

## MGC CHALLENGE METRICS TEMPLATE

#	METRIC	UNIT	RESPONSE
1	What is your current population?	# of people	37,552
2	When did your community complete a GHG inventory for municipal/county operations?	year	2024
3	When did your community complete a community wide GHG inventory?	year	NA
4	How many total metric tons of CO2e were being emitted in your GHG inventory for municipal/county operations?	Metric Tons CO2e (MTCO2e)	10337
5	How many total metric tons of CO2e were being emitted in your GHG inventory for the entire community?	Metric Tons CO2e (MTCO2e)	NA
6	Percent (%) reduction in GHG emissions from municipal/county operations from baseline year supplied above.	% reduction in MTCO2e from baseline supplied in survey	NA
7	Percent (%) reduction in community wide GHG emissions from baseline year supplied above.	% reduction in CO2e from baseline supplied in survey	NA
8	Percent (%) of energy supplied by renewable sources in municipal/county operations this calendar year.	% of annual kWh	City-owned Trinity Health Arena installed solar panels on roof in 2023. Waiting on energy data.
9	Miles of sidewalks.	# miles	330
10	Miles of dedicated/protected bike lanes/routes and nonmotorized trails.	# miles	12
11	Miles of shared bike routes (e.g., roads with 'sharrows').	# miles	0
12	Total road miles. (Centerline miles, not lane miles.)	# miles	195
13	Water use in municipal/county operations in the 2021 calendar year.	CCF (hundred cubic feet) per capita	40 million gal per day of water treated
14	Percent (%) reduction in water use from municipal/county operations in the 2022 calendar year.	% Reduction in water use from 2021	NA
15	Community-wide water use per capita. (Consult your local water utility provider. May not be discernable if your county/municipality does not have a public water utility.)	CCF (hundred cubic feet) per capita	6K gal per capita, per day of water treated
			13,730/90,000 = 15% 15% x 40M gal = 6M gal
16	Percent (%) of county/municipal vehicle fleet that are EV/clean fuel vehicles. (Includes public safety fleet and light-, medium-, and heavy-duty vehicles. See list of clean/alternative fuels here. Not applicable if county/municipality has no vehicles.)	% of total fleet	NA
17	Number of publicly accessible EV charging stations (any level).	# of EV charging stations	6
18	Number of cooling centers/resilience hubs. (May include spaces that have plans to provide emergency services like public schools, libraries, etc.)	# of cooling centers/resilience hubs	NA
19	Tree canopy cover.	% of total community land area (acres)	5%
			600 acres of parks / 11,650 total acres
20	Public transit use. (Consult your local transit authority for total annual ridership. Not applicable if there are no public transit options in your community. Dial-a-ride services count as public transit.)	# of total annual riders	175,000
21	Percent (%) of area that is impervious surface.	% of total community land area (acres)	77%
			city area 18.20 sq miles, 4.05 is covered by water
22	Total acres of public greenspace/parks. (Not applicable if there are no public greenspaces or parks.)	# acres	40 parks
23	Total acres of agricultural, rural, or natural resource land that are permanently protected.	# acres	NA
24	Total acres of agricultural and natural resource land. (Use zoning/land use maps to determine.)	# acres	600

## MICHIGAN GREEN COMMUNITIES CHALLENGE RESPONSES

County/Municipality	City of Muskegon
County	Muskegon
Score	100
Level	Gold
Date Submitted	2/27/2023

CATEGORIES	SUBCATEGORIES & DESCRIPTIONS	ACTION ITEMS	YOUR COMMUNITY'S RESPONSES
Planning for Inclusive & Lasting Impacts	<b>Embed Sustainability in Planning Processes</b>	1 Incorporate measurable sustainability targets and indicators into an existing community master plan OR create a community sustainability plan with measurable sustainability targets and indicators.	Complete
	<i>Integrate sustainability targets and actions into core community planning documents.</i>	2 Incorporate sustainability, energy use, green building standards, and/or climate metrics into capital improvements planning.	Complete
		3 Begin implementing climate mitigation and adaptation measures in capital improvement projects.	
	<b>Leverage Local Expertise</b>	4 Establish an internal sustainability team, made up of staff from different departments as relevant, to coordinate municipal sustainability initiatives.	Complete
	<i>Include residents, local business owners, and other stakeholders to provide valuable context and insight when implementing municipal and community sustainability actions.</i>	5 Establish an external sustainability team (or broaden the original internal sustainability team) to include participation from community members, especially underserved and/or traditionally marginalized residents, who will identify and make recommendations on actions the municipality and community can take to reduce environmental impacts and improve overall sustainability.	In Progress
		<b>Integrate Equity into Community Sustainability</b>	6 Staff, municipal commission/council members, and/or volunteer board members attend regular diversity, equity, and inclusion (DEI) training as part of their service/employment.
	<i>Build and strengthen municipal processes to be more inclusive, cohesive, and representative of all community members, now and in the future. These system-wide, structural changes are an important step in creating open and equitable communities.</i>	7 Pass a policy or resolution affirming the community's commitment to equity as a key component of sustainability and the municipality's mission, work, or actions.	Complete
		8 Ensure diversity on volunteer boards and commissions using the existing demographic makeup of the community as a target.	Complete
		9 Incorporate environmental justice implications and opportunities in planning and zoning documents OR in a community sustainability plan.	In Progress
		10 Require an environmental justice assessment for any new municipal policies or infrastructure projects.	
	<b>Leverage Partnerships</b>	11 Participate in the Michigan Green Communities Network and share your community's successes and/or lessons learned.	Complete
	<i>Work collaboratively with other partners through regional initiatives to broaden engagement and increase the impact of sustainability actions.</i>	12 Partner with other public, private, or nonprofit partners on regional sustainability initiatives.	Not Started
Climate Resilience & Adaptation	<b>Greenhouse Gas (GHG) Emissions</b>	1 Develop a municipal operations GHG inventory.	Complete
	<i>Inventory municipal and community greenhouse gas (GHG) emissions, noting your achievements and areas for improvement.</i>	2 Develop a community wide GHG inventory and set GHG reduction goal.	
		3 Set goal for GHG neutrality by 2030 or earlier in all municipal operations.	Complete
	<b>Climate Adaptation &amp; Resiliency Planning</b>	4 Perform a climate vulnerability assessment that considers health and equity impacts.	
	<i>Understand how climate change will likely impact your community and implement projects to adapt and prepare.</i>	5 Develop a climate adaptation and resiliency plan in collaboration with the community.	Not Started
		6 Provide incentives, support programs, and/or educational resources for businesses, households, and landlords to make improvements to properties that reduce GHG emissions and/or improve household-level resiliency to climate change (e.g., screens on windows & porches, improved insulation, tree planting, home gardening, bioswales, improved drainage & pervious surfaces).	
	<b>Hazard Mitigation</b>	7 Integrate hazard mitigation considerations and investments into community infrastructure plans.	In Progress
	<i>Understand how natural or manmade hazards could affect your community and develop a plan to respond to hazards while taking steps to mitigate the effects of hazards now.</i>	8 Develop a hazard mitigation plan with climate projections included.	In Progress
		9 Implement hazard mitigation projects to address identified risks in the hazard mitigation plan (e.g., flood mitigation, tree planting for heat reduction).	In Progress
	<b>Green Buildings</b>	10 Develop a green building policy for municipal facilities.	
	<i>Strive to lessen the impact of municipal operations on the local environment.</i>	11 Achieve green building certification for a municipal building.	
		12 Achieve green building certifications for at least 75% of municipal buildings.	
<b>Benchmark &amp; Track</b>	1 Conduct energy audits on municipal facilities.	Complete	
<i>Identify your municipality's energy use and track it over time, noting both your achievements and areas for improvement.</i>	2 Adopt decarbonization targets for municipal operations and facilities.	Complete	
	3 Track energy use for all municipal buildings using ENERGY STAR Portfolio Manager.	Not Started	
<b>Fund Energy Efficiency &amp; Renewable Energy</b>	4 Implement an internal revolving loan fund, or similar financing tool, for municipal energy projects.	Not Started	
<i>Encourage the deployment of public and private renewable energy projects by establishing financing tools that lower the cost burden for implementing renewable energy projects.</i>	5 Implement a public financing or grant program to support community energy efficiency and renewable energy projects.	Not Started	
	6 Ensure equitable access to any/all energy efficiency and renewable energy financing and grant program(s).	Not Started	
<b>Renewable Energy Deployment</b>	7 Update 6-year Capital Improvements Plan (CIP) or Asset Management Plans to include current or future municipal renewable energy project(s).	In Progress	
<i>Increase the use of renewable energy in your</i>	8 Adopt policies and/or ordinances that support renewable energy projects on private property (e.g., solar/wind ordinance, renewable energy overlay zones, expedited permitting).		

Energy Efficiency & Renewable Energy	Increase the use of renewable energy in your municipal buildings and public spaces.	9	Implement at least one new renewable energy project (e.g., solar thermal, solar photovoltaic, geothermal, wind, district heating/cooling systems, biodigesters, biomass, or energy storage system) on public buildings/property in the last year.	Complete
	<b>Energy Efficiency Improvements</b>	10	Develop a plan to upgrade/retrofit municipal buildings to improve energy efficiency.	In Progress
	Reduce energy use intensity for public buildings.	11	Upgrade/retrofit at least one municipal building in the last year to increase energy efficiency.	Complete
		12	Complete upgrades/retrofits of all municipal buildings to increase energy efficiency and help meet decarbonization targets.	
		13	Develop a plan to upgrade/retrofit publicly owned affordable housing to improve energy efficiency.	
		14	Upgrade/retrofit at least one publicly owned affordable housing structure to improve energy efficiency.	
	<b>Efficient Street Lighting</b>	15	Create an inventory of municipal owned street lighting.	Complete
	Light your community with the most efficient lighting technologies available.	16	Develop a plan to replace municipal traffic signals, street lighting, and/or parking illumination with energy efficient lighting technologies (e.g., LEDs and other technologies of equal or greater efficiency).	In Progress
		17	Replace most municipal owned traffic signals, street lighting, and/or parking illumination with energy efficient lighting technologies (e.g., LEDs and other technologies of equal or greater efficiency).	Complete
	<b>Community Energy Use</b>	18	Work with local utility providers to ensure that energy and water bills include household energy and water use statistics over time.	Not Started
	Through increased guidance on energy-related issues, create opportunities for the residential, commercial, and/or industrial sectors to reduce their overall energy use and costs.	19	Develop community wide programs that promote energy efficiency among homeowners, landlords, and businesses.	
		20	Provide (or partner with other community organizations to provide) programs for low-income homeowners and/or renters and privately-owned affordable housing owners to make energy efficiency improvements to their properties.	Complete
		21	Create and offer residents and/or businesses an opportunity to participate in a community renewable energy project (e.g., community solar park).	
	<b>Fleet Management</b>	22	Adopt and enforce an anti-idling policy for the municipal vehicle fleet.	
Plan for and implement projects to increase the environmental sustainability and efficiency of your municipal fleet and fleet maintenance program.	23	Audit the inventory and energy intensity of the municipal vehicle fleet and set a decarbonization target for the fleet.	In Progress	
	24	Meet the decarbonization target set for the municipal vehicle fleet.		
Responsibly Managing Materials	<b>Benchmark &amp; Track</b>	1	Perform an annual community wide recycling, organics (yard and/or food waste), and solid waste audit which includes quantities and information on materials content.	
	Establish baseline municipal data by tracking and measuring the amount of residential municipal solid waste generated and recycled	2	Set a community waste diversion goal.	
		3	Complete the Emerge Municipal Measurement Program database annually.	
		4	Develop or adopt a municipal sustainable purchasing policy that eliminates toxics, increases the use of recycled content, and builds or supports the low-carbon circular economy.	
	<b>Support the Circular Economy &amp; Eliminate Toxics</b> Commit to purchasing sustainable goods and services.	5	Develop or update a community recycling, organics, and waste management plan that includes scrap, bulky waste, electronics, hard-to-recycle materials, and other miscellaneous wastes.	In Progress
	<b>Recycling</b>	6	Provide access to information about community recycling programs through the municipal website, local media, social media, or other outreach mechanisms.	Complete
	Reduce residential and commercial solid waste by increasing recycling.	7	Collect traditional recycle materials from single family homes: -for communities over 5,000 people, provide/allow for single hauler (municipal, contract, or franchise) curbside collection of traditional materials. Recycling program should be opt-out. -for communities under 5,000 people, provide convenient recycling drop-off centers for traditional and non-traditional materials.	
		8	Provide and/or require collection of traditional recycling materials at all multi-family housing, commercial properties, and public spaces/parks, as applicable.	
	<b>Household Hazardous Waste</b> Help residents safely and responsibly dispose of hazardous household wastes to protect the health of people and the environment.	9	For communities of all sizes, provide comprehensive drop-off center for collection of non-traditional materials (such as household hazardous waste, electronics, polystyrene foam, textiles) OR offer at least two dedicated collection events per year.	Complete
	<b>Composting</b>	10	For communities of all sizes, provide regular information and resources on how to compost at home and/or businesses.	
	Reduce residential and commercial solid waste by increasing composting of organic materials.	11	For communities over 5,000 people, provide on-site organics (food and/or yard waste) collection for single-family residents (at a minimum) and collection at drop-off site(s).	Complete
	Smart Growth	1	Incorporate smart growth principles in community planning, policies, and zoning ordinances.	Complete
		2	Audit zoning to remove ordinances that decrease density and are contrary to the municipality's sustainability goals.	In Progress
		3	Adopt zoning ordinances that allow for infill housing development.	In Progress
<b>Resource Protection</b>		4	Implement low impact development practices, habitat protection, and native species preservation on public properties/lands.	In Progress
Increase protections for native habitats, native species, and natural features in your community.		5	Update ordinances to include specific sustainability measures such as natural features protection, wetlands preservation, green building practices, or other relevant resource protections.	In Progress
		6	Acquire or provide support for private purchase of ecologically valuable parcels and habitat in your community.	In Progress
<b>Economic Development Tools</b>		7	Update economic development incentive policies to encourage green buildings, green infrastructure, low impact design, and density.	In Progress

Sustainable Land Use & Economic Development	Ensure that economic development incentives align with and support the community's sustainability goals.	8	Participate in the MEDC Redevelopment Ready Community program.	Complete
	<b>Brownfields</b>	9	Conduct a community wide brownfield audit of public- and privately-owned properties.	Complete
	Remediate and redevelop "Brownfields:" sites that are unused or underutilized because of contamination or the reasonable perception of contamination.	10	Use brownfield clean-up and redevelopment processes to further community sustainability goals.	Complete
		11	Redevelop or remediate at least one brownfield site.	Complete
	<b>Green Jobs</b>	12	Train relevant municipal staff (e.g., public works, grounds and building maintenance) in principles of sustainability.	In Progress
	Increase local job opportunities in the sustainability sector to promote sustainable economic development in your municipality.	13	Implement a green jobs initiative with your regional/local economic development agency, downtown development authority, corridor improvement authority, and/or local businesses.	
		14	Prioritize economic development incentives/programs to support the attraction and retention of green industries.	
	<b>Local &amp; Sustainable Sourcing</b>	15	Adopt a policy for the municipal purchase of local goods and services as practicable.	Complete
	Commit to purchasing local goods and services as much as possible to support the local economy and reduce environmental impacts.	16	Implement a "buy local" campaign that educates residents about the social, economic, and environmental impacts of buying local.	In Progress
	<b>Agriculture &amp; Food Systems</b>	17	Update zoning ordinances to allow individuals and community groups to grow and sell food, enhancing their ability to be food self-sufficient.	Complete
18		Update zoning ordinances to meet the needs of small farm and food producers, processors, and other food businesses.		
19		Create a community farmland preservation plan and/or promote farmland preservation programs.		
20		Allow for farmers market(s) or other farm-to-pantry/foodbank programs to enhance access to local food sources.	Complete	
21		Adopt a local food product purchasing policy for the municipality and/or promote institutional buying of local food products and goods by anchor institutions.		
Improving Health Outcomes	<b>Integrate Health Considerations into Policies &amp; Programs</b>	1	Municipal staff have attended a Health in All Policies (HIAP) training.	
	Integrate public health and equity considerations when developing and implementing projects, initiatives, and policies in sectors where the connection to health may not be immediately obvious.	2	Adopt a Health in All Policies (HIAP) approach to planning, individual projects, and decision making.	
		3	Implement a Health in All Policies (HIAP) approach when evaluating public and private projects.	
	<b>Benchmark &amp; Track</b>	4	Work with county health departments/municipalities to monitor and report on environmental health conditions in your community.	In Progress
	Understand your community's health as it relates to environmental conditions in your community.	5	Conduct health impact assessments as part of local policy making and project approval, and in conjunction with the local health department.	
	<b>Healthy Indoor Environments</b>	6	Evaluate municipal facilities for potential health risks (preferably in conjunction with energy and water audits) such as lead exposure, indoor air quality, mold, or other potential contaminant exposures.	Complete
		7	Upgrade municipal buildings to address identified health risks.	Complete
	Protect the health of residents and municipal staff by assessing and remediating health risks in public buildings.	8	Evaluate publicly owned affordable housing for potential health risks (preferably in conjunction with energy and water audits) such as lead exposure, indoor air quality, mold, and other potential contaminant exposures.	
		9	Create a plan to remediate/mitigate potential health risks in publicly owned affordable housing.	Complete
	<b>Improve the Community Health Environment</b>	10	Adopt a community wide anti-idling policy.	
Educate on, plan for, and implement policies and projects to improve air quality and reduce heat impacts in your community.	11	Implement a neighborhood tree canopy program to improve air quality and reduce heat impacts.	In Progress	
	12	Provide incentives, support programs, and/or educational resources for green roofs on commercial and residential buildings to improve air quality and reduce heat impacts.		
ng Water Resources	<b>Municipal Water Conservation</b>	1	Track local water use for all municipal buildings using ENERGY STAR Portfolio Manager.	
	Identify your municipality's water use and track it over time, noting both your achievements and areas for improvement.	2	Develop a plan to upgrade/retrofit municipal buildings to conserve water.	In Progress
		3	Upgrade/retrofit at least one municipal building in the last year to reduce water use.	In Progress
		4	Adopt an asset management plan for municipal water systems.	Complete
		5	Improve municipal water and wastewater treatment plant efficiency.	Complete
	<b>Nonpoint Source Protections</b>	6	Implement nonpoint source pollution prevention measures in all municipal construction projects.	Complete
	Ensure that public and private construction/development projects are done in a way that protects your watershed.	7	Adopt policies that support or incentivize nonpoint source pollution control in private development and construction projects.	Complete
		8	Update zoning ordinances to require measures for controlling nonpoint source pollution.	Complete
	<b>Low Impact Development</b>	9	Implement low impact development techniques in all municipal construction projects.	
	Inspire low impact development (LID) projects in your community.	10	Adopt a policy or ordinance that encourages or incentivizes green infrastructure and low impact design in private development and construction projects.	
11		Update zoning ordinances to require low impact design techniques in all new and redevelopment projects.		
<b>Flooding &amp; Stormwater Mitigation</b>	12	Set a limit for the total amount of imperviousness in the community in the master plan OR in the sustainability plan.		
Reduce the impacts of severe weather events for	13	Adopt a stormwater ordinance to properly manage stormwater runoff.	Complete	

<b>Protecting &amp; Conservi</b>	<i>residents, businesses, and the municipality by adopting policies and educating the community on green infrastructure and reducing impervious surfaces.</i>	14	Provide incentives and/or educational resources for property owners to decrease and/or disconnect impervious surfaces.	
		15	Implement a municipal green infrastructure project.	
	<b>Managing for Fluctuating Shoreline Water Levels</b>	16	Establish minimum shoreland setback standards along lakes and rivers.	
	<i>Plan for and adapt to greatly fluctuating water levels by adopting policies that will protect residents and infrastructure.</i>	17	Conduct seawall inspections in coastal & waterfront communities.	
	<b>Septic System Impacts</b>	18	Evaluate the condition of septic systems in your community with the local health department using water quality testing in lakes, rivers, and streams.	
	<i>Protect the health of your watershed by working with residents and the local health department to understand and address the impact of failing septic systems.</i>	19	Implement a local or regional education and outreach campaign on the need to maintain septic systems and replace failing septic systems.	
	20	Install sewer systems in areas with septic systems in high density areas, when possible. OR work with local health department and state programs to connect residents with financing and resources to help them to replace failing systems.	Complete	
<b>Support Clean &amp; Inclusive Mobility</b>	<b>Non-Motorized Transportation</b>	1	Adopt a non-motorized transportation plan that includes a Complete Streets policy/ordinance.	In Progress
	<i>Commit to, plan for, and implement projects that provide inclusive and safer mobility and access for all roadway users—including pedestrians, bicyclists, transit users, and motor vehicles—regardless of age, ability, or income.</i>	2	Incorporate non-motorized transportation elements into new municipal infrastructure projects, as relevant.	Complete
		3	Adopt policies or provide incentives for developers to incorporate non-motorized transportation features into private development and construction projects.	
	<b>Clean Motorized Vehicles</b>	4	Assess needs and develop a plan for deployment of electric vehicle (EV) charging infrastructure.	
		5	Install universally accessible public EV charging infrastructure in convenient locations.	Complete
	<i>Transition your fleet and create infrastructure for electric vehicles (EV's) that municipal employees, residents, business, and travelers may use.</i>	6	Adopt policies that require EV infrastructure or EV-ready infrastructure in any new private development or significant redevelopment project.	
		7	Create incentives and/or provide educational resources for existing commercial property owners to add EV infrastructure to existing parking facilities.	
	<b>Urban, Suburban, &amp; Rural Public Transportation</b>	8	In urban and suburban communities, promote and encourage public transit use and/or incentivize municipal staff use of public transportation.	
	<i>Educate on, plan for, and implement projects to enhance use of public transportation, and other sustainable mobility options.</i>	9	Work with regional partners to expand options and access to public and shared transportation.	In Progress
<b>Inspire &amp; Mobilize Residents</b>	<b>Communicate Best Practices</b>	1	Create a local sustainability action website/webpage and/or social media page.	
	<i>Develop accessible platforms to share relevant community sustainability information.</i>	2	Implement a community outreach/education campaign around sustainability initiatives.	
	<b>Meaningful Community Engagement</b>	3	Conduct focus groups, community surveys, and/or other community activities to acquire and share information on local sustainability initiatives.	
	<i>Proactively include residents in planning for sustainability projects and developing policies and practices that best suit the needs of the community.</i>	4	Proactively engage traditionally underserved populations in your community in sustainability planning/initiatives.	
	<b>Inspire Action</b>	5	Establish a "green" volunteer corps who can help plan and implement sustainability projects.	
	<i>Encourage residents to implement sustainability projects on their own and with the municipality to support the community's sustainability goals.</i>	6	Provide awards or incentives to residents, organizations, or businesses who take significant steps to improve the sustainability and/or resiliency of the community.	

**TOTAL POINTS**

**100**