



MICHIGAN **GREEN** COMMUNITIES  
**CHALLENGE**



**ACTION ITEMS AND METRICS**

## Planning for Inclusive & Lasting Impacts

### Embed Sustainability in Planning Processes

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.
2. Incorporate sustainability, energy use, green building standards, and/or climate metrics into capital improvements planning.
3. Begin implementing climate mitigation and adaptation measures in capital improvement projects.

### Leverage Local Expertise

4. Establish an internal sustainability team, made up of staff from different departments as relevant, to coordinate municipal/county sustainability initiatives.
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/county and community can take to reduce environmental impacts and improve overall sustainability.

### Integrate Equity into Community Sustainability

6. Staff, municipal/county commission/council members, and/or volunteer board members attend regular diversity, equity, and inclusion (DEI) training as part of their service/employment.
7. Pass a policy or resolution affirming the community's commitment to equity as a key component of sustainability and the municipality's/county's mission, work, or actions.
8. Ensure diversity on volunteer boards and commissions using the existing demographic makeup of the community as a target.
9. Incorporate environmental justice implications and opportunities in planning and zoning documents OR in a community sustainability plan.
10. Require an environmental justice assessment for any new municipal/county policies or infrastructure projects.

### Leverage Partnerships

11. Participate in the Michigan Green Communities Network and share your community's successes and/or lessons learned.
12. Partner with other public, private, or nonprofit partners on regional sustainability initiatives.

<b>Climate Resilience &amp; Adaptation</b>
<b>Greenhouse Gas (GHG) Emissions</b>
1. Develop a municipal/county operations GHG inventory.
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/county operations.
<b>Climate Adaptation &amp; Resiliency Planning</b>
4. Perform a climate vulnerability assessment that considers health and equity impacts.
5. Develop a climate adaptation and resiliency plan in collaboration with the community.
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.
8. Develop a hazard mitigation plan with climate projections included.
9. Implement hazard mitigation projects to address identified risks in the hazard mitigation plan (e.g., flood mitigation, tree planting for heat reduction).
<b>Green Buildings</b>
10. Develop a green building policy for municipal/county facilities.
11. Achieve green building certification for a municipal/county building.
12. Achieve green building certifications for at least 75% of municipal/county buildings.

<b>Energy Efficiency &amp; Renewable Energy</b>
<b>Benchmark &amp; Track</b>
1. Conduct energy audits on municipal/county facilities.
2. Adopt decarbonization targets for municipal/county operations and facilities.
3. Track energy use for all municipal/county buildings using ENERGY STAR Portfolio Manager, or similar tool.
<b>Fund Energy Efficiency &amp; Renewable Energy</b>
4. Implement an internal revolving loan fund, or similar financing tool, for municipal/county energy projects. *
5. Implement a public financing or grant program to support community energy efficiency and renewable energy projects. *
6. Ensure equitable access to any/all energy efficiency and renewable energy financing and grant program(s). *
<b>Renewable Energy Deployment</b>
7. Update Capital Improvements Plan (CIP) or Asset Management Plans to include current or future municipal/county renewable energy project(s).
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).
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.
<b>Energy Efficiency Improvements</b>
10. Develop a plan to upgrade/retrofit municipal/county buildings to improve energy efficiency.
11. Upgrade/retrofit at least one municipal/county building in the last year to increase energy efficiency.
12. Complete upgrades/retrofits of all municipal/county 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/county owned street lighting. *



16. Develop a plan to replace municipal/county traffic signals, street lighting, and/or parking illumination with energy efficient lighting technologies (e.g., LEDs and other technologies of equal or greater efficiency). \*

17. Replace most municipal/county 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). \*

## Community Energy Use

18. Work with local utility providers to ensure that energy and water bills include household energy and water use statistics over time.

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.

21. Create and offer residents and/or businesses an opportunity to participate in a community renewable energy project (e.g., community solar park). \*

## Fleet Management

22. Adopt and enforce an anti-idling policy for the municipal/county vehicle fleet.

23. Audit the inventory and energy intensity of the municipal/county vehicle fleet and set a decarbonization target for the fleet.

24. Meet the decarbonization target set for the municipal/county vehicle fleet.

<b>Responsibly Managing Materials</b>
<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.
2. Set a community waste diversion goal.
3. Complete the <a href="#">Municipal Measurement Program</a> database or similar tool annually.
<b>Support the Circular Economy &amp; Eliminate Toxics</b>
4. Develop or adopt a municipal/county sustainable purchasing policy that eliminates toxics, increases the use of recycled content, and builds or supports the low-carbon circular economy.
<b>Recycling</b>
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.
6. Provide access to information about community recycling programs through the municipal/county website, local media, social media, or other outreach mechanisms.
7. Collect traditional recycle materials from single family homes: <ul style="list-style-type: none"> <li>• for communities over 5,000 people, provide/allow for single hauler (municipal/county, contract, or franchise) curbside collection of traditional materials. Recycling program should be opt-out.</li> <li>• for communities under 5,000 people, provide convenient recycling drop-off centers for traditional and non-traditional materials.</li> </ul>
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>
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.
<b>Composting</b>
10. For communities of all sizes, provide regular information and resources on how to compost at home and/or businesses.
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). *

<b>Food Waste Reduction</b>
12. Implement policies and/or programs within and across municipal/county government to reduce food waste, donate surplus food, compost and/or better manage food scraps.
13. Estimate local baseline level of food waste or update your local baseline if there are any major changes to the community that would affect food waste generation (e.g. new health care institutions, restaurants, housing, etc.). Resources available include the <a href="#">EPA's Excess Food Opportunities Map</a> and the <a href="#">NRDC Food Waste Toolkit</a> .
14. Evaluate your community's waste system to identify opportunities to boost food waste prevention, food donation, and food scrap recycling efforts.
15. Develop a food waste reduction strategy with food waste reduction targets or include a strategy in an existing community-wide plan.
16. Increase public awareness and provide concrete strategies for how households can prevent food waste, donate food, and compost food scraps.
17. Increase awareness and provide concrete strategies for how businesses and institutions can prevent food waste, donate food, and compost food scraps.

<b>Sustainable Land Use &amp; Economic Development</b>
<b>Smart Growth</b>
1. Incorporate smart growth principles in community planning, policies, and zoning ordinances.
2. Audit zoning, subdivision, and related development codes to remove barriers to sustainable land use (e.g., barriers to increased density).
3. Adopt zoning ordinances that allow for infill housing development.
<b>Resource Protection</b>
4. Implement low impact development practices, habitat protection, and native species preservation on public properties/lands.
5. Update ordinances to include specific sustainability measures such as natural features protection, wetlands preservation, green building practices, or other relevant resource protections.
6. Acquire or provide support for private purchase of ecologically valuable parcels and habitat in your community.
<b>Economic Development Tools</b>
7. Update economic development incentive policies to encourage green buildings, green infrastructure, low impact design, and density.
8. Participate in the MEDC Redevelopment Ready Community program.
<b>Brownfields</b>
9. Conduct a community wide brownfield audit of public- and privately-owned properties. *
10. Use brownfield clean-up and redevelopment processes to further community sustainability goals. *
11. Redevelop or remediate at least one brownfield site. *
<b>Green Jobs</b>
12. Train relevant municipal/county staff (e.g., public works, grounds and building maintenance) in principles of sustainability.
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 Sourcing</b>	
15.	Adopt a policy for the municipal/county purchase of local goods and services as practicable.
16.	Implement a “buy local” campaign that educates residents about the social, economic, and environmental impacts of buying local.
<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.
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.
21.	Adopt a local food product purchasing policy for the municipality/county and/or promote institutional buying of local food products and goods by anchor institutions.

<b>Improving Health Outcomes</b>
<b>Integrate Health Considerations into Policies &amp; Programs</b>
1. Municipal/county staff have attended a Health in All Policies (HIAP) training.
2. Adopt a Health in All Policies (HIAP) approach to municipal/county programs, projects, and decision making.
3. Implement a Health in All Policies (HIAP) approach when evaluating public and private development projects.
<b>Benchmark &amp; Track</b>
4. Work with county health departments/municipalities to monitor and report on environmental health 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/county 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.
7. Upgrade municipal/county buildings to address identified health risks.
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 and implement a plan to remediate/mitigate potential health risks in publicly owned affordable housing. *
<b>Improve the Community Health Environment</b>
10. Adopt a community wide anti-idling policy.
11. Implement a neighborhood tree canopy program to improve air quality and reduce heat impacts.
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.

<b>Protecting &amp; Conserving Water Resources</b>	
<b>Municipal/County Water Conservation</b>	
1.	Track local water use for all municipal/county buildings using ENERGY STAR Portfolio Manager, or similar tool.
2.	Develop a plan to upgrade/retrofit municipal/county buildings to conserve water.
3.	Upgrade/retrofit at least one municipal/county building in the last year to reduce water use.
4.	Adopt an asset management plan for municipal/county water systems. *
5.	Improve municipal/county water and wastewater treatment plant efficiency. *
<b>Nonpoint Source Protections</b>	
6.	Implement nonpoint source pollution prevention measures in all municipal/county construction projects.
7.	Adopt policies that support or incentivize nonpoint source pollution control in private development and construction projects.
8.	Update zoning ordinances to require measures for controlling nonpoint source pollution.
<b>Low Impact Development</b>	
9.	Implement low impact development techniques in all municipal/county construction projects.
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.
13.	Adopt a stormwater ordinance to properly manage stormwater runoff.
14.	Provide incentives and/or educational resources for property owners to decrease and/or disconnect impervious surfaces.
15.	Implement a municipal/county green infrastructure project.
<b>Managing for Fluctuating Shoreline Water Levels</b>	
16.	Establish minimum shoreland setback standards along lakes and rivers. *

17. Conduct seawall inspections in coastal & waterfront communities. \*

**Septic System Impacts**

18. Evaluate the condition of septic systems in your community with the local health department using water quality testing in lakes, rivers, and streams. \*

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. \*

**Support Clean & Inclusive Mobility**

**Non-Motorized Transportation**

- 1. Adopt a non-motorized transportation plan that includes a Complete Streets policy/ordinance.
- 2. Incorporate non-motorized transportation elements into new municipal/county infrastructure projects, as relevant.
- 3. Adopt policies or provide incentives for developers to incorporate non-motorized transportation features into private development and construction projects.

**Clean Motorized Vehicles**

- 4. Assess needs and develop a plan for deployment of public electric vehicle (EV) charging infrastructure.
- 5. Install universally accessible public EV charging infrastructure in convenient locations.
- 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.

**Urban, Suburban, & Rural Public Transportation**

- 8. In urban and suburban communities, promote and encourage public transit use and/or incentivize municipal/county staff use of public transportation. \*
- 9. Work with regional partners to expand options and access to public and shared transportation. \*

<b>Inspire &amp; Mobilize Residents</b>
<b>Communicate Best Practices</b>
1. Create a local sustainability action website/webpage and/or social media page.
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.
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.
6. Provide awards or incentives to residents, organizations, or businesses who take significant steps to improve the sustainability and/or resiliency of the community.



## Michigan Green Communities Challenge Metrics

		Question/Metric	Units of Measurement
GHG Emissions	1	What is your current population?	# of people
	2	When did your community complete a GHG inventory for municipal/county operations?	year
	3	When did your community complete a community wide GHG inventory?	year
	4	How many total metric tons of CO <sub>2</sub> e were being emitted in your GHG inventory for municipal/county operations?	Metric Tons CO <sub>2</sub> e (MTCO <sub>2</sub> e)
	5	How many total metric tons of CO <sub>2</sub> e were being emitted in your GHG inventory for the entire community?	Metric Tons CO <sub>2</sub> e (MTCO <sub>2</sub> e)
	6	Percent (%) reduction in GHG emissions from municipal/county operations from baseline year supplied above.	% reduction in MTCO <sub>2</sub> e from baseline supplied in survey
	7	Percent (%) reduction in community wide GHG emissions from baseline year supplied above.	% reduction in CO <sub>2</sub> e from baseline supplied in survey
	8	Percent (%) of energy supplied by renewable sources in municipal/county operations this calendar year.	% of annual kWh
Nonmotorized Transportation	9	Miles of sidewalks.	# miles
	10	Miles of dedicated/protected bike lanes/routes and nonmotorized trails.	# miles
	11	Miles of shared bike routes (e.g., roads with 'sharrows').	# miles
	12	Total road miles. (Centerline miles, not lane miles.)	# miles
Water Use	13	Water use in municipal/county operations in the 2021 calendar year.	CCF (hundred cubic feet) per capita
	14	Percent (%) reduction in water use from municipal/county operations in the 2022 calendar year.	% Reduction in water use from 2021
	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

	16	Percent (%) of county/municipal vehicle fleet that are EV/clean fuel vehicles. (Includes public safety fleet and light-, medium-, and heavy-duty vehicles. <a href="#">See list of clean/alternative fuels here</a> . Not applicable if county/municipality has no vehicles.)	% of total fleet
	17	Number of publicly accessible EV charging stations (any level).	# of EV charging stations
	18	Number of cooling centers/resilience hubs. ( <a href="#">See definition of resilience hubs</a> . May include spaces that have plans to provide emergency services like public schools, libraries, etc.)	# of cooling centers/resilience hubs
	19	Tree canopy cover. ( <a href="#">Information on i-Tree Canopy tool</a> .)	% of total community land area (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
	21	Percent (%) of area that is impervious surface.	% of total community land area (acres)
Land Use	22	Total acres of public greenspace/parks. (Not applicable if there are no public greenspaces or parks.)	# acres
	23	Total acres of agricultural, rural, or natural resource land that are permanently protected.	# acres
	24	Total acres of agricultural and natural resource land. (Use zoning to determine. Complete baseline survey.)	# acres