climate resiliency programs and funding opportunities. The Alliance for Sustainability has hosted community workshops and City staff workshops focused on resilient cities. The MPCA has proposed a budget for fiscal year 2022 to assist cities with climate resiliency planning. Organizations such as Green Step Cities and Minnesota GreenCorps can help increase resilience and build local capacity to respond to threats of climate change.



Goal 2: Increase community access to local food resources by creating, assisting with, and promoting local food production/distribution through Community Supported Agriculture (CSAs), farmer's markets, and community gardens (Green Step 27.3).

BASELINE DATA:

Supporting local foods provides many benefits to individuals and the community they live in. Individually, people can benefit from local foods because it lowers the carbon footprint of food given that less GHGs are associated with shorter transport distances from the source. Local foods benefit the community because it supports local farmers and improves soil quality.

The City currently has one farmers' market that runs every Saturday throughout the summer and fall months of the year. Mahtomedi has one local food shelf that serves those in need and one community garden.

BARRIERS:

Opposition to urban farming use of public lands, opposition to convert traditional yard space of mowed lawn, limited number of local growers, premium prices for some products because of the inclusion of externalities (environmental benefits, etc.) in the prices.

IMPLEMENTATION:

1. A community survey gauging interest about

gardening on their own lawns, or leading community gardens.

2. Explore increasing the size of the community garden lots to allow more people to become members.
3. Encourage community members to garden in their yards or take part in community gardens through increasing public awareness – more marketing ads and flyers, or educational events.
4. Provide public awareness about the importance of local, organic foods. Actively promote the Mahtomedi Farmer's Market.
5. Make farmers market more accessible by offering multiple days a week with additional hours of operation and after-hours pickups.
6. Update farmers market application to encourage more vendors to apply.
7. Identify an additional location for a community garden such as within Wedgewood Park, Wildwood Park, or High School soccer fields area. Identify up to 3 additional locations for new community gardens. Consider flexible zoning for urban agriculture. Lease vacant City-owned lots to gardens. Issue hydrant garden permits to community gardens and urban farmers allowing

access to a specific fire hydrant for watering.

8. Create new initiatives that encourage use of local Community Supported Agriculture (CSA) farms. Such as fresh produce delivery, portable grocery stores, or Farm to School Programs.
9. Contract with local growers to provide 25% of the produce at Mahtomedi Public Schools.
10. Increase awareness about income-eligible assistance programs such as SNAP for farmers market shoppers.

PROGRESS REVIEW:

Complete 3 tasks promoting access to local food each year.

FUNDING AND RESOURCES:

Residents interested in community gardens may benefit from funding opportunities such as the Community Beautification Grant, to provide them with the necessary tools needed to start their own garden. Organizations such as Minnesota Community Gardening, Do It Green Minnesota, and others provide helpful resources for starting a community garden.



Goal 3: By 2025, procure 10% of City supplies and City services from women- or minority-owned vendors; or from organizations that partner with these types of businesses; or from organizations that are making strides towards equality.

BASELINE DATA:

The City does not have procurement standards that focus on disadvantaged businesses and populations, although green guidelines are common and can be used as a starting point or foundation for other new standards.

BARRIERS:

Identifying service areas and product sources that meet these parameters in the local area, lack of social capital that allows for businesses to connect to the City. Language barriers exist as well as the fact that people of color may not have had an equal foot at the table with other influencers, thereby limiting their previous access to capital and other important business connections.

IMPLEMENTATION:

- Work with local community-based groups who are led by people of color and ask them what would help reduce barriers and increase their access to sustainable business opportunities.
- Identify avenues of procurement within the City for obtaining goods and services. Determine which avenues of procurement make up 10% that should be attributed to disadvantaged businesses, organizations that partner with these businesses, or organizations that are making strides towards equality per the City's discretion.
- Use the Minnesota Unified Certification Program list of disadvantaged businesses to identify minority-owned and women-owned businesses.
- Consider developing an Affirmative Action Plan with policies and procedures to eliminate barriers to employment within the City or contracting with the City.

PROGRESS REVIEW:

Annually evaluate past fiscal year procurement sourcing to determine actual percentage of disadvantaged businesses, partner organizations, or organizations showing efforts towards equality that were used by the City.



3.6 WASTE



3.6.1 OVERARCHING GOAL

Minimize the amount of waste that is sent to a landfill by reducing materials consumed and better managing the City's resources through reduce, reuse, recycling, and composting.

3.6.2 EXISTING CONDITIONS

The City has established a community compost drop-off site at the fire station and provides links/resources to residents about the County composting sites. Within the City, residents can participate in yard waste and organics collection through Waste Management. Compost bin and rain barrel sales are also available through the County and promoted by the City.



Goal 1: Increase community composting and reuse of food and yard waste by 25% by 2025.

BASELINE DATA:

Community composting engages and educates the community in food systems thinking and community sustainability, while providing solutions that enable residents, businesses, and institutions to capture organic waste and maintain it as a community resource. Community composting supports a community social, economic, and environmental health. The City is currently involved in composting and has a compost drop site set up at the City's fire station. The City promotes Washington County's compost bin and rain barrel sales and has other composting resources available through their website.

BARRIERS:

Residents may not be responsive to more composting without an incentive or additional education. Lack of knowledge about compostable foods/materials and the benefits of composting. Lack of a program that allows residents to pick up compost for personal use.

IMPLEMENTATION:

1. Engage in community composting education programs. Consider partnering with the fire station for an in-person sustainability event at the composting site.
2. Create a community composting incentive program.
3. Partner with the County to engage more residents.
4. Make composting available in public spaces with appropriate signage.
5. Integrate use of community compost into City maintenance and soil amendments on public lands/project.

PROGRESS REVIEW:

YEAR 1:

Determine a baseline of residents that compost by completing a resident survey, or documenting use of the community composting site. Develop education and outreach work plan.

YEARS 2-5:

Implement work plan to encourage composting and use of compost.

FUNDING AND PROGRAMS:

The MPCA has grants for best practices for composting collection systems. Washington County has the following grants: food scraps programs and the Biz Recycling grant for waste reduction. Washington County has resources for residents about compostable foods and materials, backyard composting, and community drop off sites. The County also has compost bin and rain barrel sales.



Goal 2: Develop policy by 2024 to prohibit single-use or disposable products whenever possible.

BASELINE DATA:

Most single use products acquisition is driven by convenience rather than their long-term impacts considering that non-biodegradable products have extensive life cycles. Single use nondegradable products has long lasting effects on the human population and takes more resources to produce, resulting in climate change. Nondegradable products affect groundwater and causes food chain contamination, emissions and other impacts to natural capital. The City currently has no policy regarding nondegradable or disposable products.

BARRIERS:

The community's response to the policy. Changing behavior that includes a strong preference towards convenience, thereby incenting using disposable, single use products.

IMPLEMENTATION:

1. Review similar policies that have been developed in other Minnesota cities.
2. Draft a policy that is specific to the City's solid waste.
3. Support eco-friendly reusable and biodegradable products as an alternative to nondegradable single use products.
4. Encourage businesses to collaborate on sustainable and resilient products.
5. Host zero-waste events to encourage re-usable materials.

PROGRESS REVIEW:

Year 1: Conduct nondegradable single-use product waste assessment.

Year 2: Based on data from assessment, develop a tailor-made policy to prohibit single use nondegradable products and disposable product usage.

Funding and Programs: The MPCA has a guide for local government policy makers regarding single use plastics (MPCA, 2016).



Goal 3: Improve City operations and procurement to recycle, reuse, or compost 50% of public facility waste by 2026.

BASELINE DATA:

The City of Mahtomedi encourages business to recycle, through the BIZRecycling program and offers a single sort curbside recycling program to residents. The waste hauler for the City does not currently differentiate between waste and recycling volumes, so the amount of City waste that has been recycled is unknown. The composting program is just beginning so data is not yet available for volumes. Public facilities within the City include libraries, parks and trails, schools, and municipal buildings.

BARRIERS:

The waste hauler for the City does not currently differentiate between waste and recycling volumes.

IMPLEMENTATION:

1. Discuss recycling tracking with the City's haulers and determine a plan for documenting and reporting volumes of waste vs. recycling, as well as compost pickup from the community drop off site.
2. Establish a baseline the amount of waste that is sent to the landfill vs. the amount that is recycled, reused, or composted.
3. Review City purchases and packaging to identify areas of procurement that can be refined with more sustainable products.
4. Limit purchases of single-use items for public facilities. Work with the school to limit the sales of plastic water bottles that may be thrown into the garbage rather than recycled.
5. Increase funds in the City budget for non-disposable products that can be re-used.
6. Ensure that recycling bins are readily available throughout the City, including along trails and at parks. Bins should include instructions about accepted materials.
7. Minimize toxic and hazardous waste generation.

PROGRESS REVIEW:

Review amount of City waste being recycled, reused, or composted on a quarterly basis to monitor City efforts.

FUNDING AND PROGRAMS:

The Environmental Protection Agency has resources about improving community recycling programs. Washington County offers support and funding for recycling program efforts, such as specific projects. BizRecycling program offers free assistance and resources to business interested in recycling and reusing waste.



Goal 4: Implement incentives by 2026 that increases local businesses to participate in sustainable practices, such as the Washington County Business Recycling Program, eliminate the use of single use containers/bags, etc.

BASELINE DATA:

The City currently has an array of sustainability programs running simultaneously and releases City wide progress and guidance in its monthly Green Talk newsletter. The City strives to promote and support efforts to help businesses, industries and residences in Mahtomedi develop sustainable practices and now realizes that incentivizing sustainability practices is a way to encourage businesses to participate in sustainable practices.

BARRIERS:

Finding the right practices to incentivize businesses based on the challenges they face, and funding for these incentives. Cost, convenience, lack of awareness, inertia of behavior and current protocol.

IMPLEMENTATION:

1. Meet with local businesses to determine existing sustainability efforts.
2. Incentivize “buying green” by businesses.
3. Direct incentives towards practices that will offer more environmental benefits.
4. Partner with local “green” vendors to offer discounts for bulk purchases.
5. Promote local business participating in sustainable practices in the monthly Green Talk newsletter.
6. Encourage and offer sustainable practices that will result in financial savings for businesses.
7. Create an Awards for Reduction and Recycling of Waste Program.
8. Consider partnering with the County to establish a Zero Waste Grant for education and infrastructure initiatives that promote reduction of waste.

PROGRESS REVIEW:

Meet with local businesses in Year 1 as well as Year 3 to assist and incentivize sustainable practices and track progress.

FUNDING AND PROGRAMS:

Washington County Business Recycling Program, Alliance for Sustainability Program, Minnesota Waste Wise.



ACTION



3.6.4 COMMUNITY ACTION

Ways the community can reduce waste:

Residents and businesses can help reduce waste beyond recycling:

- Eliminate personal use of disposables. Use a reusable mug, water bottles, and shopping bags. Consider using mesh produce bags at the store.
- Reduce your food waste by composting.
- Take advantage of zero waste education opportunities.
- Adopt a local street or park to clean annually.



04 **SUPPORTING THE PLAN**



4.1. STAFF AND COMMUNITY INVOLVEMENT

Engagement is an especially important part of meeting sustainability outcomes. This emphasis is woven throughout the plan, so those specific tactics will not be repeated here. Instead, in this section we highlight collective efforts that could cost-effectively and efficiently increase the adoption of this Sustainability Plan through community and staff involvement. All these roles are important because of the multi-pronged approach needed to meet these goals.

For community involvement, the City staff could develop an overarching strategic communication plan to weave together engagement and outreach identified in the plan. Key stakeholders should be identified for each key area. The staff could provide resources such as the City website with up-to-date sustainability information for residents and businesses, social media messaging for target audiences, other web-based forms of communication, outreach targets based on the unique attributes of the community and educational awareness building, etc. Stakeholder engagement should be a priority in the implementation of the plan. Tactics could include participatory design, exploring meaningful virtual engagement, messaging based on community characteristics, exploring meaningful avenues for incenting higher adoption rates of more sustainable lifestyles. A special emphasis should be placed on overcoming barriers to sharing information, such as language, accessibility, affordability, equity, and other evolving dynamic needs. Mahtomedi has a track record of good work in this area so this plan will help build on that momentum.



4.2. PROGRESS REVIEW



It is important to check in periodically to keep the plan relevant and adapt to changing circumstances, learn what is working and adapt.

- The Commission checks in quarterly on the status of the plan during regular Commission meetings.
- The Council checks in annually on the status of the plan via an annual status report from the Commission to discuss together at a regularly scheduled Council meeting. The Commission could work with the Council and City staff to guide how to report to the public.

05

CONCLUSION

This sustainability plan guides Mahtomedi's vision for a healthy future. It provides a dynamic guideline for becoming a leader in sustainability and allows the City to adapt into the future. Mahtomedi has a great history of being an environmentally conscious City and focusing time and a leader on efforts for sustainable practices. Not only will the City's sustainable efforts impact the environmental and social aspects of the community, but investments in energy efficiency, green infrastructure, water, and transportation efficiency will provide the City with positive economic growth and benefit to the community into the future.

This is a dynamic plan that provides a foundation of ideas and resources that guide the City to the next steps of implementation and community engagement. Staying nimble and adapting to the needs of the community will ensure priority outcomes are met.

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