

CENTRAL UPPER PENINSULA MATERIALS MANAGEMENT PLAN

2027-2032

ENCOMPASSING ALGER, DELTA, DICKINSON, MARQUETTE, MENOMINEE, AND SCHOOLCRAFT COUNTIES

PREPARED BY THE CENTRAL UPPER PENINSULA
MATERIALS MANAGEMENT PLANNING COMMITTEE

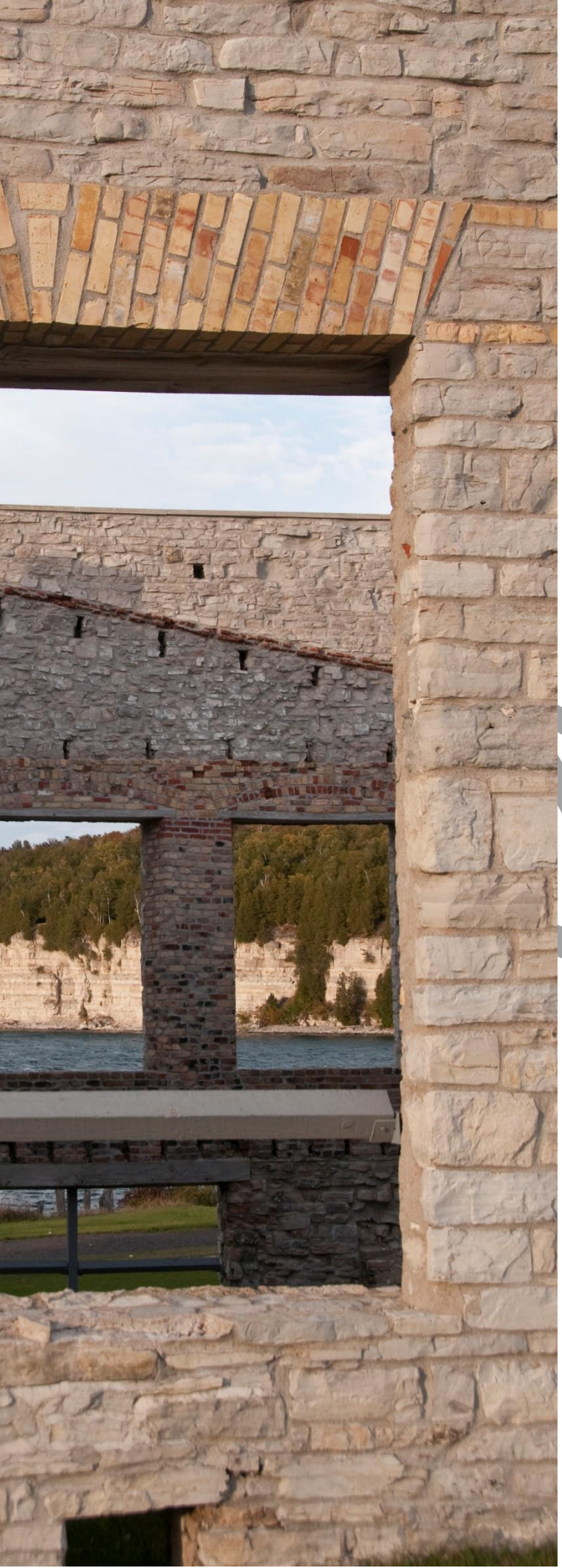


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PLAN APPROVALS

DATE SUBMITTED TO EGLE:	
EGLE APPROVAL DATE:	

All counties participating in this Plan are listed below and will be referenced throughout this plan as the planning area or county, as applicable.

Alger County	Delta County
Dickinson County	Marquette County
Menominee County	Schoolcraft County

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CERTIFICATION AND APPROVAL

The Central Upper Peninsula Materials Management Plan, 2027–2032, has been approved by the County Approval Agencies of:

County	**Date of Approval**
Alger County	
Delta County	
Dickinson County	
Marquette County	
Menominee County	
Schoolcraft County	

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CENTRAL UPPER PENINSULA MATERIALS MANAGEMENT PLANNING COMMITTEE

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Executive Summary

The Central Upper Peninsula Materials Management Plan (CUPMMP) is a policy-based system for sustainable materials management that supports the local residents, the local economy, and the local environment. Materials Management in Michigan is regulated by the Part 115 of the Natural Resources and Environmental Protection Act (PA 451 of 1994; MCL 324.155 et seq.), which requires county-level Materials Management Plans to be submitted to the Department of Environment, Great Lakes, and Energy (EGLE) for approval in response to the State's materials management policy, regulation, and goals.

Prior to updates to Part 115 in 2023, each county regulated the disposal of solid wastes through a Solid Waste Management Plan. Materials management is a guide for the management of a wider variety of materials, with an emphasis on increasing sustainable practices, such as recycling and composting, and reducing the ultimate disposal of wastes into landfills. Counties are delegated authority from the Legislature to regulate materials management by Part 115; a county is authorized to accept responsibility for the development and implementation of a Materials Management Plan, and to ensure that the necessary materials management authorizations, fees, regulatory ordinances, or agreements needed to achieve the materials management goals of that plan are effect[1].

Michigan's central Upper Peninsula, encompassing Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft County took the initiative to develop a multi-county Materials Management Plan to focus on building capacity to support new and expanded recycling and composting programs. The region faces unique challenges and opportunities in managing its materials. Low population density, significant distances to processing and end market facilities, and low public awareness contribute to a lower recycling rate compared to the state average. Solid waste collection services are primarily provided by private haulers, with limited municipal involvement. Many municipalities lack comprehensive ordinances that encompass both solid waste and materials management, or have outdated regulations that do not adequately address the current landscape. This has resulted in inconsistent access to recycling and organic diversion opportunities and low market competition. A history of limited access to services has contributed to a lack of public awareness about recycling and composting practices and the environmental and economic benefits.

The region has historically relied heavily on landfilling as its primary means of managing waste. Five active municipal solid waste landfills provide sufficient disposal capacity for the foreseeable future, with average remaining operational lifespans measured in decades. However, the region experiences some of the highest disposal costs in Michigan due to transportation constraints, limited competition, and the realities of serving a sparsely populated area. While disposal infrastructure remains adequate, the continued reliance on landfills is inconsistent with Michigan's materials management goals and represents a long-term economic and environmental challenge.

[1] MCL 324.11504(26), 11577 et seq., 11578(1)(a-b), and 11584(2).

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Analysis conducted during Plan development estimates that approximately 151,000 tons of municipal solid waste materials are generated annually throughout the planning area. Available waste characterization studies indicate that more than sixty percent of materials currently disposed in landfills could potentially be diverted through expanded recycling and organics management systems. Food waste and yard waste alone account for more than one-third of all materials generated and represent one of the greatest opportunities for diversion.

The assessments completed for this Plan identified several recurring barriers to increased diversion including: limited access to recycling services in rural areas, transportation costs associated with moving materials, inconsistent public awareness of recycling and composting opportunities, fragmented program development, limited local processing capacity for certain materials, and the absence of strong regional end markets for recovered commodities. Despite these challenges, the region possesses substantial strengths, including existing landfill and transfer infrastructure, successful county materials management authorities, an expanding regional materials recovery facility, active composting operations, and a demonstrated willingness among local governments to collaborate.

This Plan concludes that the most effective path forward is not to develop separate and independent diversion systems, but rather to integrate recycling, composting, and other materials management activities into the existing waste collection and transportation network. By leveraging the existing infrastructure in collection, transfer stations, hauling systems, and regional facilities, the central Upper Peninsula can expand diversion opportunities while minimizing duplication of infrastructure and controlling costs. This approach emphasizes regional cooperation, shared investment, and scalable implementation strategies appropriate for a rural area.

As each of the County Boards of Commissioners in the planning area have accepted responsibility as County Approval Authorities for the development of a Materials Management Plan, these oversight bodies may be the most appropriate body to maintain materials management programs, funding sources[2], and provide for enforcement to guarantee compliance with the plan[3]. This Plan is written for its primary audience to be County Commissioners in order to guide development, examine options, and provide for approvals of actions related to materials management.

Implementation of the Plan will require sustained commitment from counties, municipalities, private service providers, businesses, institutions, and residents. Priority actions include expanding curbside and drop-off recycling infrastructure, strengthening public education and outreach, improving local reporting systems, supporting food waste diversion and composting programs, standardizing local ordinances and service contracts, and pursuing grants and other funding opportunities to offset infrastructure costs. Particular emphasis is placed on ensuring that rural communities receive equitable access to materials management opportunities while recognizing the operational realities associated with serving low-density areas.

Ultimately, this Plan establishes a roadmap for moving the central Upper Peninsula toward a more sustainable and resilient materials management system. Improving materials management practices in the region requires a multi-faceted approach that includes regional collaboration, expanded

[2] MCL 324.11581 et seq.
[3] MCL 324.11503(9)

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infrastructure for collection and processing, increased public awareness, and supportive policies. Increasing the recycling and food waste diversion rates could create economic opportunities, provide landfill longevity, and mitigate the environmental impact of historic and poor practices. This Plan is designed to provide an organizational foundation that allows counties and local governments to advance materials management processes and infrastructure in their communities. By addressing these challenges and capitalizing on the economic and environmental opportunities, the Central Upper Peninsula can become a leader in sustainable materials management.

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DEFINITIONS

Anaerobic Digester: a facility that uses microorganisms to break down biodegradable material in the absence of oxygen, producing methane and an organic product.

Anaerobic Digestion: a process that uses microorganisms to break down biodegradable materials in the absence of oxygen, producing methane and an organic product.

Benchmark Recycling Standards: the recycling rate and access standards outlined in Part 115, MCL 324.11502(6) et seq.

Beneficial Use Materials: aggregates, road materials, building materials, organic materials and other uses of waste that can be used in applications outside of typical recycling, composting, solid waste disposal or diversion activities.

Central Upper Peninsula Materials Management Planning Committee (CUPMMPC or MMPC): the committee created by the intergovernmental agreement between the County Boards of Commissioners of Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft Counties to develop and oversee the materials management planning process and related issues.

Commercial (as in "commercial waste" or "commercial recycling"): refers to non-residential sources, including businesses, government facilities or operations, institutions, schools, non-profit organizations, community activities, etc. Interchangeable with "non-residential."

Compostable Material: organic material that can be converted to finished compost.

Composting: the controlled microbial degradation of organic waste to yield a humus-like product.

Composting Facility: a facility where composting processes occur, excluding household composting, temporary accumulation of organic/yard wastes, and on-farm organics management.

Construction and Demolition (C&D) Debris: waste building materials, packaging and rubble resulting from construction, remodeling, repair and demolition of buildings and roads.

County Approval Agency (CAA): the County Board of Commissioners of each respective county in the planning area.

Curbside Collection: collection of waste (garbage, recyclables, yard waste, etc.) from residences at the point of generation.

Designated Planning Agency (DPA): the agency designated by the County Approval Agency to conduct materials management planning activities and oversee the Materials Management Planning Committee. For the purposes of this Plan, this agency is Central Upper Peninsula Planning and Development (CUPPAD).

Disposal Area: a facility that accepts solid waste for disposal, or handling prior to disposal, such as a landfill, incinerator, or solid waste processing and transfer facility.

Diversion: waste materials (typically of specific types) that can be readily separated from solid waste to other methods of management or disposal. Diversion includes recycling and organic waste separation activities, but may also include the collection of hazardous waste, liquids, pharmaceuticals, electronics,

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batteries, light bulbs, pesticides, mercury containing devices, medical waste, and other types of separated materials.

EGLE: the Michigan Department of Environment, Great Lakes and Energy. EGLE's Materials Management Division is responsible for administration and oversight of Materials Management Facilities, regulated activities, and Materials Management Planning.

Food Waste: organic animal or vegetable matter that was used or intended for human or animal consumption.

Hauler: a person or company that transports managed materials.

Industrial Waste: solid waste that is generated by a manufacturing or industrial process including ashes, processing residuals, pulp and paper mill material, wastewater sludge, and other segregated waste types.

Innovative Technology Facility: a materials management facility that converts solid waste into energy or a usable product that is not a materials recovery facility, composting facility, or anaerobic digester.

Landfill, Type II: a landfill that receives primarily household and commercial municipal solid waste, and may also receive other types of solid waste including construction and demolition debris, sewage sludge, commercial waste, nonhazardous sludge, hazardous waste from exempt small quantity generators, and industrial waste.

Landfill, Type III: a landfill that is not a Type II landfill and primarily receives types other than municipal solid waste, including specific types of nonhazardous industrial waste, construction and demolition waste, or low-hazard industrial waste.

Managed Material: solid waste, diverted waste, or recycable materials, excluding scrap metals.

Materials Management Facility: a disposal area (processing and transfer facility, landfill or incinerator), a materials utilization facility, or a waste diversion center.

Materials Management Plan (MMP): this plan, as required by MCL 324.11571.

Materials Recovery Facility: a facility that primarily receives source separated materials and sorts, bales, or processes them for reuse, recycling, or utilization as a raw material or new product.

Materials Utilization: processes including recycling, composting, or converting materials into energy rather than disposing of the material.

Materials Utilization Facility: a materials recovery facility, composting facility, anaerobic digester, or innovative technology facility.

Municipal Solid Waste (MSW): household, commercial, and nonindustrial waste.

Part 115: means the legislation and rules for solid waste management under Part 115 and its subparts of the Natural Resources and Environmental Protection Act, MCL 324.11502 et seq.

Planning Area: means the six counties and constituent municipalities of the central Upper Peninsula region within Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft County.

Recycable Materials: glass, metal, plastics, paper products, wood, rubber, textiles, food waste, yard clippings, and other materials that may be recycled or composted.

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Solid Waste Processing and Transfer Facility (Transfer Station): a facility used for the handling, storage, transfer, or processing of solid waste, and is not located at the site of generation or disposal of the solid waste.

Source Reduction: the design, manufacture, purchase, or use of materials that reduces the quantity of waste generated and increases the sustainability of materials and products.

Source Separated Materials: materials specifically removed from solid waste for recovery, recycling, reuse, composting, or another materials management process other than disposal.

Waste Diversion Center: a facility or part of a facility that is designated to receive or collect diverted wastes.

Waste Generator: all residential, commercial, institutional and industrial establishments generating managed materials and located within the planning area.

Yard Waste: leaves, grass clippings, vegetable and garden debris, shrubbery, and wood that can be converted into compost

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INTRODUCTION

The Central Upper Peninsula Materials Management Plan 2027-2032 replaces the previous Solid Waste Management Plans of Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft Counties. The 2023 updates to Part 115 of the Natural Resources and Environmental Protection Act (PA 451 of 1994 et seq.) created the option for counties to act jointly for the regulation of materials under their jurisdiction through the exercise of joint powers under the Urban Cooperation Act (PA 7 of 1967; MCL 124.501 et seq.). A collaborative effort was then enjoined to develop a regional multi-county Materials Management Plan.[4] This Plan is prepared in accordance with Part 115 of the Natural Resources and Environmental Protection Act (PA 451 of 1994, as amended), including the 2023 materials management amendments.

The county-level regulation of solid waste has been in place in Michigan since 1965; in 1973, the six counties of the central Upper Peninsula joined together in an initial Solid Waste Management Plan that would address the environmental effects of poorly-regulated dumps and disposal sites. The Federal Resource Conservation and Recovery Act of 1976 forced the closure of open dumps nationwide, and required regional planning for the disposal of municipal solid wastes and feasible efforts to initiate recycling. Michigan's 1978 Solid Waste Management Act then required individual county plans, and was superseded later with the inclusion of the regulations as Part 115 under the Natural Resources and Environmental Protection Act of 1994. County solid waste management plans required their last major updates to be adopted in the late 1990s and early 2000s.

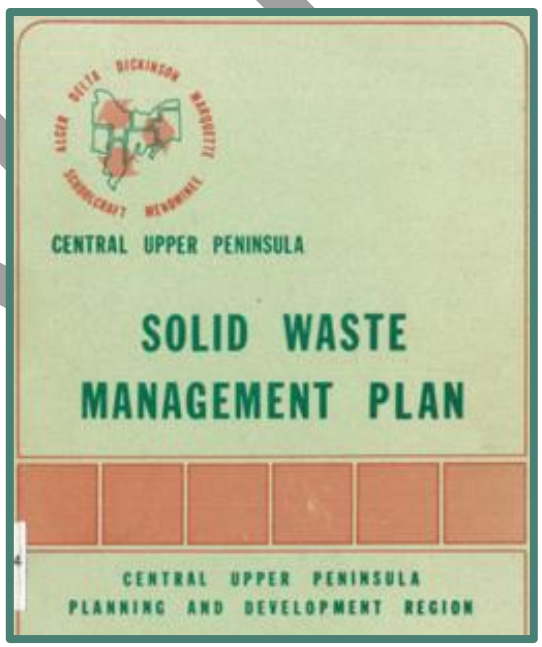


Figure 1: *Cover Page, 1973 Central Upper Peninsula Solid Waste Management Plan*
Source: *CUPPAD*

Early initial materials management planning began in 2022, with EGLE offering Materials Management County Engagement Grants to counties ahead of the expected passage of updates to Part 115. Each of the six counties engaged Central Upper Peninsula Planning and Development to engage local stakeholders and inventory materials management facilities, programs, ordinances, and hauling companies throughout the region.

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[4] (2024) Interlocal Agreement to Create a Multicounty Materials Management Plan, Designate a Planning Agency, and Establish a Materials Management Planning Committee. Alger, Delta, Dickinson, Marquette, Menominee, Schoolcraft County, See Appendix I: Intergovernmental Agreement

The developed report[5] formed the initial inventory and analysis of the strength and weaknesses of the region's materials management infrastructure, and identified that a collaborative multi-county framework would be beneficial to provide capacity and support to local governments. The subsequent passage of updates to Part 115 in late 2023 initiated the statewide call for Materials Management Plans.

In January of 2024 EGLE announced its call to initiate the materials management planning process, starting a timeline of plan development and the ultimate adoption of this plan by July of 2027. Development of this Plan began in July of 2024, with the approval and signature of a joint Notice of Intent by the six counties to develop a multi-county Materials Management Plan, and the creation of the Central Upper Peninsula Materials Management Planning Committee (CUPMMPC) to represent stakeholders and guide plan development. The Notice of Intent stated each county's intent to develop a joint Materials Management Plan, documented consultation with other adjacent counties, and was distributed to all constituent local units of government before publication on County websites, newspapers, and other media.

The CUPMMPC is a 23-member body with representatives from solid waste management, recycling, composting, environmental, businesses, and local government interests. The Plan was prepared by staff from the Central Upper Peninsula Planning and Development (CUPPAD) Regional Commission, which acts as Designated Planning Agency, administers the CUPMMPC, and guides plan implementation. The CUPMMPC met xxx times over the plan's development timeline beginning in October of 2024, and approved the final draft on xxxxxxxxxxx.

Throughout the planning process, the CUPMMPC solicited the direct engagement of stakeholders and the general public. Beginning in October of 2024, each of the 93 municipalities and members of the public requesting notice began receiving notifications of meetings, including the subject matter to be discussed. At several points in development, these notifications included additional information on materials management planning and updates on the plan development process.

Regular open meetings of the CUPMMPC were held at the Delta County Service Center in Escanaba, and included opportunities for public comment and participation. Local newspapers and television stations in the six-county planning area communicated materials management planning information, the availability of a public survey, and contact information for public participation. Representatives of the Designated Planning Agency and the CUPMMPC provided updates to County Boards of Commissioners, Township Boards, Township Associations, stakeholder groups, the Central Upper Peninsula Planning and Development Regional Commission, and outreach groups. Events held by the Upper Peninsula Association of County Commissioners, The Department of Environment, Great Lakes, and Energy, and the Michigan Recycling Coalition included local information and input opportunities to stakeholders. Public feedback was incorporated into plan development during this period.

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[5] (2023) Central Upper Peninsula Materials Management County Engagement Report. CUPPAD. https://drive.google.com/file/d/1wzKKSc8b17vZP3fs6PkrotXGK2uM3UwH/view

In October of 2026, the CUPMMPC reviewed and approved the initial draft of the Materials Management Plan to be distributed to County Boards of Commissioners and be made available to the public for comment. The public review and comment period was open from November 2 to January 20, 2027. A stakeholder session was hosted in each County to provide a direct venue for questions and public comment. The feedback received through these methods was collated and presented at a public hearing on the Plan held by the CUPMMPC on [January 21, 2027]. The Committee reviewed all the feedback received and incorporated changes into the Plan.

Ultimately, a draft Plan was approved by the CUPMMPC on xxxxxxxxx, and recommended for approval by each County Board of Commissioners, acting as the County Approval Authorities for the Plan and its implementation. The plan was then distributed to all 87 constituent local units of government in the six-county planning area, with a majority (xxxx) affirming the plan's approval. The Central Upper Peninsula Materials Management Plan, 2027-2032 was approved by the Department of Environment, Great Lakes, and Energy on xxxxxxxxxxx, setting an ongoing timeline for plan implementation and revision.

Highlighted sections will be detailed with public engagement and approval process information and dates as appropriate.

The goals of this Materials Management Plan align with Section 11577 of Part 115:

1. *To prevent adverse effects on the environment, natural resources, or the public health, safety, or welfare resulting from improper collection, processing, recovery, or disposal of managed materials, including protection of surface water and groundwater, air, and land;*
2. *To ensure managed materials are sustainably managed to achieve benefits to the economy, communities, and the environment;*
3. *To ensure that all managed material generated in the planning area is collected and recovered, processed, or disposed at materials management facilities that comply with state statutes and rules or managed appropriately at out-of-state facilities.*

In addition, this Materials Management Plan aligns with the state's solid waste management plan to optimize recycling opportunities, including electronics recycling opportunities, and to promote the reuse of materials in the best interest of the environment, natural resources, and the public health, safety, and welfare.

The move to a sustainable materials management hierarchy will support a circular economy model, which seeks to keep materials in use and reduce the amount that is ultimately disposed of in landfills or by other means. Recyclables and organics that are disposed in landfills represent lost energy, material, and commodity value that can be diverted and/or reintroduced into the economy. The overall benefit of that diversion depends on the amount of energy used to convert the materials to useful means, what kinds of materials are produced, and what value is captured by replacing the use of virgin materials with recycled ones. This Plan is focused on supporting sustainable materials management by increasing diversion and processing capacity at the local level, while supporting industries and producers in reducing the use of natural resources and creating more sustainable products.

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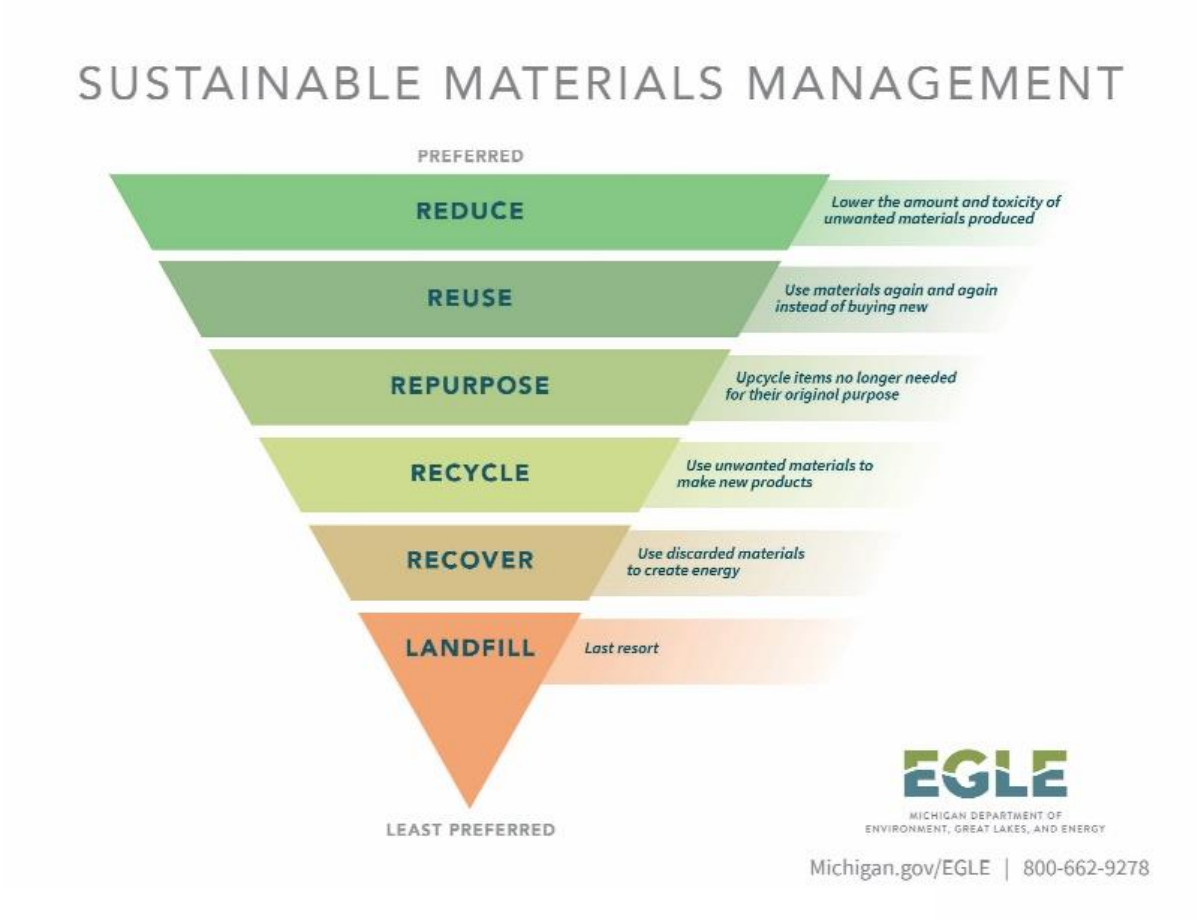


Figure 2: *Sustainable Materials Management Hierarchy*
Source: *Michigan EGLE*

Part 115 sets a number of "Benchmark Recycling Standards" (MCL 324.11502(6)) that Michigan communities are required to enact as goals in materials management planning. These are:

1. *By January 1, 2026, at least 90% of single-family dwellings in urban areas as identified by the most recent federal decennial census and, by January 1, 2028, at least 90% of single-family dwellings in municipalities with more than 5,000 residents have access to curbside recycling that meets all of the following criteria:*
    i. *One or more recyclable materials, as determined by the county's material management plan, that are typically collected through curbside recycling programs, are collected at least twice per month.*
    ii. *If recyclable materials are not collected separately, the mixed load is delivered to a solid waste processing and transfer facility and the recyclable materials are separated from material to be sent to a solid waste disposal area.*
    iii. *Recyclable materials collected are delivered to a materials recovery facility that complies with part 115 or are managed appropriately at an out-of-state recycling facility.*
    iv. *The curbside recycling is provided by the municipality or the resident has access to curbside recycling by the resident's chosen hauler.*

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2. *By January 1, 2032, the following additional criteria:*
    i. *In counties with a population of less than 100,000, there is at least 1 drop-off location for each 10,000 residents without access to curbside recycling at their dwelling, and the drop-off location is available at least 24 hours per month.*
    ii. *In counties with a population of 100,000 or more, there is at least 1 drop-off location for each 50,000 residents without access to curbside recycling at their dwelling, and the drop-off location is available at least 24 hours per month.*

Michigan's long-term goal is to achieve a 45% municipal solid waste recycling rate. As an interim step, the state aims for a 30% recycling rate by 2029. The recycling rate in Michigan has risen from around 14% before 2019 to 26% in 2025.

Additionally, the State has set a goal to reach half the amount of food waste that enters the waste stream by 2030.[6] This action will reduce food waste and loss in Michigan, diverting an additional one-third of previously disposed organic materials into an alternative chain of use, energy creation, or composting processes. The Food Recovery Hierarchy prioritizes actions that can be taken to prevent and divert wasted foods.

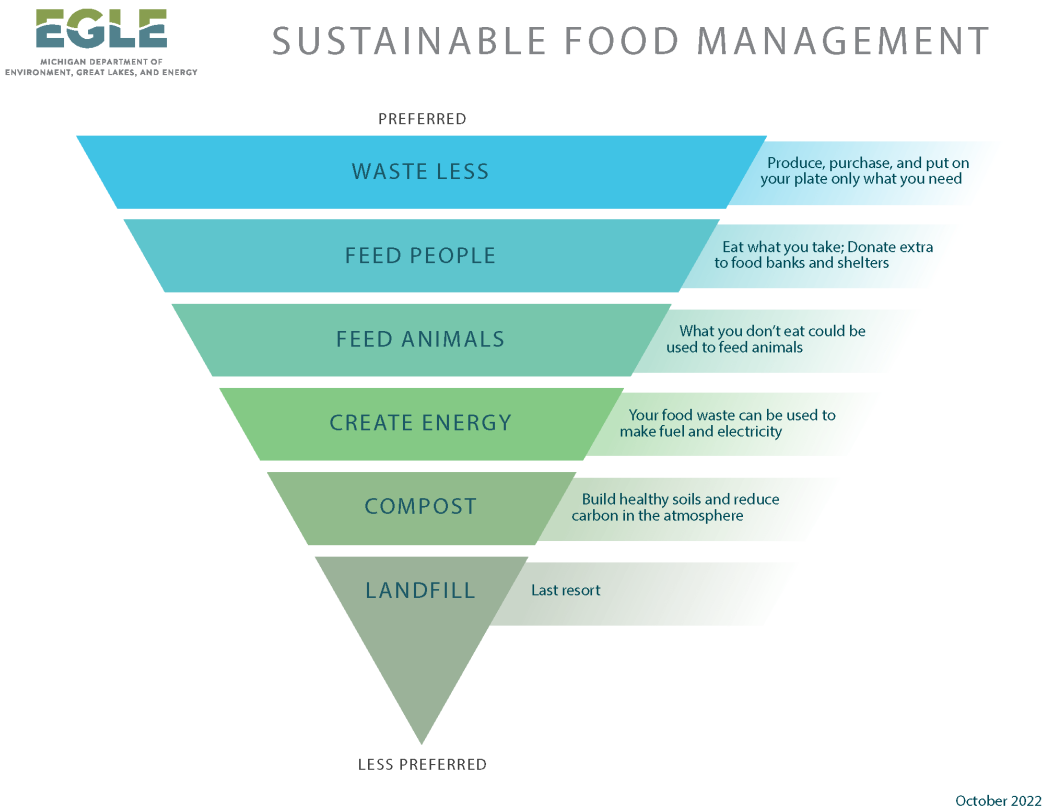


Figure 3: *Sustainable Food Management Hierarchy*
Source: *Michigan EGLE*

[6] https://www.michigan.gov/egle/about/organization/climate-and-energy/mi-healthy-climate-plan

The six counties of the Central Upper Peninsula planning area encompassed by this Materials Management Plan are committed to helping their communities meet and exceed the State's materials management goals. To do so, this initial Materials Management Plan seeks to establish an inventory of generation sources and current materials management infrastructure available within the planning area. It then seeks to establish the area's current municipal solid waste recycling rate in an effort to provide a baseline measure towards meeting the State's Benchmark Recycling Goals. The Plan will also inventory the current mechanisms and ordinances established to regulate, fund, and provide for materials management activities across the planning area's municipalities.

Following this inventory, the Central Upper Peninsula Materials Management Planning Committee, and the respective Counties, have set measurable, objective, and specific goals to increase solid waste diversion, the municipal solid waste recycling rate, and the food waste diversion rate. The CUPMMPC and each County have established an implementation strategy to demonstrate progress towards meeting these goals over this Plan's five-year timeline.

The objectives of this Plan are to:

1. Provide local units of government within the central Upper Peninsula with a sound basis for the design and operation of solid waste, recycling, organics, and waste diversion facilities to meet their present and projected needs.
2. To identify opportunities for local units of government to take advantage of the economy of scale to provide jointly-operated programming, collection, transfer, and disposal facilities to ensure that the needed facilities are provided in an efficient and cost-effective manner.
3. To protect and improve our natural resources to ensure the public health, safety and welfare of the people of the central Upper Peninsula and their environment.
4. To assist the counties and areas identified by the Benchmark Recycling Standards in satisfying the materials management access, management, and planning requirements put in place by Part 115 of the Michigan Natural Resources and Environmental Protection Act.
5. To support the achievement of increased food waste diversion by identifying and evaluating phased implementation strategies for organics management systems, including expansion of drop-off and curbside collection programs. This will include identifying and developing partnerships with existing service providers and the development of scalable, community-based infrastructure to increase participation and material recovery.

This Plan recognizes that providing a higher level of service and access to materials management systems initially involves a higher cost to the users of that system, which may be balanced or exceeded by the longer term benefits in decreased capital costs needed for landfill expansion and land use. To offset that burden, this Plan envisions slow, long-term changes that increase the opportunity to secure funding support and mitigate the cost burden to residents. This Plan also recommends policy changes that create opportunities for change within the enforceable mechanisms available to local units of government. If these policies remain un-

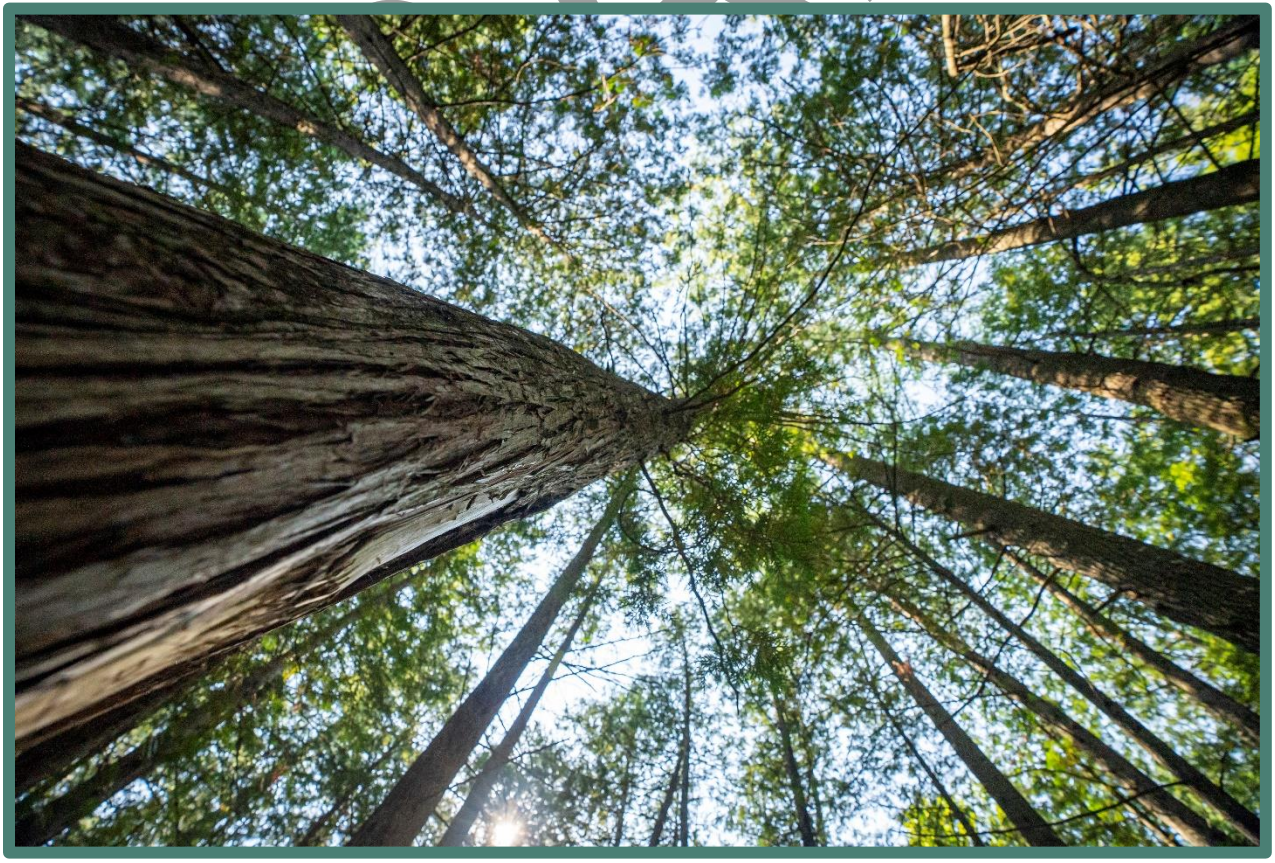
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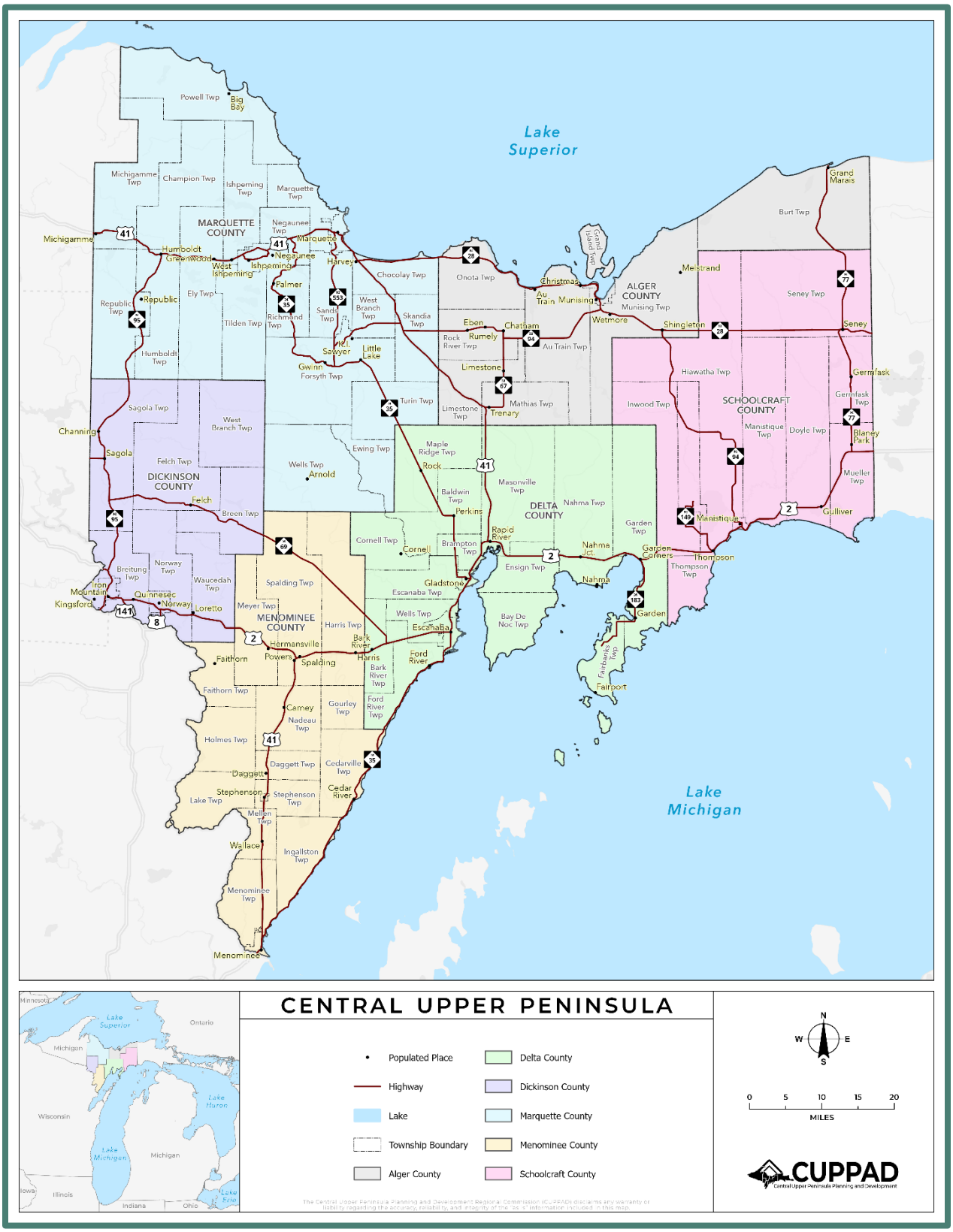
adopted or unenforced, the region will likely see little improvement in materials management practices; particularly in rural areas.

Ensuring that the planning process for materials management facilities, operations, and programming is implemented under an equitable and collaborative process ensures that all communities will benefit from the expansion of the circular economy. Continuous innovation into new production processes and market areas developed by the availability of recycable resources on the secondary materials market will spur new business development and workforce opportunities. Waste diversion activities will also promote the protection of natural resources by reducing illegal dumping, promoting sustainable agriculture and soil health, limiting environmental contamination, and reducing detrimental land use. Waste reduction, diversion, and recycling efforts should be included as part of sustainability actions identified in local unit planning.

Environmental protection, through sustainable land use and development, is an important issue in the Upper Peninsula, and many communities have identified individual goals. Local units of government within the planning area are encouraged to adopt this Plan by reference, or incorporate similar goals and materials management focused actions into their regulatory and operational frameworks.

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Lake Superior
Lake Michigan
MARQUETTE COUNTY
DICKINSON COUNTY
MENOMINEE COUNTY
DELTA COUNTY
ALGER COUNTY
SCHOOLCRAFT COUNTY
Powell Twp
Big Bay
Michigamme Twp
Champion Twp
Ishpeming Twp
Marquette Twp
Negaunee Twp
Michigamme
Humboldt
Graveraet
West Ishpeming
Ishpeming
Marquette
Negaunee
Harvey
Palmer
Republic
Republic Twp
Ely Twp
Tilden Twp
Humboldt Twp
Richmond Twp
Sands Twp
West Branch Twp
Skandia Twp
Chocolay Twp
Onota Twp
Grand Island West
Grand Island East
Christmas
Au Train
Munising
Munising Twp
Wetmore
Meistrand
Burt Twp
Grand Marais
Seney Twp
Seney
Shingleton
Eben
Rock River Twp
Rumely
Chatham
Au Train Twp
Limestone
Limestone Twp
Mathias Twp
Trenary
Turin Twp
Little Lake
Lake Sawyer
Gwinn
Forsyth Twp
Hiawatha Twp
Inwood Twp
Germfask
Germfask Twp
Manistique Twp
Doyle Twp
Blaney Park
Mueller Twp
Gulliver
Manistique
Thompson
Thompson Twp
Garden Corners
Garden Twp
Garden
Nahma Jct.
Nahma
Nahma Twp
Ensign Twp
Bay De Noc Twp
Fairbanks Twp
Fairport
Sagola Twp
West Branch Twp
Channing
Sagola
Felch Twp
Felch
Breen Twp
Ewing Twp
Wells Twp
Arnold
Maple Ridge Twp
Rock
Baldwin Twp
Perkins
Masonville Twp
Rapid River
Cornell Twp
Cornell
Brampton Twp
Gladstone
Escanaba Twp
Escanaba
Wells Twp
Norway Twp
Breitung Twp
Iron Mountain
Kingsford
Quinnesec
Norway
Loretto
Waucedah Twp
Spalding Twp
Meyer Twp
Harris Twp
Hermansville
Powers
Spalding
Bark River
Harris
Ford River
Bark River Twp
Faithorn
Faithorn Twp
Carney
Nadeau Twp
Gourley Twp
Ford River Twp
Holmes Twp
Daggett Twp
Daggett
Cedarville Twp
Cedar River
Stephenson
Stephenson Twp
Lake Twp
Mellen Twp
Wallace
Ingallston Twp
Menominee Twp
Menominee
CENTRAL UPPER PENINSULA
Populated Place
Highway
Lake
Township Boundary
Alger County
Delta County
Dickinson County
Marquette County
Menominee County
Schoolcraft County
N
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MILES
CUPPAD
Central Upper Peninsula Planning and Development

PLANNING AREA PROFILE

Population

The Central Upper Peninsula Region is comprised of Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft Counties, along with representation by the federally recognized Hannahville Indian Community and the Sault Ste. Marie Tribe of Chippewa Indians. Ninety-four local units of government are represented within the planning area. The total area of the region is approximately 14,465 square miles largely existing as tracts of federal, state, and commercial forest land. Highly rural, small cities are concentrated along the shores of Lake Superior and Lake Michigan and the Menominee River; historic economic and transportation hubs.

With a 2020 population of 169,215, the region's population density of 24.63 persons per square mile is significantly lower than downstate areas of similar size. The highest population densities occur in the Marquette-Negaunee-Ishpeming, Escanaba-Gladstone, and Iron Mountain-Kingsford-Norway urban areas. These are the current centers of waste generation and are anticipated to remain the population centers of the region for the next five- and ten-year periods.

Table 1: *2020 Population and Projected Five-Year Estimates*
Source: *US Census Bureau, Michigan DTMB*

County	2020 Population[7]	2025 Population (est.)[8]	2030 Population (est.)[9]	2035 Population (est.)
Alger	8,842 (5.2%)	8,753	8,652	8,465
Delta	36,903 (21.8%)	36,686	36,148	35,323
Dickinson	25,947 (15.3%)	25,932	25,587	25,024
Marquette	66,017 (39.0%)	66,591	66,097	65,342
Menominee	23,459 (13.8%)	22,840	22,429	21,851
Schoolcraft	8,047 (4.7%)	8,242	8,430	8,539
TOTAL	**169,215**	**169,044**	**167,343**	**164,544**

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[7] United States Census Bureau.
[8] (February 2026) Michigan County Population Projections through 2050. Michigan Department of Technology, Management, and Budget. https://milmi.org/DataSearch/POPPROJ
[9] Ibid.

The Upper Peninsula has historically experienced a 3% decline in population over the past several censuses. Prior to the 2020 Census, Marquette County was the only county that was projected to achieve population growth between 2020-2045. Population projections created by the Michigan Center for Data and Analytics estimate that the area's population is expected to experience slow growth and ultimately decline between the present and 2050. Some minor gains are expected within Marquette, Menominee, and Schoolcraft counties before an overall net loss of 1.1% in total planning area population by 2030. Shifts in employment sectors, retirements, and remote work opportunities may develop into further unanticipated growth but unless this becomes realized, current waste generation relies on average trends and available data, with minor population gains anticipated as a "best case" scenario, and flat or negative growth expected.

Five Census-designated urban areas are present in the six-county region: Marquette, Negaunee-Ishpeming, Escanaba-Gladstone, Iron Mountain-Kingsford-Norway, and Menominee-Marinette, WI. There are no urban areas in Alger or Schoolcraft County. Together, these urban areas contain roughly half of the population of the region, and the wider pattern of settlement falls away from these into suburban, and then sparse rural areas. The population of these urban areas is expected to experience only minor gains or losses.

Table 2: *2020 Census Urban Area Populations*
Source: *US Census Bureau, Michigan DTMB*

Urban Area	2020 Population (est.)[10]	2030 Population (est.)
Marquette	24,682	+29
Negaunee-Ishpeming	11,298	+13
Escanaba-Gladstone	21,159	-423
Iron Mountain-Kingsford-Norway	16,801	-218
Menominee-Marinette, WI*	8,656*	-372
% of Total Population	**48%**	**-971**

**Michigan area only*

The Upper Peninsula contains approximately 30% of Michigan's total land area, and 3% of its population. Population density is much lower than many Lower Peninsula counties, with all 15 U.P. counties in the bottom 30% statewide. Change in population density is expected to be negligible based on current population and land use trends. Michigan contains the highest concentration of state and federal government land ownership east of the Mississippi, the majority of which is concentrated in the northern portion of the state. Much of the county land area in the central U.P. is public land with limited use, concentrating the populations to pockets of private land ownership. Excluding public lands from population density makes these counties more comparable to mid-lower-Michigan that, while more populous, are similar in density of persons per square mile.

[10] United States Census Bureau.

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Table 3: 2020 Population and Population Density by County
Source: US Census Bureau, public land use datasets

County	2020 Population (share of tot. pop.)	Square Miles (land area)	Density (persons per square mile)	Percentage in public ownership[11]	Density less public ownership
Alger	8,842 (5.2%)	915	9.66	50%	19.39
Delta	36,903 (21.8%)	1,171	31.51	42%	54.50
Dickinson	25,947 (15.3%)	761	34.10	46%	63.62
Marquette	66,017 (39.0%)	1,808	36.51	24%	48.24
Menominee	23,459 (13.8%)	1,044	22.47	15%	26.45
Schoolcraft	8,047 (4.7%)	1,171	6.87	68%	21.63
TOTAL	**169,215**	**6,870**	**24.63 (avg.)**		**38.97 (avg.)**

Land Use

Land use in the six-county planning area is heavily based on historical activities and physical characteristics. Settlements often grew near resource production centers for mining and forestry, and transportation facilities for Great Lakes shipping and railroads. Urban development focused on industrial and supportive businesses, leading to residential concentrations. After these industries experienced downturns in the early 20th century much of the rural land was turned over to the State and Federal Government. As a result, much of the area is natural resource-protected public lands, limiting further development in some areas. Current land use trends include slow growth of residential, commercial, and industrial development often alongside agricultural or forested areas.

The majority of local units of government have zoning regulations in place that protect the health, safety, and welfare of residents, and apply in the case of solid waste facilities and activities. Because materials management is a regulatory and operational system that crosses jurisdictional lines, informal controls in unzoned and inconsistently zoned areas may not be sufficient to address the development impacts of large-scale, long-term land use. This Plan pursues voluntary zoning coordination measures, including model ordinances, regional siting criteria, and intergovernmental review practices to improve consistency in materials management infrastructure planning while preserving local land use authority. Part 115 creates a preemption of the Michigan Zoning Enabling Act that allows the Materials Management Plan the ability to regulate siting of materials management facilities. This siting process is detailed in later sections.

[11] CUPPAD-derived figure from public datasets

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Table 4: Zoning Responsibilities by County
Source: CUPPAD

County	Zoning Responsibility	Additional Information
Alger	Municipalities	Limestone Township is unzoned; all other municipalities maintain zoning.
Delta	Hybrid- County and Municipalities	Wells, Cornell, Brampton, Baldwin, Maple Ridge, Ensign, Bay de Noc, Nahma, and Fairbanks Townships are County-zoned; the remaining municipalities undertake zoning themselves.
Dickinson	Municipalities	All zoning is conducted by individual municipalities.
Marquette	Municipalities	Ewing and Turin Townships are unzoned. All other municipalities maintain zoning.
Menominee	Municipalities	Menominee, Holmes, Faithorn, Meyer, Spalding, Daggett, Nadeau, and Gourley Townships are unzoned. All other municipalities maintain zoning.
Schoolcraft	Hybrid- County and Municipalities	The County maintains zoning in the townships, the City of Manistique is independently zoned.

Natural features and forests are the most prevalent land use across the planning area: lakes, rivers, wetlands, and high water tables can limit development intensity and the geographic availability of areas feasible for materials management facilities. Sandy and loamy soils overlay metamorphic bedrock in the western Marquette and Dickinson counties, while sandstones and karst limestones cover the majority of the south and east. Over a dozen major watersheds and rivers flow into Lakes Michigan and Superior. Nonpoint source pollution and watershed contamination is an expressed concern across the Upper Peninsula.

Many of the existing materials management facilities in the planning area are located just outside of cities within areas zoned for industrial use in proximity to urban areas where the greatest amount of waste is generated. Outside of urban centers, large-scale industrial development is limited due to the modest availability of transportation and municipal services like water, wastewater, and natural gas. Where not otherwise preempted by Part 115, materials management facilities must adhere to local zoning regulations, and are often located in industrial districts or other specifically permitted zones. State and local siting criteria ensures that facilities are not located in sensitive areas (wetlands, floodplains), near homes or water supplies, or in areas with historical significance.

Additional development is likely to continue along existing roadway corridors on non-commercial forested upland and agricultural lands. Increased residential development along waterfronts and in rural areas, with decreasing farm acreage, is expected. Commercial and industrial development will likely be concentrated in currently existing population centers with sufficient utility infrastructure. As low-density rural sprawl continues, the amount of land available for the intensive industrial and light industrial uses meeting the size, setbacks, and regulatory requirements of large facilities may be constrained.

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Additional development of materials management facilities should incorporate regulations and siting requirements that protect from environmental degradation, public health risks, and community impacts.

Waste Materials Generation

The CUPMMPC needs to understand the amounts and types of materials the Planning Area will generate before it can make decisions regarding how to manage waste disposal and diversion. The Committee analyzed the amounts and types of materials that were generated in the past several years during the Materials Management Plan development process. “Generation” means the total amount of all materials that are present in the waste management system. “Disposal” means materials within the system that are ultimately landfilled, while “diversion” encompasses materials that enter other portions of the system like reuse, recycling, composting, secondary processing, and other activities. Generation and diversion data presented in this section should be understood as a baseline for planning estimates and is derived from a combination of modeled generation tools, facility reporting, landfill tonnage data, and available stakeholder reporting. Due to ongoing limitations in regional reporting consistency and interstate material movement, exact diversion and recycling quantities remain subject to refinement as additional data becomes available.

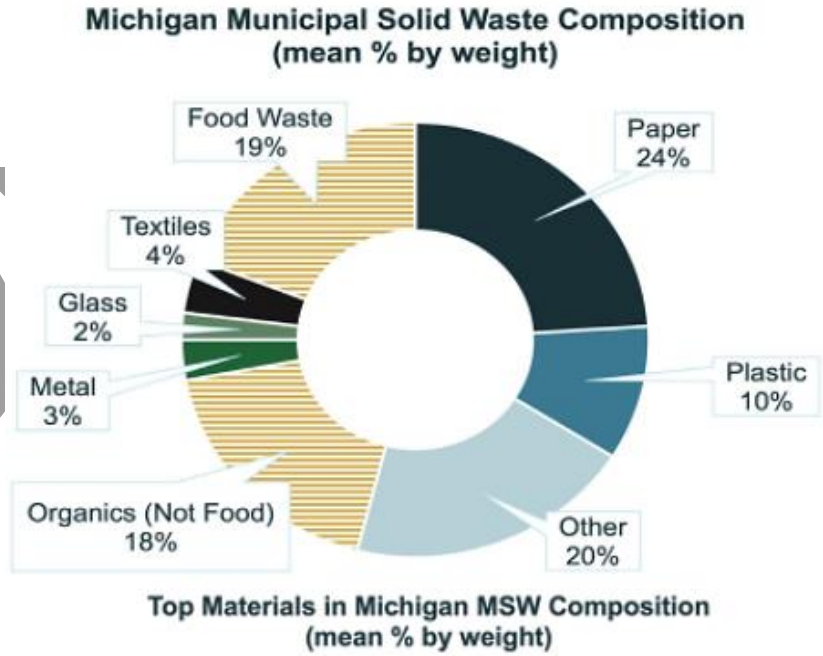
For the purposes of Part 115, municipal solid waste is the primary disposal and diversion priority. "Municipal solid waste" (MSW) means household waste, commercial waste, waste generated by other nonindustrial locations, or waste that has characteristics similar to that generated at a household or commercial business. Generation for specific types of material is detailed in subsequent sections, and aggregate disposal reporting is included in *Appendix C: Waste Characteristics*. EGLE provides a “Materials Generation Tool” that uses characterizations collated by the Environmental Protection Agency to provide an aggregate average composition and estimate of waste generation based on population. From this, the following breakdown can be assumed for the quantity of types of waste present within materials disposed of in the central Upper Peninsula. The tool also estimates that municipal solid waste generation is composed of 60% residential and 40% commercial sources.

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Table 5: *Estimated Materials Generation and Composition* ***Source:*** *Michigan EGLE*		
Materials	**Estimated Generation (tons)**	**Percent of Total Disposal**
Paper and paperboard	34,844.13	23%
Glass	6,333.92	4%
Metals	12,909.71	9%
Plastics	18,442.45	12%
Rubber and Leather	4,731.55	3%
Textiles	8,813.07	6%
Wood	9,357.27	6%
Other Materials	2,690.78	2%
Food Waste	32,637.08	22%
Yard Clippings	18,306.40	12%
Misc. Inorganics	2,101.23	1%
TOTAL	**151,167.60**	**100%**

A further study by the Michigan Sustainable Business Forum[12] developed an average waste characterization of disposal sites across Michigan to estimate that the majority of materials disposed in the state's landfills consist of paper products, food and other organic materials that could be readily diverted. The report found that over 60% of materials currently disposed of may be readily diverted into traditional recycling and organics management systems. These estimates reinforce the potential to

Figure 4: *Michigan Municipal Solid Waste Composition*
Source: *Michigan Sustainable Business Forum*



[12] (2024) 2024 Economic Impact Potential and Characterization of Municipal Solid Waste in Michigan. Michigan Sustainable Business Forum. https://misbf.org/msw/

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divert additional materials traditionally seen as waste for disposal in landfills to a more comprehensive materials management system and circular economy model.

The Materials Generation Tool estimates that approximately 151,000 tons of materials are generated for disposal in the central Upper Peninsula, using the national average of approximately 4.9 pounds of materials generated per person per day. Using the EGLE *Report of Solid Waste Landfilled in Michigan*[13] in fiscal years studied during Plan development, generation for the six-county planning area can be established based on the origin of reported quantities of waste disposed of in intra-region facilities. Reporting details that an average of approximately 106,000 tons of municipal solid waste materials generated were ultimately disposed of within the central Upper Peninsula; approximately 3.4 pounds of materials generated per person per day. However, MSW is representative of approximately 30-40% of total waste disposal within the planning area in a given year; approximately 50% of total materials disposed are industrial wastes, followed by construction and demolition debris, and other types of waste disposal.

Table 6: *Tons of Municipal Solid Waste Disposal by County*
Source: *Michigan EGLE*

County	Generation in tons FY 2023 (% of total)	Generation in tons FY 2024 (% of total)	Generation in tons FY 2025 (% of total)
Alger	10,518.83 (10%)	11,633.00 (11%)	13,867.03 (12%)
Delta	20,948.76 (21%)	20,604.00 (20%)	28,062.80 (24%)
Dickinson	15,817.00 (16%)	17,823.00 (17%)	14,868.00 (13%)
Marquette	37,459.71 (37%)	37,271.50 (36%)	38,673.46 (34%)
Menominee	8,568.93 (8%)	7,436.03 (7%)	7,882.38 (7%)
Schoolcraft	8,063.76 (8%)	7,767.83 (8%)	11,448.62 (10%)
TOTAL	**101,376.99**	**102,535.36**	**114,802.29**

No generated MSW materials were exported to disposal facilities outside of the planning area. Year-to-year discrepencies in the data may be attributed to additional sources of generation, hauling logistics, and changes in reporting mechanisms. In addition to this reporting, approximately 34,000 tons per year of municipal solid waste were imported from Wisconsin facilities for ulimate disposal at facilities within the planning area. The importation of waste from Wisconsin may be due to operational efficiency within vertically integrated haulers and landfill operators resulting in reduced costs for disposal. The State of Wisconsin currently assesses a $13.09 surcharge on tons of solid waste disposed of, while Michigan assesss $0.36 per ton.[14] Tipping fees inclusive of surcharges between U.P. and Wisconsin facilties have been largely comparable over the past several years, leading to an assumption that transportation costs are a primary factor in disposal choice between the two states.

[13] EGLE. (2023, 2024, 2025) Annual Reports of Solid Waste Landfilled in Michigan by Fiscal Year https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/solid-waste-disposal-areas/annual-reports
[14] https://dnr.wisconsin.gov/sites/default/files/topic/Landfills/EnvironmentalFeeSummary.pdf

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Table 7: *Tons of Municipal Solid Waste Imported* ***Source:*** *Michigan EGLE*			
County	**Imported Wastes in tons FY 2023**	**Imported Wastes in tons FY 2024**	**Imported Wastes in tons FY 2025**
Wisconsin to Alger	24,011.00	22,055.00	5,457.00
Wisconsin to Menominee	15,685.44	16,569.52	20,682.42
TOTAL	**39,696.44**	**38,624.52**	**26,139.42**

Identified in this reporting is a gap between the reported tonnage quantity generated in Menominee County and the expected amount, which based on population should be within 10% of comparable generation for Dickinson County. Solid waste reporting from the State of Wisconsin indicates that the estimated volume of gap materials are not being disposed of at Wisconsin facilities. Based on anecdotal reports and estimates, approximately 8,000-10,000 estimated tons of materials generated within Menominee County is transported to facilities in Wisconsin, and then ultimately imported back into the planning area for disposal. Since the majority of Menominee County is served by Green For Life contracted and subscription hauling services, it is assumed that upon reentry to Michigan this material is disposed of at the Green For Life-owned Wood Island Landfill in Alger County. As of FY 2025, Green For Life has slowed delivery of imported materials to Wood Island; reciprocal reporting from Wisconsin was not available during Plan development to confirm whether these materials were retained for disposal within the state. Additional municipal solid waste imported from Wisconsin is assumed to be generated in the northeast Wisconsin border area. Imports to Michigan Environs Landfill in Menominee County is assumed to be composed of WM-contracted and subscription hauling service areas within Wisconsin.

For recycable and divertible organic materials, using the last known broad diversion reporting available (2021-22), approximately 6,100 tons of captured recyclables and 4,596 tons of organic waste were captured within the planning area. This number reflects only known reported quantities, and is expected to be slightly higher than reported amounts. Unreported semi-organized recycling collection from within the planning area is known anecdotally to occur in Alger, Menominee, and Schoolcraft counties. However, at least some portion of these quantities may suffer from the same reporting gap of having been somewhat combined with materials from Wisconsin, and are ultimately transferred to a southeastern Wisconsin Materials Recovery Facility. Quantities for organics diversion were derived from the 2023 update of the EGLE *Gap Analysis*[15] for materials management activities.

In FY 2025, EGLE implemented the reporting requirements for materials management facilities required under the updates to Part 115. Facilities are required to voluntarily register and report using an online system called RETRAC. Where available, these RETRAC reports are used to set the benchmark reporting for other areas of this Plan. Since reporting is voluntary and is facility-based, there is a gap in

[15] *Gap Analysis 2023 [revised March 2024].* Michigan Department of Environment, Great Lakes, and Energy. https://static1.squarespace.com/static/623ba5dc2405f749aa2dc3b1/t/662661bac6a57c7b5b50ead3/1713814592474/2023-Gap-Analysis_March-2024-update.pdf

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known recycling and organics diversion activities and actual reporting. There is also some discrepency in defining the types of material reported. Facility-based reporting does not typically include more detailed county-of-origin data, so some estimation is required. Known gaps in recycling reporting include transfer facilities that export collected recycling to out-of-state processing facilities. Organics reporting is known to be significantly underreported based on the number of yard waste collection sites and annual collection activities, in addition to the amount of materials mixed, composted, and reported used as Alternative Daily Cover for landfill operations.

Table 8: *Tons of Recycling and Organics Generation*
Source: *Michigan EGLE, other sources*

County	Reported 2022 Recycling Tonnage[16]	Reported 2021 Organics Diversion[17]		RETRAC FY2025 Recycling Tonnage[18]	RETRAC FY2025 Organics Diversion[19]
Alger	77	-		-	-
Delta	1,500	-		1,379.8	281.3
Dickinson	429	-		-	1,055.9
Marquette	4,094 tons	-		6,103.4	4,256.8
Menominee	unreported	-		26.7	-
Schoolcraft	unreported	-		14	-
Total	**6,100 tons**	**4,596 tons***		**7,523.9 tons**	**5,594.0 tons**

**Reported in aggregate from facilities within the six-county planning area*

In total, the quantity of reported managed materials being generated (solid wastes, organics, recyclables) within the planning area can be estimated **on annual average to be approximately 122,000 tons.** Deficiencies in reporting are a barrier to more accurate data. Generation for each specific type of material is detailed in subsequent sections, and reporting is included in *Appendix C: Waste Characteristics*. In general, generation of MSW and divertible materials for the residential/commercial sectors is projected to remain steady based on population projections and historic reporting.

The difference between the estimated amount of generation calculated using the EGLE Materials Generation Tool and from available reporting is approximately 29,000 tons of material. Some of this is due to known reporting gaps discussed earlier in this section, but the remaining difference may indicate that Upper Peninsula residents contribute less waste on average compared to statewide reporting. Landfill reporting in the Lower Peninsula includes a higher proportion of commercial generation, and a

[16] 2022 totals as detailed in Marquette SWMA, Delta SWMA, Dickinson SWMA, and EGLE documents and conversations with operators.
[17] *Gap Analysis 2023 [revised March 2024].* Michigan Department of Environment, Great Lakes, and Energy.
[18] Tons estimated using *MRF Annual Facility Reports. Michigan Department of Environment, Great Lakes, and Energy. https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/planning/planning-development-items*
[19] Ibid.

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higher proportion of waste imports from other states and Canada which the U.P. generally lacks in comparison.

Municipal Solid Waste Recycling Rate

The "municipal solid waste recycling rate" means the amount of municipal solid waste recycled or composted, divided by the amount of municipal solid waste recycled, composted, landfilled, or incinerated. This calculation includes tons of disposed materials generated outside of the planning area. During Plan development, a base estimated rate using known reporting and FY 2024 disposal data was used to calculate a FY 2024 recycling rate for the planning area:

(141,159.88 tons of total MSW landfilled + 6,100 tons of recyclables + 4,596 tons of organics) = 151,855.88 tons of total materials managed

The 2024 estimated MSW recycling rate for the planning area would be **7.0%**
(6,100 + 4,596) / 151,855.88 = 0.070

A FY 2025 rate can be calculated using reported landfill disposal, recycling, and organics diversion data available through EGLE. This reporting is assumed to only encompass traditional material types and programming known to be available within the planning area. Additional diversion data from outside sources has not been included in the calculation at this time. (140,981.71 tons of MSW landfilled + 7,523.9 tons of recyclables + 5,594.0 tons of organics) =
154,099.61 tons of total materials managed

The FY 2025 reported MSW recycling rate for the planning area would be **8.5%**
(7523.9 + 5594.0) / 154,099.61 = 0.085

Based on FY 2025 data, the reported municipal solid waste recycling rate using materials generated in the planning area only (not including outside disposal) is approximately **9.3%.** For both solid waste generation and recycling and diversion, the difference between estimates created during Plan development and the first year of EGLE-supplied reporting is approximately 20%. This indicates a weakness and gap in reporting metrics, participation, and sourcing that can be addressed in part through this Plan's goals and mechanisms. These figures are preliminary planning benchmarks rather than precise performance measurements.

Achieving a 45% Recycling Rate

The central Upper Peninsula currently lacks enough diversion infrastructure, reporting consistency, and participation levels to approach statewide goals without major structural changes. Michigan has steadily increased its statewide recycling rate from 14.25% before 2019 to 23% in 2023, and 26% in 2025. Under the materials management updates to Part 115, Michigan is pursuing a 30% recycling rate by 2029, and an ultimate goal of 45%. The Upper Peninsula has historically lagged behind downstate communities in access to recycling programs and participation, however, the materials management

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planning process represents an opportunity to continue to increase access convenience to diversion activities that can support greater goals.

To achieve the Part 115 statewide goal of a 45% recycling rate, approximately 19,400 tons of conventional recyclables, 5,600 tons of other recyclables, and 17,500 tons of organics diversion are estimated to need capture in the planning area.[20] Beyond investing in infrastructure, education, and recycling programming, innovation and market development will be essential to maintain growth in the recycling rate into the future. The CUPMMPC also has the opportunity to include other types of diversion in calculating an additional diversion rate for a wider variety of materials including textiles, batteries, construction and demolition debris and other types of waste. For the purposes of setting a benchmark for this Plan, these are not largely incorporated into the document; subsequent sections break down various issues and opportunities related to a minimum level of solid waste, recycling, and organics materials management.



[20] *Gap Analysis 2025.* Michigan Department of Environment, Great Lakes, and Energy. https://static1.squarespace.com/static/623ba5dc2405f749aa2dc3b1/t/6a0369800df3750fb9fb0dad/1778608512270/00_MI+Gap+Analysis+2025-FINAL+May+12.pdf

SOLID WASTE DISPOSAL

Introduction

The shift to materials management emphasizes the minimization of the use of landfilling and municipal solid waste incineration for the disposal of wastes. Part 115 contains the primary regulations and responsibilities of counties, local governments, and businesses charged with planning and implementing waste management practices. Nine of Michigan's 67 reporting landfills are within the six-county planning area. This is significantly reduced from the initial attempts at coordinated solid waste management plans in the 1970s, when more than 75 garbage and rubbish dump sites managed by local units of government were identified[21].

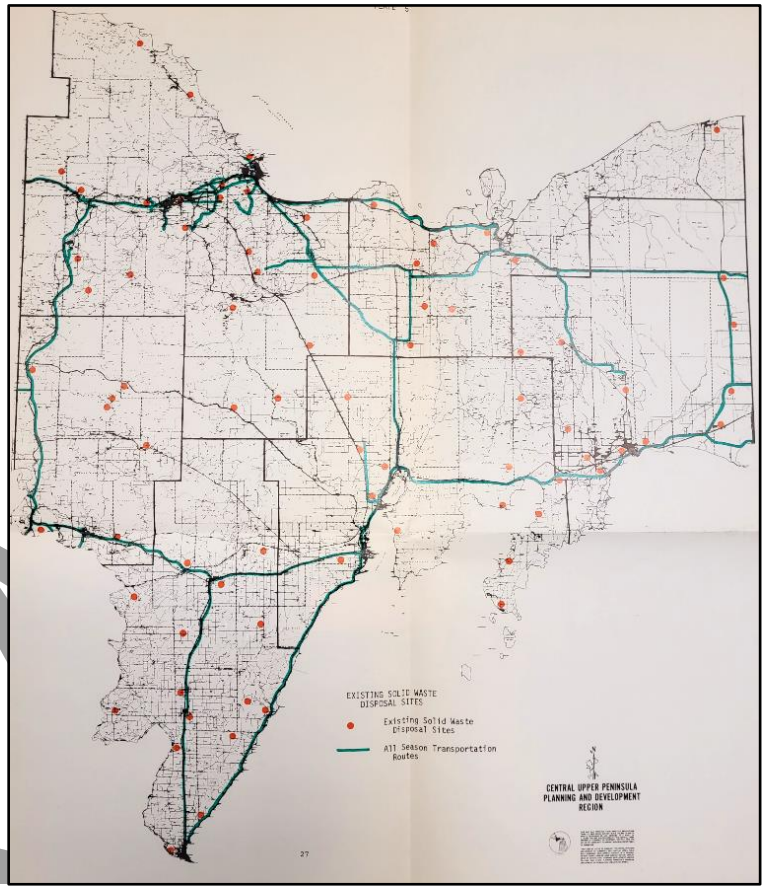


Figure 5: *Locations of Rubbish Dumps and Disposal Sites, Circa 1973*
Source: *CUPPAD*

Since the implementation of solid waste regulations and modern landfill construction and siting practices, the number of landfills has been reduced and their long-term use has been prioritized. Previous solid waste planning emphasized remaining landfill capacity to ensure that the state had enough land area to manage waste disposal into the future. Combined with low waste disposal fees, the preferred alternative for waste management in county solid waste management plans was the continued landfilling of materials, with efforts for recycling and composting managed as secondary activities.

Landfills are separated into two types: Type II Landfills primarily receive municipal solid waste from residential and commercial customers, and Type III Landfills receive non-household industrial, construction and demolition, and other wastes. Five Type II municipal solid waste landfills are present in the six-county planning area. Three of the four Type III landfills are primarily for the disposal of the byproducts of paper production at local paper mills. While landfilling waste materials is represented as

[21] (1973) Central Upper Peninsula Regional Solid Waste Management Plan. Central Upper Peninsula Planning and Development Region.

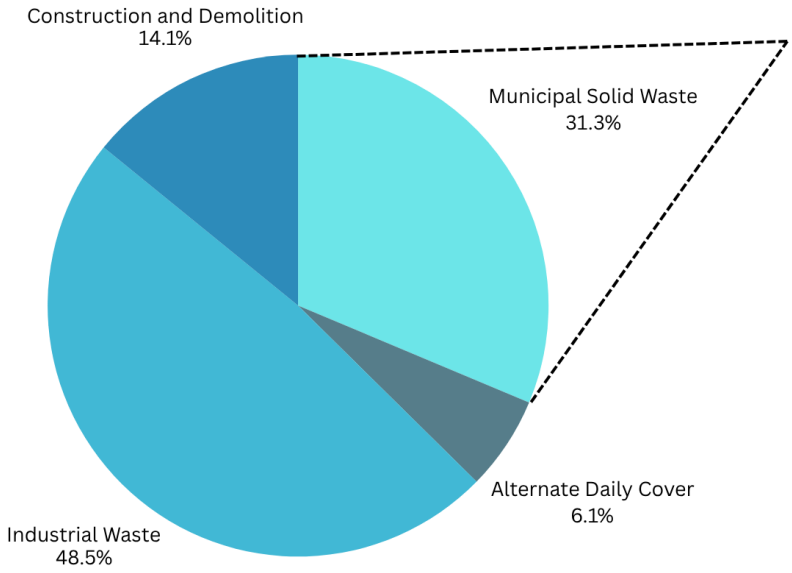
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the least preferred option in the State's waste disposal hierarchy, these facilities are anticipated to remain in operation for the foreseeable future, and no new facilities are anticipated in the planning area. In a transition to increased activities under a materials management system, the existing solid waste management system is anticipated to continue in form and function as long as operational realities are feasible.

System Overview

Based on EGLE's *Report of Solid Waste Landfilled in Michigan*[22], the central U.P. has generated approximately 428,000 tons of waste on average disposed of in landfills from FY 2023-2025. The majority of that waste represents the byproduct of industrial processes, while municipal solid waste represents 30-40% of an average year's total disposal. Approximately 106,000 tons of municipal solid waste is generated on average within the planning area, with 141,000 tons of total disposal. This number is an approximation due to reporting where materials generated within Menominee County are exported into Wisconsin, and then ultimately turn around and are imported for disposal within the region. The majority of the state's Wisconsin imports are received by central U.P. landfills, while imports from Canada and other states are mostly received by downstate facilities. Year-to-year reporting also detailed that low amounts of waste have been imported from other U.P. counties outside of the planning area or Canada in preceding years. Detailed reporting on various types of waste disposal derived from EGLE's annual reporting is included in *Appendix C: Waste Characteristics*.

Figure 6: *Total Waste Generation by Type, FY 2024*
Source: *EGLE*



County	Tons Disposed FY24
Alger	11,633
Delta	20,604
Dickinson	17,823
Marquette	37,271
Menominee*	7,436
Schoolcraft	7,767
Wisconsin*	38,624
Total	**141,160 tons**

*Some portion of Wisconsin materials are Menominee materials

[22] EGLE. (various years) Annual Reports of Solid Waste Landfilled in Michigan by Fiscal Year https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/solid-waste-disposal-areas/annual-reports

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Solid Waste Disposal Areas

Engineered Type II landfills are the principal method of waste disposal used in United States. The technologies used for these systems have existed for many years, though increased regulations have resulted in additional processing requirements and infrastructure to mitigate environmental contamination concerns. Landfill capacity is an estimate of the volume of air space remaining to be filled with waste under a facility's design and operational parameters. Landfill cells are permitted and constructed in phases across their lifetime, and in general only one or more cells actively receive waste at a given time. Remaining disposal capacity is the permitted total capacity minus usage, plus the remaining volume of area that is permitted to be opened or constructed as additional landfill space.[23] Below is a table of EGLE estimated capacity for landfills within the planning area based on FY 2025 reporting. The "facility-based" projected years of remaining capacity is an internal estimate based on the potential to expand a landfill beyond its currently permitted limits and on current property. The "EGLE-based" metric is the projected years of capacity remaining on the facility's current construction permit.

Table 9: *Central Upper Peninsula Landfill* Facility Capacity and Years Remaining[24]
(volume in cubic yards; FY 2025 data)
Source: *EGLE*

Facility Name	Remaining Capacity	Capacity Used in FY 2024	Projected Years of Remaining Capacity (facility-based)	Calculated Years of Remaining Capacity (EGLE-based)	% MSW as a proportion of total disposal	% of MSW in region collected in FY2025
Delta Solid Waste Management Authority	195,030	76,927	105	3	81.37%	25.26%
Hiawatha Shores Landfill	1,554,332	28,366	64	55	55.95%	4.77%
Marquette County Solid Waste Management Authority	4,778,082	99,500	55	48	51.64%	27.43%
Michigan Environs, Inc.	1,705,161	44,337	28	36	36.1%	18.28%
Wood Island Landfill	1,524,513	49,639	36	31	86.83%	24.23%
TOTAL	**9,757,118**	**298,769**	**57.6 years (avg.)**	**42.6 years (avg.)**		

From these reports, the five MSW-receiving landfills in the planning area have the estimated capacity to continue to accept municipal solid wastes generated for the foreseeable future. An immediate need for

[23] Section 11512(24) of Part 115
[24] *Report of Solid Waste Landfilled in Michigan, Fiscal Year 2025.*

additional disposal capacity is not identified as a critical constraint to the planning area at this time. However, municipal solid waste disposal only represents 30% of total wastes disposed of in Type II and Type III landfills in the region in FY 2025. Industrial wastes from large manufacturing entities, particularly paper mills, typically represent half of total disposal in a given year. In addition, construction and demolition debris and other types of wastes are reported separately from MSW disposal. The type and tonnages of disposed wastes each year can affect the remaining disposal capacity considerably. As an example, in 2024 the Marquette County Landfill disposed of roughly 40% more waste in total than the year prior; while MSW disposal maintained its annual average, the majority of the excess materials were debris from the demolition of the old Marquette General Hospital.

Whether or not these landfills will continue to be sufficient for the planning area in the coming years will depend on a number of variables that affect the logistical and operational processes of the solid waste industry. Some of these variables include:

- The "evolving ton", which refers to the shifting nature of the characterization of MSW over time, with a reduction in heavier materials like glass and steel and an increase in lighter materials like plastics and aluminum. The characteristics are related to modernized manufacturing methods, regulations, and consumer behavior, which have resulted lower-weight-but-similar-volume materials disposed of.
- The amount of material that is separated from the total of solid waste and diverted to be used in other processes (recycling, organics diversion, other waste diversion). As diversion increases, the total amount of solid waste should decrease, leading to longer operational lifespans for existing facilities.
- The actual volume of waste that will reach a landfill. Three counties currently use methods of solid waste flow control which limit the areas where generated waste is acceptable for disposal. Other counties rely on operational agreements to dispose of waste outside of the county it was generated in. Changes to enforceable mechanisms or logistics used by service providers to move and ultimately dispose of waste could cause a capacity deficit.
- Realized community population growth or loss in future years, which will affect volume, waste composition, and cost to provide services.
- The ability of facilities, businesses, and residents to support the costs for waste management and disposal options.
- The introduction of new technologies or manufacturing processes that could affect a community's ability to dispose of or divert additional amounts of materials. It would not be advisable to introduce alternative disposal methods until such time as the available facilities no longer serve the long-term interests of the planning area.

As of FY 2025, Michigan landfills as a statewide average have approximately 23 years of remaining disposal capacity based on current disposal rates and permitted capacity.[25] EGLE estimates this capacity based on the permitted, used, and remaining airspace provided in engineering and reporting documents submitted to the Department. For county and regional solid waste planning, local landfill capacity should review unused capacity in currently constructed cells (whether there is sufficient space before a new cell needs to be constructed), and the approved expansion capacity that has been

[25] *Report of Solid Waste Landfilled in Michigan, Fiscal Year 2025*.

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permitted, but not yet built (how many cells could be constructed on a permitted site). The practical operating life of a landfill is affected by market conditions, waste disposal rates, and the effectiveness of diversion programs; current landfill capacity is a snapshot at current and does not account for future changes which may result in extensions to landfill life. While central UP landfills have above average capacity at current, the priority should be to continue to expand diversion of materials from disposal to ensure local landfill capacity is extended as much as feasibly possible.

With the updates to Part 115, the goal of the State is to no longer approve applications for new Type II landfill construction that are not contiguous to an already permitted landfill.[26] To site a new facility, a County Board of Commissioners would be required to petition EGLE for approval of a new landfill, demonstrate that all material utilization options have been exhausted, and receive such approval from EGLE. It is assumed then, under the current regulations, that the currently active landfills in the central U.P. planning area will remain the only viable options for disposal, and that additional pressures will be put on public and private disposal facilities to provide capacity for the disposal of solid wastes generated from within and without of the region.

The current landfills in the planning area will someday no longer have capacity to accept waste materials. Current and post-closure landfills have the potential to affect water quality, through ongoing activity and potential release, or post-closure modification. Use of active landfills will be expected to continue and should be considered in pre-planning, site identification, construction, and incorporated into municipal planning documents and ordinances to ensure health, safety, and welfare. Long-range planning should consider monitoring, environmental compliance, and what the use of the site will be once the landfill use is ended. Reuse of old landfill sites should be limited to specific non-impactful activities; there may exist opportunities for energy generation through passive means (wind and solar), or potential recreational activities (parks, ski slopes, trail systems) that incorporate sites.

An example of limited reuse of a former landfill site is the 30-acre Marquette City Dump. This site was closed in 1987 and capped with a liner and soil. The large hill is now an open meadow surrounded by trees, which offers an overlook to the east towards Lake Superior. The site is also the home to a segment of Pioneer Loop Trail of the Noquemanon Trail Network. The trail climbs several switchbacks up to the overlook and is used by hikers and off-road bicyclists to connect to the larger NTN trails of south Marquette. The former Gladstone City Dump is maintained by the city as its compost and aggregate materials storage site, and hosts recreational trails for active and off-road vehicle use. These uses are viable examples of post-closure activities that support the outdoor recreation economy and quality of life for residents in the central Upper Peninsula. Similar post-closure uses should be included in long-range planning whenever feasible.

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[26] MCL 324.11509(9)

Financial Conditions

Landfills assess tipping fees for the type and tonnage of waste they receive. The rising overhead costs for construction, operation, closure, and post-closure activities have increased tipping fees at landfills across the state, and in the Upper Peninsula significantly. Among landfills throughout Michigan, the average landfill tipping fee was $42.77 in 2020[27]. However, in the Central Upper Peninsula, the average landfill tipping fee is $120.80 as of 2026[28]. Privately owned landfills across the Upper Peninsula have some of the highest tipping fees in the state, exceeding $200/ton, indicating that there is a major regional disadvantage in the share of solid waste disposal costs when compared to downstate residents.

Through public frameworks, Delta and Marquette County both incentivize and control the flow of waste to their own facilities through flow control mechanisms, which prohibit wastes from being imported or exported to other areas. These result in below area average tipping fees of $80 and $98 per ton, respectively.[29] Public service fee programs like these are designed to be revenue neutral, meaning that the fees collected from users for services cover the cost of providing that service without generating a profit or requiring additional tax subsidies. In addition to operations, other financial commitments, including bonding for construction, perpetual care funds, and increasing capital costs, influence the costs of solid waste disposal, which are then passed down to the consumer by raising fees.

Publicly owned-disposal facilities secure their capacity for accepting waste through flow control mechanisms. Flow control allows local governments to designate public facilities where MSW is taken for processing, treatment, or disposal. The continued disposal of a consistent volume of solid waste is critical to their design, operational efficiency, and costs. Designated facilities may then hold monopolies on materials generated within their jurisdiction, and can better plan for the long-term capacity for disposal and diversion. Delta, Dickinson, and Marquette County maintain flow control mechanisms (by police power ordinance or intergovernmental agreements) requiring that all wastes generated within their jurisdiction be delivered to their facilities. Delta County also allows for some importation of waste for disposal from outside the county, while Marquette operationally does not.

Table 10: *Central Upper Peninsula Materials Management Authorities*
Source: *CUPPAD*

Authority Name	Year Created	Enabling Legislation
Delta County Solid Waste Management Authority	1984	Act 185 of 1957
Dickinson County Solid Waste Management Authority	1992	Act 233 of 1955
Marquette County Solid Waste Management Authority	1988	Act 233 of 1955
West Marquette County Sanitation Authority	1974	Act 179 of 1947

[27] Recycling Infrastructure and Market Opportunities Map. Environmental Protection Agency (accessed 1/27/25) https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=fefb46fd31a14b80a836bd0bd4d788e2
[28] Survey conducted by Marquette County Solid Waste Management Authority, 2026
[29] As of July 2026.

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Privately owned disposal facilities maintain their viability by creating revenue in excess of the cost of operation. The operational realities for private businesses necessitate that they continue to receive a sufficient amount of waste. Since the amount of waste of generation within the planning area is expected to remain flat or decline in the near future, these facilities may rely on the additional importation of waste from outside sources. The importation of additional waste may reduce the overall capacity of facilities to provide for the planning area's needs. Alternatively, the larger flows of the waste disposal market may provide financial incentives for the exportation of waste to facilities outside of the planning area.

In either instance, interruption of service or closure of privately owned landfills will result in increased costs in waste disposal due to increased fuel consumption and travel time as the distance from generators to disposal facilities is increased. The closure of landfills and consolidation of landfill ownership has limited the available options for solid waste disposal and increased costs. Private entities providing vertically integrated collection, transportation, and disposal infrastructure have created internal incentives that raise the cost for additional providers to enter or maintain their position in the market, as well as the cost for residents to dispose of materials directly at a disposal site.

Solid Waste Collection Services and Transportation Infrastructure

An inventory [see *Appendix D: Residential Services]* of municipal hauling contracts and stakeholder assessments indicates that nearly all households in the Central Upper Peninsula have access to curbside solid waste collection through municipality operated, contracted, or private subscription services. Those remaining households without curbside service utilize drop-off services provided by their municipality or by pay-as-you-throw access to drop-off infrastructure. Outside of more urban communities, rural areas are largely served by private hauling companies, and the availability of curbside services depends on proximity to all-season public roads and household density. Private market availability is based on proximity to established transportation routes, leaving gaps as distance to the nearest trunkline increases. In places away from trunklines, service is less likely to be available, or is coordinated to have a secondary collection point along an all-season designated road. All-season roads are more likely to be paved, maintained, and have available room for haulers to turn around, especially during the winter months. This means there are areas where "curbside" service may be available but requires a household to collect and transport garbage or carts to a second location for collection.

Where curbside collection service is not available, there are some individual residents that drive considerable (up to 30 miles or more) distance to dispose of waste or participate in recycling at the nearest permanent drop-off. Open responses to surveys conducted in the past several years with waste collection questions identified that older respondents were less likely to support service that requires the transportation of trash or carts to secondary pickup locations, particularly in winter months. In rural areas, this means that there will likely continue to be gaps in curbside collection infrastructure just

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based on the practical requirements of providing service. This reduced accessibility increases the cost burden on residents to store and transport their own waste materials.

Only 4 of the 12 cities of the region still offer municipal waste and/or recycling management services; the majority have a contracted third-party hauler and utilize utility billing to provide service efficiency to households. Two townships offer municipal waste services in built-up residential areas, but do not serve the entirety of the residents. Through the years, a variety of difficulties have contributed to a reduction in municipally-run hauling and drop-off programs. Cities across the region have ended these operations through their public works departments and handed responsibilities to private companies operating under their own procedures. Where municipal ordinances are in place, many reflect out-of-date state laws and definitions because they have not been reviewed regularly by legislative bodies. A lack of education at the local legislative level is also apparent in regard to what actions municipalities can take regarding regulatory language or hauling contract service provisions.

On average, 2-3 private companies either operate on the open market or as municipality-contracted residential haulers in each county. This can lead to significant overlap in routes and a diversity in the level of service provided; in one particular area outside of the city of Escanaba, three haulers concurrently service a residential area of less than 4 square miles. Commercial collection is typically performed by private haulers. Some haulers offer commercial hauling services in counties where they do not have regular residential routes, leading to areas where four or more commercial haulers are operating concurrently. In large areas of some counties, particularly northeastern Delta and eastern Alger and Schoolcraft counties there is only a single hauler operating curbside waste pickup with no competition. There are few, if any, drop-off locations for solid waste and/or recyclable materials in these areas.

Solid Waste Processing and Transfer Facilities are colloquially “transfer stations” that collect drop-off or hauled materials at an intermediate site before their ultimate transportation for disposal or processing [see *Appendix A: Materials Management Facility Inventory* for an inventory of facilities]. Two types of transfer stations are generally present in the region: those that receive waste primarily from mechanically unloaded vehicles, and those that receive waste primarily non-mechanically or by hand. Mechanical transfer stations generally include those with compactors or large equipment designed to collect a large amount of materials from haulers or other collection infrastructure in one location before transferring them by tractor-trailer to disposal and/or processing sites. Non-mechanical transfer stations come in a variety of sizes or formats, but are generally a placement of containers allowing for the collection of household wastes generated from multiple sources.

At least 12 municipalities operate a transfer station or drop-off site that allows for the collection of residential solid waste, and may or may not incorporate space for recycling, organics, or other types of diversion. These may be as simple as a collection of dumpsters that are open to residents on certain days of the week, to larger sites including compaction equipment and source-separation collection containers. There are additional sites where a municipality may provide a dumpster or drop-off for seasonal residents or specific types of materials like glass or yard waste. In five of the six counties (Dickinson as exception) residents can drop solid waste and recycling at publicly-accessible landfills or

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landfill-adjacent facilities. The region's rural nature can mean that the nearest drop-off is across county lines, leaving non-residents unable to participate or having to pay a premium.

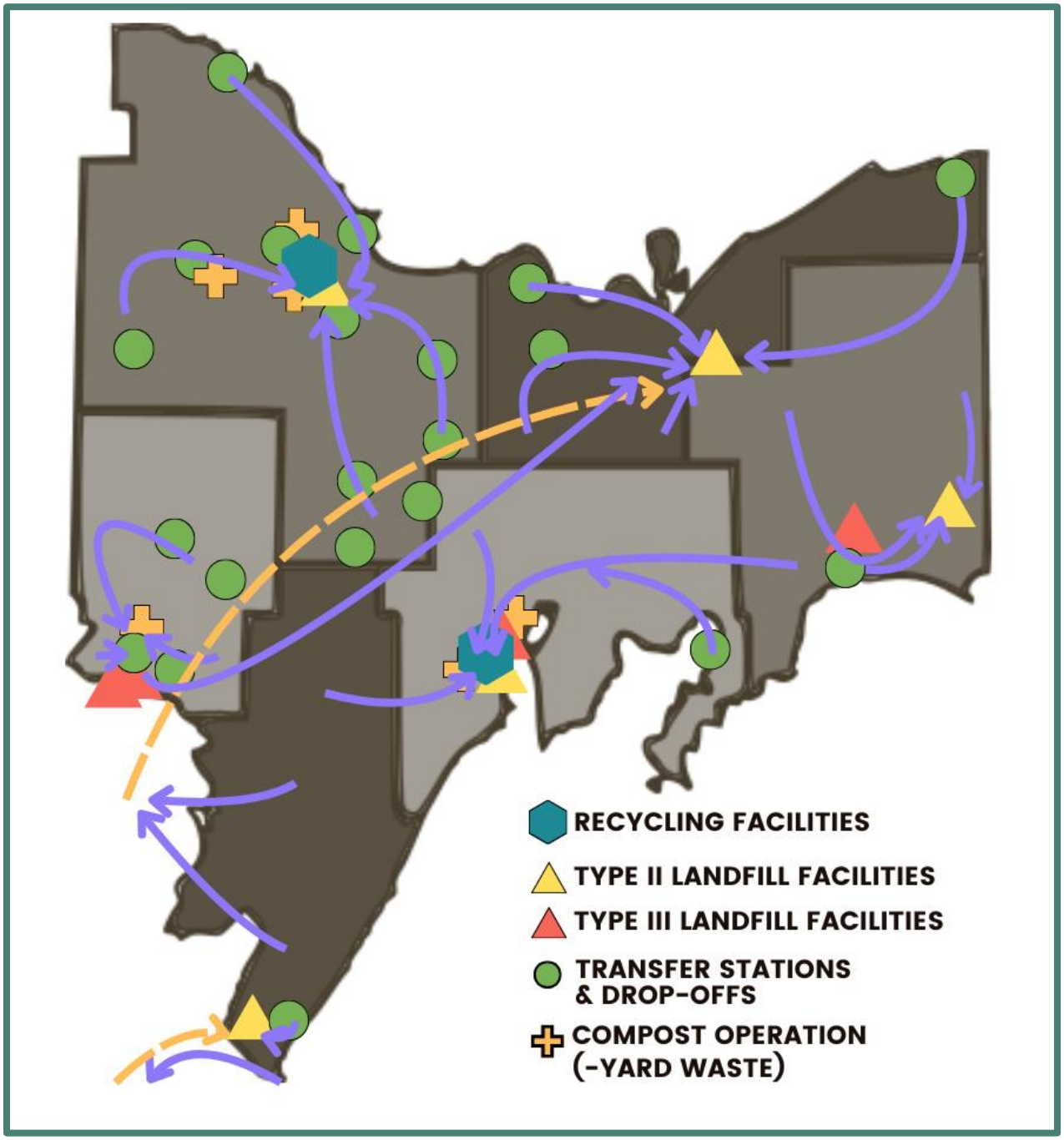
Private entities providing collection, transportation, and disposal infrastructure have created internal incentives that raise the cost for additional haulers to enter or maintain their position in the market. A lack of additional haulers in the rural areas creates little incentive for competition, and a need to ensure continued availability of solid waste collection service for residents at an affordable rate. At the same time, there may be haulers not interested at present in expanding their operations to include recycling services where a municipality has not first solicited for the service, and where they do not currently have a waste pickup contract already in place. Using the same collection vehicles and routes allows the hauler to increase efficiency and economy of scale, which results in lower service costs to residents. From the perspective of private haulers, each would offer additional recycling services if enough residents desired the service and would pay the service costs.

Transportation cost is seen as a large barrier to Upper Peninsula materials management coordination, both in the lack of municipal infrastructure and vehicles to accommodate transporting materials, and the cost associated with private market collection and transportation. This difficulty has been evident in other local EGLE-assisted waste diversion programs (e-waste, tires), as the distance to processing and secondary market facilities can be a deterrent to contracting with service providers. The high seasonal home vacancy of some areas of the region also inhibits regular collection and leads to irregular waste volumes, and several facilities operate under reduced services or hours through the winter months.

Figure 7 is a visual representation of the major logistics of materials management throughout the planning area. In general solid wastes collected by curbside haulers and at transfer stations are moved to centralized disposal sites (purple arrows). Some materials are exported from the state, while others may leave and be re-imported for ultimate disposal (gold arrows). Facilities are dispersed, but the majority of active sites are in proximity to areas of population.

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Figure 7: *Central Upper Peninsula Materials Management Facilities and Waste Flows*
Source: *CUPPAD*



Gap Analysis: Evaluation of Deficiencies and Problems with Solid Waste Management in the Planning Area

Despite a strong foundation of waste management progress in the central Upper Peninsula over the past 50-plus years, several gaps emerge when comparing the planning area's current systems to what Part 115 expects for a forward-looking Materials Management Plan. A delicate balance exists between the amount of solid waste generated, transported, and disposed; the revenues needed to operate facilities and programs; the preservation of disposal capacity; and the minimization of environmental risk.

The key issues in the central Upper Peninsula regarding solid waste management are:

- Heavy reliance on landfilling due to a lack of infrastructure and program options available to support participation in an alternative system.
- Higher disposal costs relative to the State average due to constrained market competition and high transportation costs.
- Present inefficiencies in logistics, costs, and standardized regulations that are exacerbated in areas with cross-border waste management.
- Financial dependence of private facilities on importing waste from other counties and outside of the planning area, leading to reduced long-term capacity.
- Limited competition in hauling markets that limit residents' options for services.
- Service gaps in low-density rural areas that prohibit the expansion of curbside collection.
- Local governments may be wary of using means that will affect the level of current service provision or impact residents' utility and tax burdens.

The Materials Management Planning Committee reviewed and discussed various scenarios and options for waste disposal over the creation of the Materials Management Plan. In general, the preferred alternative is the continued operation of existing landfills for solid wastes generated and disposed of within the planning area. Acceptance of wastes from other counties in or outside of the planning area will be at the determination of the accepting facility, with consideration for regulatory or operational mechanisms in place. For counties with public facilities, the importation of additional solid waste from other counties is recognized to decrease the capacity of their facilities and introduce additional cost and environmental risk.

The current system is stable and functional, but depends heavily on volume (waste tonnage) to remain financially viable, and is not aligned with long-term materials management goals. An ultimate goal for materials management would be a reduction in the amount sent for final disposal through volume reduction techniques, waste diversion, and materials recovery programs. However, as diversion of additional materials becomes more prevalent, it is likely that solid waste disposal costs will rise to make up for the reduction in volume. With the region already experiencing higher than average disposal costs, market pressure may influence the closure or consolidation of existing private facilities. This would put immediate stress on the remaining facilities to provide additional capacity, and rural service costs would likely continue to rise based on transportation costs to viable disposal sites.

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Increased recycling and organics diversion would increase the long-term sustainability of the current system by increasing landfill lifespan and reducing capital costs. Transitioning to a diversion-based system will require intentional restructuring of policy and investments. Regional coordination in shared infrastructure or contractual agreements, and policy tools like flow control, standardize service standards, and similar pricing structures will be important to maintain equitable service costs across the planning area. Further investment in rural access to curbside transfer stations and drop-off sites in underserved areas with incorporation of diversion infrastructure would create a more resilient materials collection and transportation system and supports equity in service access.

To achieve long-term materials management goals, the system must adapt to be more resilient by redesigning funding models to support equitable access to waste diversion activities, and directly integrate those activities into the existing logistics network of the solid waste system. Costs are likely to increase under most scenarios, so it will be important to continue education and outreach to local government leaders and residents to explain options and provide guidance for service delivery. Rural equity in equivalent access to hauling and collection systems may be difficult to solve without some public-sector coordination or intervention. This may be implemented through support for infrastructure (investment in rural transfer sites, collection carts) or common regulatory frameworks (hauler licensing, standard contract language, mandatory service) that ensure service delivery and may increase economies of scale.

For a rural region like the central Upper Peninsula, integrating recycling and organics diversion into the existing solid waste management system rather than trying to build entirely separate systems is the most financially realistic pathway to long-term diversion growth. Therefore, diversion should be integrated in proximity to landfill operations and established hauling systems instead of treating landfills and haulers as separate entities. There are advantages in using the existing infrastructure in place to coordinate additional diversion efforts and reduce capital burden. The system may be able to jumpstart diversion by adding surcharges for diversion to existing landfill tipping fees; while this does not reduce the burden on residents to fund additional activities, such a mechanism would use the existing system to fund its own reinvestment. This would support the existing facilities in transitioning away from using waste disposal volume to solely fund disposal, and align with the benefits of extending landfill capacity and deferring capital costs for expansion.

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RECYCLING

Introduction

In 2023, Michigan's Part 115 was expanded from a focus on solid waste management, to a broader spectrum of materials management including recycling and organics waste diversion. While recycling activities have been in place in some central U.P. municipalities for several decades, the State's goals and this Materials Management Plan envision a more complementary and accessible system that provides additional opportunities to divert materials from landfill disposal. Part 115 broadly defines "recyclable materials" as metals, plastics, paper, glass, rubber, textiles, wood waste, food waste, yard clippings, and other materials that may be recycled or composted. Many local recycling programs already in place accept many of these materials, however, gaps remain in education, collection, and processing capacity to expand upon the current system. For the purposes of the following sections, recyclables and organics are treated as separate types of materials.

Increasing recycling participation and capture in the region is challenged by low population density, transportation logistics, limited infrastructure, and inconsistent access to services across rural communities. Local and regional experience in investment in collection and processing capacity creates opportunities to increase the recovery of recycable materials by using the foundations already in place. The central Upper Peninsula requires integrated, regionally coordinated materials management systems because rural geography and transportation economics make traditional curbside approaches difficult to replicate. Without this investment, the region will continue to see siloed efforts and operational inefficiencies that will impede growth and limit participation.

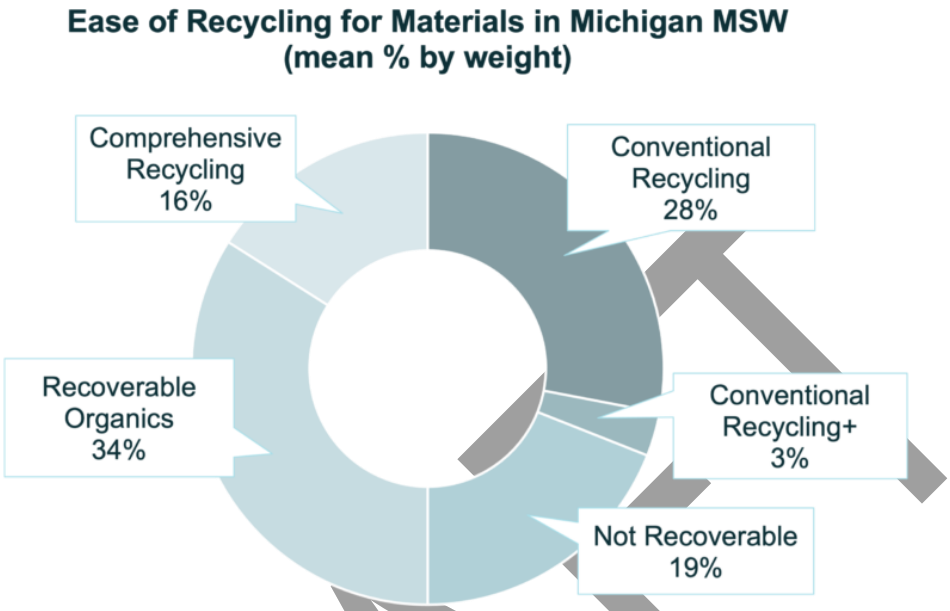
Generation

Waste characterization studies of municipal solid waste disposal in Michigan by Grand Valley State University and the Michigan Sustainable Business Forum[30] in 2016 and 2024 found that approximately one-third of disposed materials could be recycled in categories described as "conventional recycling" and "conventional recycling +". Conventional recyclables (paper, cardboard, glass, plastic bottles/tubs, and metal cans) could be captured in typical recycling programs and with the available processing infrastructure currently present. In addition, another third of materials could be diverted from landfilling as "recoverable organics" by creating processing capacity through composting facilities or other means.

[30] (2024). Economic Impact Potential and Characterization of Municipal Solid Waste in Michigan. Michigan Sustainable Business Forum.

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Figure 8: *Michigan MSW Mean Composition*
Source: *Michigan Sustainable Business Forum*



Using these estimates, and extrapolating on reported disposal data and diversion within the central Upper Peninsula indicates a potential of approximately 37,820 tons of conventional recyclables and 41,480 tons of organic waste that could be expected to exist within the planning area to be captured using current means. An additional 19,520 tons of comprehensive recycling materials could be expected to be present as well, which could be captured with additional infrastructure or program support.

At present, Part 175 of the Natural Resources and Environmental Protection Act requires recycling establishments to report on the collection of glass, paper and paper products, metals, textiles, and other single stream recyclables. In FY 2024, EGLE reported that recycling establishments reporting under Part 175 collected 633,827.84 tons of materials.[31] The reported recyclables captured in the central Upper Peninsula represent approximately 1.1% of the statewide total. EGLE's 2024 Gap Analysis estimates that approximately 2,600 tons of bottle deposit bill materials are generated annually in the central Upper Peninsula; however, these materials are not typically counted in local level recycling reporting.

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[31] (2025) FY 2024 Report on Part 175, Recycling Reporting. EGLE. https://www.michigan.gov/egle/about/organization/materials-management/recycling/part-175-michigan-recycling-reporting

Figure 9: *FY 2024 Part 175 Recycables Reporting*
Source: *EGLE*

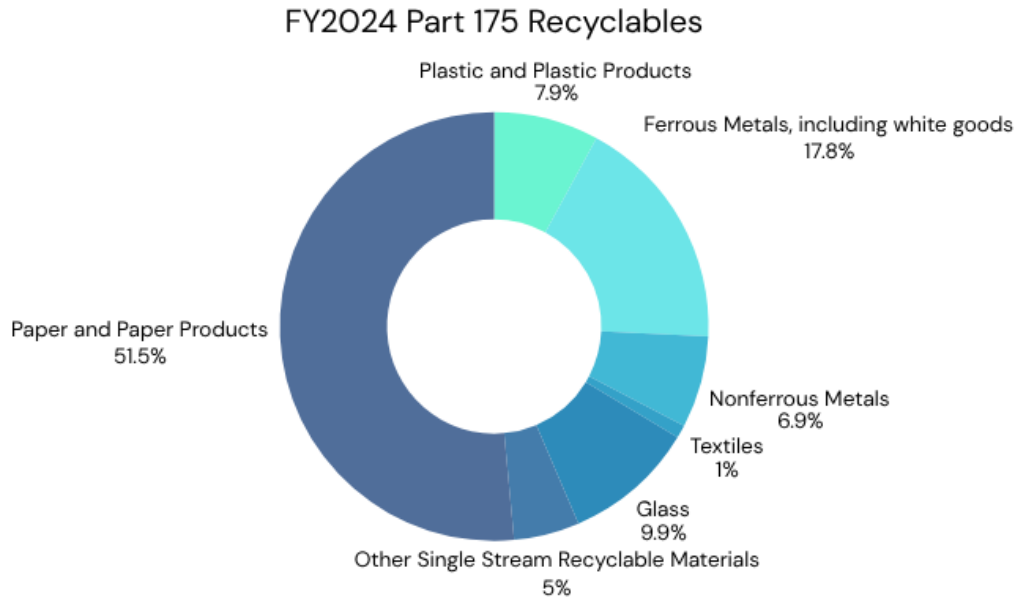


Table 11: Feasibility of Material Capture
Source: CUPPAD

Materials	Current Feasibility of Capture	Infrastructure Expansion Need
Paper and paperboard	Present in most current programs	Collection capacity
Glass	Present in some current programs	Processing capacity and end markets
Metals	Present, additional options available	Existing
Plastics	Present in most current programs	Collection capacity
Rubber and Leather	Not present in current programs	Collection, processing, and end markets
Textiles	Not present in current programs, additional options available	Collection, processing and end markets
Wood	Present in other industry capacities	Processing capacity
Food Waste	Present in few programs	Collection and processing capacity
Yard Clippings	Present in few programs	Collection and processing capacity

Local Recycling Reporting

The lack of local reporting on recycling and diversion activities in the past makes estimating and documenting recycling and organics diversion rates difficult for the central Upper Peninsula. Data gaps, voluntary reporting, unreported diversion, and interstate movement complicate data collection. Throughout the development of this Plan, voluntary and anecdotal reporting was used to make estimates and assumption on the current level of diversion activities. Beginning in FY 2025, voluntary reporting by facility type required to be implemented by Part 115 became available. Even with this

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method accessible, some known facilities within the area either declined to participate, or reported materials that were ultimately transferred to other area facilities. While the central system made reportable volume easier to collate, inconsistent reporting methodologies and program requirements still create limitations.

Analyzing FY 2025 reporting in the State's RETRAC system and available local facility reporting, approximately 7,523.9 tons of recycable materials were captured within the planning area. The majority of this reporting comes from the Marquette County Solid Waste Management Authority and the Delta County Solid Waste Management Authority. This reporting is additionally complicated by the fact that Delta contracts with Marquette for additional materials processing for some types of materials. Privately-owned facilities and those exempt from other Part 115 regulations are not required to report their activities. A stronger framework for reporting and more consistent methodology at both the state and local levels would increase confidence in the area's recycling and diversion rates.

Table 12: FY 2025 Recycling Facilities Reporting
Source: EGLE
(volume in tons; FY 2025 data from RETRAC)[32]

Facility Name	Total Tons Recycled
Delta Solid Waste Management Authority	1,408.0
Marquette County Solid Waste Management Authority	6,103.4*
TOTAL	**7,511.4 tons**

*Less 563 tons received by DSWMA and shipped to MCSWMA

In Marquette County, the Marquette County Solid Waste Management Authority maintains recycling rates by municipality, under a hauler licensing mechanism that is used to bill municipalities for solid waste tipping fees by volume and origin. By municipality, the cities and suburban townships of the county maintain a planning-area high recycling rate between 10-13%. Marquette County as a whole maintains a recycling rate of approximately 10%. Delta County maintains a rate of 6.3%. From available state reporting on recycable material origins, the recycling rates in Menominee and Schoolcraft County are estimated at 2% and 0.1 %, respectively. No active reporting is currently available from haulers or facilities in Alger, Dickinson, Menominee, and Schoolcraft Counties, even though recycling collection is available in some forms.

Through its hauler licensing mechanism, Marquette Solid Waste Management Authority is able to identify tonnage rates for individual municipalities (or groups served by common transfer sites). This reporting allows municipalities to gauge participation and identify service gaps. This level of information, when combined with geographic context, demographics, and reviews of local service provisions and mechanisms, is more able to become actionable in identifying strengths and weaknesses of an operating system. Having this level of data in more communities within the planning area would be useful for both identifying needs and communicating success within recycling programs.

[32] (2026) County Planning Development Tools and Resources. EGLE. https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/planning/planning-development-items

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Table 13: FY 2024 Marquette County Municipality Recycling Rates
Source: MCSWMA

Municipality or Transfer Station Group	Single-Stream Residential & Commercial Recycling (tons)	Municipal Solid Waste Residential & Commercial (tons)	Recycling Rate	Collection Infrastructure
Chocolay Township	218.49	1997.29	9.86%	Curbside carts/bins
Ewing Township	2.23	53.76	3.98%	N/A
Forsyth Township	69.91	2857.56	2.39%	Drop-off/limited curbside
City of Ishpeming	333.72	3139.72	9.61%	Curbside bins (Carts in 2027)
City of Marquette	2283.76	16091.80	12.43%	Curbside carts/drop-off
Marquette Township	319.20	2270.05	12.33%	Curbside carts
City of Negaunee	244.19	2374.06	9.33%	Curbside carts
Negaunee Township	176.24	1692.27	9.43%	Curbside carts
Powell Township	40.16	380.16	9.55%	Drop-off
Richmond Township	13.24	319.63	3.98%	Curbside carts
Republic Township	29.92	336.39	8.17%	Curbside carts
Sands Township	46.72	1023.35	4.37%	Drop-off
Skandia West Branch Transfer Skandia Township West Branch Township	20.01	777.23	2.51%	Drop-off
Turin Township	0.01	60.68	0.02%	Limited
Wells Township	0.08	124.73	0.06%	Limited
West End Transfer Station Champion Township Ely Township Humboldt Township Ishpeming Township Michigamme Township Tilden Township	245.31	4067.66	5.69%	Mixed curbside carts/drop-off
TOTAL FOR ALL MUNICIPALITIES	**4,043.19**	**37,566.34**	**9.72%**	

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Local-level reporting allows for more strategic identification and action. As an example from the table above, transitioning a program towards a widespread recycling cart-based system can boost recycling rates and reduce household garbage volumes. In Richmond Township, recycling rates for FY 2024 were around 4%. The Township worked with its hauler to provide a recycling program and carts to households in 2025. Having a direct, convenient, option to recycle provides more participation in a program. That access resulted in a 175% increase in the quarterly recycling rate, putting them on

average with other Marquette County municipalities with similar access in a short period. This helps demonstrate that convenience is one of the primary factors in recycling participation; many people began recycling, or recycling more often, once they had a curbside collection option available.

Recycling Programs

Community-level recycling programs in the central U.P. began in the 1970s, usually after citizen-led efforts to initiate them. Many communities have established programs that have been in place for several decades, while others may have initiated and ended programs due to lack of volume, service, or sustainability. The success of a recycling program largely depends on individual household participation and manual sorting activities. A recycling program should focus on reducing effort and increasing convenience for households, which should lead to increased program participation. However, increasing recycling convenience for households does not necessarily result in increased levels of recycling awareness without maintaining adequate program education and enforcement.[33]

There is no "one-size fits all" program method that can be applied over the six-county region. Successful rural and small community recycling programs concentrate on collecting a standard suite of recyclable materials before considering expansion to collect other types. To add value, these programs must find ways to aggregate and densify profitable materials to more than pay for the logistics needed to take the material to markets. Major costs in materials management operations are in handling and hauling the materials, which means identifying opportunities to shorten distances and increase density are means to offset higher costs.

There is a tradeoff between program efficiency and contamination with alternative collection methods. Curbside collection programs increase participation in programs by offering the consumer more convenient methods of involvement, but increase contamination levels by offering greater opportunities for non-participating materials, trash, and other items to be collected in recycling containers. However, the rural nature of the planning area means that customer density and distance to processors generally does not allow established private haulers to achieve a sufficient return for offering a higher level of curbside recycling service, even where they may offer curbside solid waste pickup.

Source-separated drop-off programs significantly reduce contamination as the consumer is generally more willing to participate in collection, but generally reduces overall recycling rates because fewer consumers take time to separate, store, and deliver materials to a drop-off location. Recyclers tend to use the drop-off sites more when they feel that recycling is a convenient activity and when they are more familiar with the sites.[34] Therefore, drop-off sites should be located in high-traffic areas where people are more likely to be present, and sites should maintain user safety, security, and cleanliness so that a positive perception is maintained.

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[33] Lakhan, C. (2015). A Comparison of Single and Multi-Stream Recycling Systems in Ontario, Canada. *Resources*, *4*(2), 384-397. https://doi.org/10.3390/resources4020384

[34] Sidique, et.al. (2010) The effects of behavior and attitudes on drop-off recycling activities. *Resources, Conservation and Recycling*. 54(3), 163-170. https://doi.org/10.1016/j.resconrec.2009.07.012

The alignment of municipal recycling guidelines with materials accepted by Materials Recovery Facilities (MRFs) is a clear way to reduce contamination and inefficiency in recycling programs. Providing education to waste generators about what constitutes acceptable single-stream materials (material types and cleanliness) minimizes the level of contamination and increases the processing efficiency of MRFs. To increase the effectiveness and efficiency of municipal curbside recycling programs, municipalities with single-stream recyclable collection should provide households with bins/carts that have sufficient space to accommodate the current and future generation of recyclables, along with continuing education.

The expansion of curbside recycling areas that are underserved or only have access to drop-off centers would require significant long-term investment in collection carts, trucks, and aggregation bins for transportation. Expansion of curbside programs in more urban areas should take into consideration institutional and multi-family housing that may currently be served under a commercial, rather than residential level of service and may lack equitable access to programs. At the same time, expansion into commercial recycling represents a large gap in local collection. Materials like corrugated cardboard are present at volume from commercial sources; a survey of Michigan small businesses found that many lack access to commercial recycling haulers, have limited space for on-site separation collection containers, and do not find per-tip based fees economical.[35] Encouraging local haulers to expand service availability, provide “right-sized” or shared collection containers, and supporting connections and education between businesses and haulers can help address these barriers.

Expanding drop-off programs in rural areas would require investment in sites, containers, compacters, and supporting infrastructure like fencing and signage, in addition to creating local staffing capacity to maintain oversight and site management. Infrastructure should be realized as a long-term capital investment that requires ongoing programming to manage and sustain. In areas where the private market is unavailable, or unable, to expand services, public programs may be necessary to build programs from the ground level until a higher level of service is desired and achievable.

No matter the specific features of a recycling program, the expansion of recycling collection programs requires accessibility considerations including access to recycling services on par with solid waste disposal services[36]. There then may be a need for the adoption of regulatory frameworks, or government-run or government-supported programming to fill gaps in service. Municipalities may use their existing solid waste management ordinances to support expansions into recycling, and then organics, service delivery; further information on these mechanisms is explored in the *Mechanisms* section of this Plan.

Despite public support for recycling, participation remains uneven. Many worry that their effort will be wasted and their recycling will ultimately end up landfilled after reaching a processing facility. The recycling industry standard is to maintain contamination rates below 5%; under Part 115, every Materials Recovery Facility and Waste Diversion Center is held to maintaining less than 15% of their annual materials disposed as solid waste. The reality in the central U.P. is that recycling tipping fees

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[35] *Gap Analysis 2025.* Michigan Department of Environment, Great Lakes, and Energy.
[36] (2024) An Assessment of the U.S. Recycling System. Environmental Protection Agency. https://www.epa.gov/system/files/documents/2024-12/financial_assessment_of_us_recycling_system_infrastructure.pdf



are so low compared to solid waste fees, that disposing of recycables as solid waste would represent a significant financial loss to those facilities that have invested in recycling processing infrastructure.

Another way to engender public support for transitioning to a materials management system and preventing excess cost burden may be to transition current recycling programs to a “Pay-As-You-Throw” (PAYT) model. Some communities in the central Upper Peninsula still participate in “bag tags” or per-bag fees for the collection and disposal of solid waste. PAYT expands upon this concept to create an economic incentive for residents to participate in alternative systems: if it costs more to dispose of waste rather than to recycle it, people will be more likely to participate. The majority of the current recycling programs present in the area use flat-rate utility billing or subscription fees for service. Residents are somewhat burdened then by having to pay additional costs to participate in diversion, while those who generate more disposable are subsidized by not participating. Under a PAYT system, residents only pay for what they generate, and the cost of various facets of the system is more fairly distributed.

Materials Recovery Facilities

Recycling prevents the disposal of potentially valuable materials that would otherwise end up in landfills or be disposed of through other means. Materials Recovery Facilities (MRFs) collect diverted recyclables to sort and process them into commodities purchased by manufacturers for further refinement and reuse in products. The separation and diversion of recyclable materials from waste that has little to no value has been one of largest barriers to implementing recycling programs. The separation therefore generally occurs at the generator (households and commercial/industrial establishments), requiring effort to identify and individually separate recyclables collected by a local program.

The most popular method of recycling collection is Single-Stream Recycling (SSR). Single-stream methods reduce education and effort on the consumer by allowing all potentially recyclable materials to be placed in a single container separate from waste to be disposed of. Many recycling programs in the central U.P. utilize single-stream methods for curbside collection of recyclable plastics, metals, cardboard, and paper containers and products. Separate collection methods may exist for other recyclable materials like glass. However, single-stream programs also increase the potential cross-contamination and equipment costs to sort recyclable and non-recyclable materials at recovery facilities. Dual-stream or multi-stream methods separate materials into additional containers or collection processes that require additional education, infrastructure, and cost to maintain. Single-stream MRFs offset the education and time-investment of the waste generated by investing in processing, and utilizing human and mechanical sorting methods to sort comingled materials.[37]

Higher contamination rates lower the quality of incoming recyclables and increase overall MRF operating costs due to additional sorting time and related staffing costs. This contamination affects

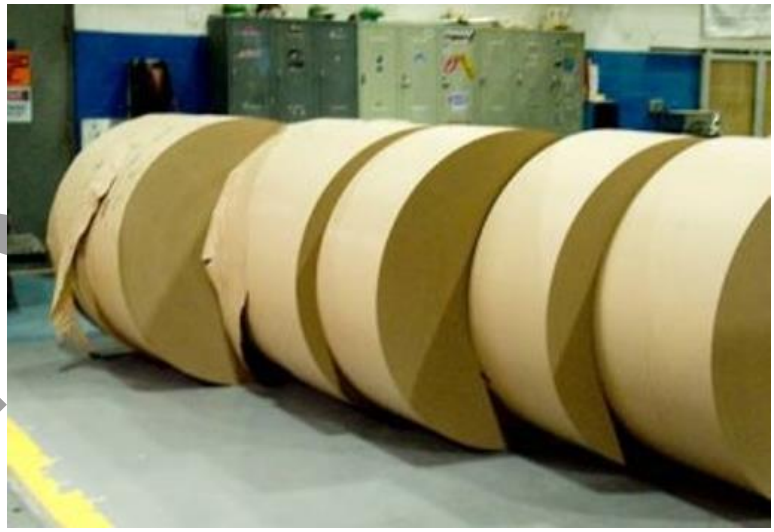
[37] Lakhan, C. (2015). A Comparison of Single and Multi-Stream Recycling Systems in Ontario, Canada. *Resources*, *4*(2), 384-397. https://doi.org/10.3390/resources4020384

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operating efficiency, leading to stoppages on processing lines for removal of wastes and repair of equipment. Contaminated materials also affect other processed materials in common storage, leading to a decrease in end-product quality. Other factors affecting MRF throughput and contamination include plastic bags, glass breakage, complex packaging of different recyclable materials, limitations of optical sorting scanners, and materials that are not widely accepted or valuable.[38] If recyclables at the beginning or end of the sorting process contain too much contamination, then the materials are removed for disposal in the landfill.

The capacity of a Materials Recovery Facility to accept and capture recyclable materials is dependent on the volume of materials received, their processing infrastructure, and staffing. Revenue generated from the processing and sale of materials is affected by the proportion of material types, the frequency of delivery, and the associated commodity cost paid by receiving end market facilities. The aggregate average price per ton for material types fluctuates from month to month. The majority of recycling revenues are derived from fiber products, paper, and cardboard that represent a higher physical volume of total materials. Like landfills, MRF success depends on sustained material volume, as well as the ability to process, transport, and sell materials to end markets. End market demand is the driving factor in the success of recycling; without viable end markets, investing in recycling is ineffective.

Figure 10: *Kraft Paper Rolls at ProAmpac UP Paper*
Source: *ProAmpac*



End markets, also known as reuse markets, are the businesses or industries that use recovered materials to manufacture new products. End markets ensure that recycled, reused, or recovered materials are turned into new products, keeping value in the circular economy. Without reuse markets, materials collected for recycling have nowhere to go, stalling the system and increasing disposal to landfills.[39] In the central Upper Peninsula, the closest reuse market brokerages are in the Green Bay area and Lower Michigan, necessitating additional transportation costs. Few businesses and industries in the central U.P. are known to be using recycled feedstock at scale. Paper mills in the region generally accept quantities of recycled paper products for incorporation

[38] (August 2024) An Assessment of the U.S. Recycling System: Financial Estimates to Modernize Material Recovery Infrastructure. Environmental Protection Agency. https://www.epa.gov/system/files/documents/2024-12/financial_assessment_of_us_recycling_system_infrastructure.pdf
[39] (2026) Toolkit for Identifying Reuse Markets for Recycled Material in Michigan. Michigan State University. https://ced.msu.edu/research/publications/handbooks

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into papermaking content. ProAmpac UP Paper in Manistique produces natural kraft paper for packaging applications made from 100% recycled fiber.

The Marquette County Solid Waste Management Authority (MCSWMA) currently operates its MRF and recycling activities through a brand named “Recycle906”. MCSWMA had previously developed an in-house recycling capability, but saw that expansion would allow the processing of additional material as a possible revenue generation source, and that by diverting material, the engineered life of the landfill could be preserved. In 2020, it secured funding through a $3 million interest-free loan from Closed Loop Partners[40], an investment firm focused on building capacity for the circular economy, and $800,000 in recycling infrastructure grants from the Department of Environment, Great Lakes, and Energy (EGLE). Combined with a traditional loan funded through a temporary increase in the tipping fee to the landfill for the recycling infrastructure, the $6.3 million expansion of the MRF and operations of MCSWMA provided the capacity to exponentially increase the capture of material.

Figure 11: *Sorters at Recycle906 MRF*
Source: *Marquette Mining Journal (photo by Annie Lippert)*



Single-stream collected materials are processed within the facility by automated sorting system technology and people on the receiving line. Automated equipment includes optical sorters that identify materials and use robotic arms or air currents to separate them from other types. The combination of systems sort the collected materials into commodity types that are then compacted into bales for storage. Recycle906 then arranges sale of materials to end market manufacturers in lower Michigan, Wisconsin, and Minnesota, depending on availability.

Over the past several years, program changes to a single-stream recycling system, education, and support for infrastructure funding to provide recycling carts to Marquette County municipalities at little or no cost have resulted in a substantial increase in local recycling participation. Furthermore, agreements with out-of-county municipalities to accept materials for processing at the MRF have extended recycling options to the greater region. Prior to the facility’s 2020 expansion, the MRF was able to process roughly 1,500 tons of material per year. In 2023, the processed amount peaked in excess of 8,300 tons, and the facility has capacity to continue to accept 10,000-12,000 tons total in its current configuration. Additional capacity could be realized by

[40] https://www.closedlooppartners.com/

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increasing the number of days per week when processing and delivery can occur, and by adding additional workforce capacity.

Recycle906 demonstrates that scalable and successful integration of diversion into the existing waste management system can be accomplished within the central Upper Peninsula. This facility has the current capacity to accept recyclable materials collected within the planning area at present, and can continue to scale to meet demand. Transportation is the dominant barrier to scaling the system from household collection, community consolidation, and regional processing. Investing in collection infrastructure alone is not sufficient to ensure the success of a recycling program, as volume and end market access drive revenue generation and system sustainability.

Gap Analysis: Systems for Recycling Management in the Planning Area

The materials management system in the central Upper Peninsula cannot function as a separate diversion network that is detached from the current waste management system. The current recycling system is functional, but fragmented by a lack of consistency and investment. Low population density complicates the collection, transportation, and processing of available recyclable materials in a similar manner to solid waste. The existing solid waste infrastructure is insufficient to meet long-term benchmark goals. Future diversion growth depends on leveraging existing hauling, transfer, and disposal systems that use both curbside and drop-off infrastructure to provide equitable access to recycling programs.

The key issues in the central Upper Peninsula regarding recycling management are:

- Independent program development and voluntary reporting frameworks reduce the operational effectiveness of recycling programs.
- Access to recycling infrastructure is not on par with access to solid waste.
- Curbside recycling systems are likely not feasible across the entire planning area due to low-density service inefficiencies and long-distance hauling logistics.
- Sustainable funding mechanisms for recycling management are necessary at the local level to support collection and transportation; processing is offset by revenue generated by sale of materials.
- The planning area is lacking in local end markets that can reuse collected materials.

The Materials Management Planning Committee reviewed and discussed various scenarios and options for recycling management over the creation of the Materials Management Plan. In the near term, expanding access to recycling infrastructure (curbside collection carts and drop-off collection sites) has been identified as a way to boost recycling participation. This infrastructure should be integrated into the operations of existing hauling service providers, and be co-located with existing transfer stations and landfill-adjacent sites. Haulers can be incentivized to incorporate recycling collection into their service delivery by providing municipality-owned carts to households, or ensuring mandatory participation in programs by ordinance or contract language.

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Standardizing recycling messaging and regulations is necessary to reduce confusion and contamination in recycling programs, and to apply consistent frameworks and reporting requirements. Unified language in contracting and ordinances can apply consistency across service expectations, and add requirements for local hauler and facility reporting. More consistent reporting can be used as messaging to document success and reduce skepticism in the system. Increasing the availability of education and marketing is a non-infrastructure investment that can support behavioral change, and school and institutional partnerships can reinforce diversion practices at a young age.

While expanding collection activities makes recyclable materials more accessible to end markets, if there are not enough end market users to support processing and reuse, the market and its efficiency are deflated. Stronger reuse markets that can reliably absorb materials and create stable demand will take coordinated and strategic actions at the operational and policymaking level. Locally, businesses should participate in materials management engagement events and work with processors to identify which types of materials could feasibly be used in their current practices with minor adjustment or investment. Economic development efforts should incorporate efforts to connect recycled materials with product developers and manufacturers. Partnerships with higher education institutions can support additional use of local materials.

Large scale glass recycling outside the bottle deposit space is a known gap in waste diversion activities across the Upper Peninsula. While glass is still accepted in limited quantities at processors and through local drop-off programs, the sheer weight and volume of the material, compounded by the lack of a local secondary market, has been a barrier to successful large-scale diversion. There has been innovation activity locally; a project developed in partnership with Michigan Technological University, the Dickinson County Road Commission, and Recycle 906 used several million crushed glass bottles to replace natural sand in a 2023 reconstruction and paving project. The wider availability of sand and gravel in the U.P. may be a barrier to expanding this process due to the additional processing and transportation cost, and the practical use and environmental impact may take time to realize. Additional uses for glass and other heavy, diverted materials could benefit from additional research partnerships with higher education institutions and recycling market innovation programs.

In the mid-to-long-term, recycling and organics collection and logistical transfer infrastructure should be formalized into what is known as a “hub-and-spoke” diversion system that takes advantage of existing facilities and efficiencies in collection, hauling, and processing. A hub-and-spoke system relies on the availability of existing facilities to collect diverted materials, and then move them efficiently to processing facilities. Some existing facilities could increase their capacity with upgrades to increase throughput to meet expected demand. Others need additional infrastructure to expand current activities, and/or flexibility in operations to expand access to additional residents.

Regional coordination will be important to utilizing shared infrastructure and creating operational efficiencies that maintain the cost of diversion below the cost of disposal. Shared hauling agreements, regional contracting, and cooperative infrastructure ownership will reduce the burden on individual counties to ensure recycling access is available to residents. As the region transitions to materials management, it will be important to support communities with the best information and options available to meet their needs.

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ORGANIC MATERIALS MANAGEMENT

Generation

Organics diversion at scale is a viable option for waste in the Upper Peninsula. Organic materials, including food waste and yard waste, represent one of the largest and most actionable components of the municipal solid waste stream. Organic wastes also represent one of the largest sources of methane and gas emissions from landfills, requiring costly monitoring and collection systems. Based on averaged audits of municipal solid waste in Michigan, organic materials constitute approximately 37% of waste disposal.[41] MSW Composition in the central U.P. is estimated at national rates to contain approximately 23,995 tons of food waste materials and 13,459 tons of organic yard wastes.[42] The preservation of landfill capacity by diverting organic wastes could significantly increase longevity, as well as create additional benefits by feeding people, feeding animals, creating energy, or creating compost.

Organics management in the central Upper Peninsula currently operates under two distinct regulatory and operational frameworks: yard waste diversion, which is mandated by state law, and food waste diversion, which remains largely voluntary and underdeveloped. Michigan and 26 other states currently have yard waste landfill bans. Michigan banned yard waste from disposal in municipal solid waste landfills in 1994 and required composting facilities to register with the state beginning in 2008. Michigan's yard waste ban has driven the growth of the state's composting industry, where facilities diverting this material are readily able to incorporate additional organics for compost production. Yard waste accounts for 88% of currently recovered organics in Michigan[43]. The majority of yard wastes are diverted in support of landfill operations, which use the compost to augment sands and soils required as daily and final cover. In municipal yard waste programs, the resulting compost may be used to promote vegetation in recreational areas or be used in construction projects. Wood wastes are sometimes collected, chipped, and sold to industry as raw materials or fuel for energy generation. While yard waste diversion is already partially institutionalized and present within the current system, food waste diversion remains limited and voluntary.

Food waste represents over 20% of material disposed of in Michigan landfills. Food waste is food that is ultimately not consumed by humans and is discarded, including food that is safe to eat and food that is unsafe to eat or inedible. The diversion of food wastes from the waste stream represents great social, economic, and environmental value that can be readily removed from disposal with intentional action and less capital investment than other diversion[44]. The majority of action related to food waste diversion

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[41] (2024) Michigan Municipal Solid Waste Characterization 2024.
[42] EGLE Materials Generation Tool
[43] *Gap Analysis 2023 [revised March 2024].* Michigan Department of Environment, Great Lakes, and Energy.

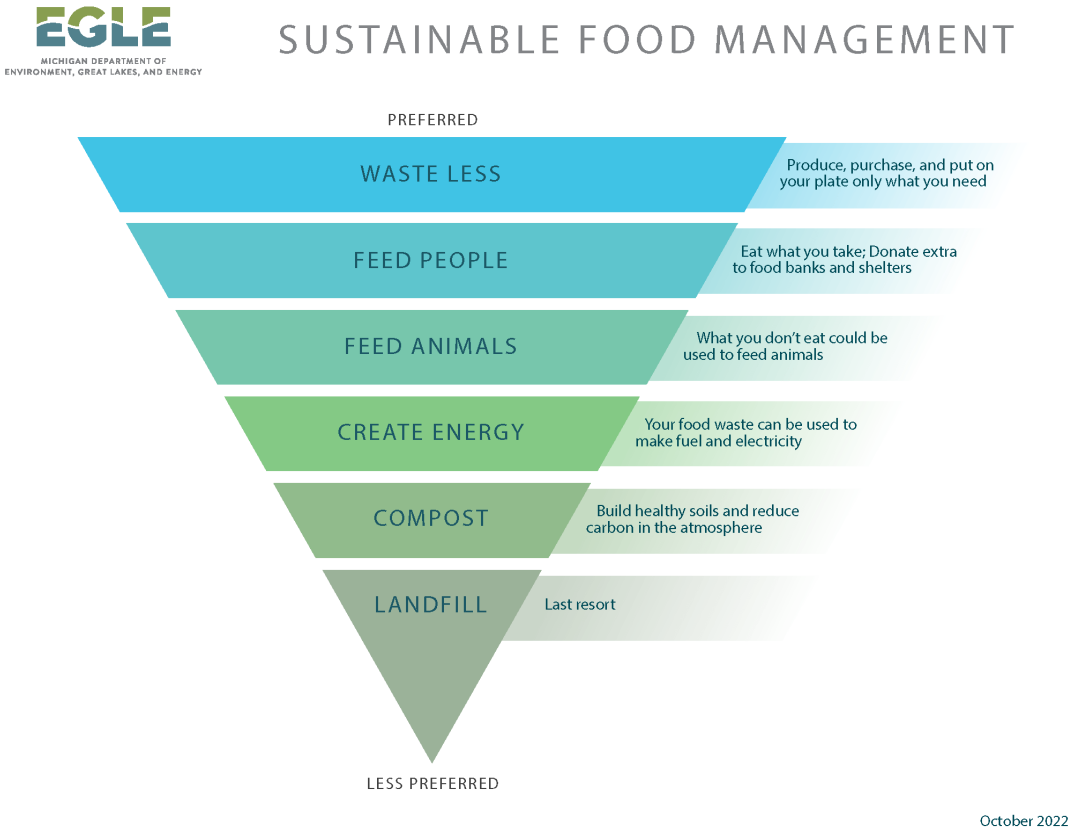
[44] (2023) Michigan Food Waste Roadmap. Michigan Sustainable Business Forum. mifoodwasteroadmap.org

is through a combination of actions focused on prevention of food waste disposal, rescue of foods before they become waste, and diversion of food waste into organics materials management processes.

Food Waste Diversion

Food loss and food waste is primarily generated in homes and businesses like grocery stores and restaurants. The first level of sustainable food waste management would be achieved through behavior change that results in less waste generated at these sources. Consumers would be tasked with improving their understanding of food waste causes, and creating opportunities for more efficient use of food. Since behavioral change takes time to implement and relies on the collective action of individuals, creating additional opportunities to rescue food or divert food waste may be more actionable for materials management stakeholders.

Figure 12: *Sustainable Food Management Hierarchy*
Source: *Michigan EGLE*



Food waste diversion activities may be focused on diverting waste before it may be received by solid waste or organic processing facilities or food rescue organizations. In the central U.P., food waste diversion systems are currently limited in scale and geographic availability. Participation in food waste diversion and/or composting remains voluntary and is primarily concentrated in areas where collection and processing services are available. Food rescue activities through charities that connect surplus food from individuals and businesses to those in need currently represent the largest source of food diversion in Michigan[45]. With recent increases in grocery prices, the charitable food system has an increased demand for donated surplus food. For rescue strategies to have a meaningful impact, capacity to receive and distribute donated food must increase substantially.

Local food pantries, service organizations, and food banks are locations for participation in food rescue in the central Upper Peninsula. All items that are provided to rescue organizations must be within the manufacturer's printed expiration or best-by date, and packaging must be clean and intact. Feeding America West Michigan is the largest organization, and provides mobile food pantry and distribution across 40 counties on a regular basis. Other food rescue organizations like churches, senior centers, St. Vincent DePaul, and the Salvation Army collect local food stuffs and distribute them directly within communities.

The United States Department of Agriculture (USDA) defines a food desert as a community or neighborhood with limited to no access to affordable and nutritious food. More descriptively, an urban community resident who lives more than one mile, or a rural community resident living more than 10 miles, from a supermarket or large grocery store resides in a food desert. The planning area's rural nature means that many central Upper Peninsula residents live in food deserts, and many more lack transportation or financial resources to access healthy foods. Donation of surplus food serves an important role in meeting the immediate needs of those facing food insecurity. Outside of food rescue, reducing food loss to disposal is an economic opportunity for Michigan's farms and food manufacturers.[46]

The Environmental Protection Agency estimated in 2019 that approximately 60% of wasted food was disposed of in landfills nationally.[47] The current system for the collection and processing of food wastes is largely unorganized within the central Upper Peninsula and access to other options for diversion is severely limited. It can therefore be assumed that the majority of food wastes are being disposed of in landfills within the planning area. To meet the State's ambitious goals to cut food waste in half by 2030, there must be some capacity created to connect people and communities to education and food waste reduction efforts, and to invest in food waste collection and processing infrastructure. Lacking more organized activities around food waste reduction and rescue, the expansion of organics management through composting, both by households and facilities is likely to increase diversion.

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[45] *Gap Analysis 2023 [revised March 2024].* Michigan Department of Environment, Great Lakes, and Energy.
[46] (2023) Michigan Food Waste Roadmap. Michigan Sustainable Business Forum. mifoodwasteroadmap.org
[47] (2026). Food: Material-Specific Data. United States Environmental Protection Agency. Retrieved from https://www.epa.gov/facts-and-figures-about-materialswaste-and-recycling/food-material-specific-data

Composting and Organics Facilities

Composting is a self-heating process carried on by bacteria and organisms that decompose organic materials in the presence of oxygen. The organic material is broken down into a humus and can take several months to occur. The decomposition process is aided by components in the mixture, and by aerating the materials regularly to introduce additional oxygen and moisture. The resulting material can be added as an amendment to the soil to increase the nutrient content and variety of beneficial microorganisms. Composting at home can reduce the amount of organic waste disposed of while adding benefits to plant beds and food gardens.

Composting services are often delivered via curbside collection or drop-off programs, similar to other materials management programs. Curbside collection is most effective in densely populated areas with established collection routes, where collectors can capture large volumes of food scraps and achieve economies of scale. Drop-off programs are more suitable for smaller municipalities, rural areas, or cities that are testing composting services before implementing them on a larger scale. They can require significantly lower startup costs, need minimal infrastructure beyond collection sites and signage, and allow cities to gauge resident interest without a significant commitment. Drop-off works well in communities with strong environmental awareness, where residents are willing to make the extra effort, or in areas with existing infrastructure, such as farmers' markets, parks, or community centers, that can host collection points. For convenience and ease of access to composting drop-offs, they should be co-located with existing solid waste or recycling collection points.

In a typical large-scale composting operation, all types of organic and compostable fiber wastes are piled in rows of thoroughly mixed material. The combined effort of millions of bacteria create temperatures of 130-150 degrees within the piles. The rows must be turned a number of times to add oxygen and to heat the material consistently. This heat must be maintained to both speed decomposition, and render any harmful microbes inert. Attaining and maintaining these temperatures during the winter months in the Upper Peninsula has been proven possible. Other methods of large-scale composting introduce self-contained and mechanical processes that speed the process of decomposition.

Figure 13: *Production at Partridge Creek Compost*
Source: *Partridge Creek Compost*



Part 115 divides composting facilities into “small”, “medium”, and “large” sized facilities, utilizing “class 1” (general organic materials) and “class 2” (mixed municipal solid wastes,

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biosolids, and other controlled substances) compostable materials. Most municipalities in the region have established “small” or “medium” class 1 composting facilities or equivalent programs to manage grass, leaves, brush, and wood waste. Class 1 facilities are designed to process non-hazardous/non-controlled organic materials and are generally limited to small percentages of non-yard waste material (food waste or other organics); up to 5% and above 500 cubic yards of total material for “small” facilities and up to 10% and between 500-10,000 cubic yards of total material for “medium” facilities.

Any compost facility processing greater than 10% non-yard waste organics and has greater than 500 cubic yards of material on site at any time is classified as a “large” facility and requires a general permit. “Medium” and “Large” facilities also have requirements for siting, and “large” facilities require additional statutory compliance measures. Type II landfills are also able to compost materials on-site if the activities are described in their approved permitting and operational plans.

While yard waste diversion infrastructure is well established through facilities which do not require general permit financial and monitoring requirements (generally “small” or “medium” size category) or facilities contiguous to Type II landfills, it does not directly translate to capacity for expansion into food waste diversion. The additional compliance and financial assurance required with large-scale facilities is the most prohibitive barrier to entry. Municipalities with existing yard waste facilities are disincentivized to expand into handling large amounts of food wastes due to the increased regulatory and compliance requirements that are triggered.

Very small “exempt” sites may operate with minimal regulatory oversight where on-site volumes remain limited to less than 500 cubic yards of material onsite at any time, and the composting activities do not create nuisances like odors, vectors, leachate/runoff, or create water contamination. These facilities must still notify EGLE of their existence, but are not required to hold a permit to operate, nor are they required to remain below 10% food waste. For small and rural communities, one or more “exempt” facilities may adequately address the existing volume of food waste with very few regulatory requirements.

At present, the region has one operational “large” class 1 composting facility designed to accept food waste and other non-yard waste class 1 material at greater than 10% of total material. Partridge Creek Compost (PCC) in Ishpeming is the central Upper Peninsula’s only current large-scale organics collection service and composting site. In 2024, Partridge Creek Compost diverted 295,000 pounds of food waste (147.5 tons) from residential, institutional, and commercial collection in Marquette County. In 2025, that volume increased to 460,000 pounds (230 tons). PCC partners with Northern Michigan University and local restaurants to collect food waste, as well as provides curbside organics collection to residential households. Based on its current site capacity, PCC could expand to collect up to 5,000-6,000 annual cubic yards (nearly the same in tons) without additional construction or permitting. The remaining composting facilities in the region focus primarily on yard wastes, along with co-located compost sites at landfills that use finished materials for alternative daily cover, construction restoration, and closure.

The management of organic composting sites relies on a sufficient amount of materials to maintain regulated processes within the nature of the climate of the planning area. During particularly cold

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periods, proper composting collection, maintenance, and processing are difficult to maintain. Partridge Creek Compost identified this as an issue early on in their operations, and developed methods to self-heat their collection trailers to prevent freezing. The success of PCC and other start-up organics management facilities in the Upper Peninsula are evidence that larger-scale food waste collection and composting are viable options for communities.

The production and use of high-quality compost improves soil structure, enhances water retention, reduces reliance on synthetic fertilizers, and minimizes nutrient runoff into regional waterways. These outcomes contribute directly to agricultural productivity, food quality, and the economic resilience of rural communities. Organics disposed of in landfills create methane gas, a combustible product requiring careful monitoring and management, and lock nutrients away from being reused or replaced. Putting compost back into the food production system helps to grow new plants for people and animals to eat, and the resulting wastes are recycled back into the organics management system. In this manner, the production of local compost directly benefits the local food system; a current weakness identified in the central Upper Peninsula's food system is overreliance on importing fresh food products and limited local production. Expanding the production of finished compost can support the expansion of local end markets (farms, hobbyists, and other food producers) who can directly benefit from local access to materials.

Table 13 details the currently reported tons of finished compost produced by the reporting organics facility. Because materials are rotated into the existing materials on site, sometimes the total amount of finished compost is larger than the amount of materials brought on site in a given year. Similar to other materials management reporting, the collection of this data relies on voluntary reporting and an inconsistent reporting methodology. As a result, these numbers can vary widely based on facility and classification. Reporting may also be affected by operational procedures; MCSWMA weighs all organic materials at delivery to the site during open hours, while DSWMA provides on-and-off hours public access to its drop-off site without weigh-in and does not weigh materials until later in the composting process. For this reason, the reporting between the facilities is not comparable while the volume of materials brought on site may be similar.

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Table 13: FY 2025 Organics Facilities Reporting **Source:** EGLE (volume in tons; FY 2025 data from RETRAC)[48]		
Facility Name	**Total Tons Brought on Site**	**Total Tons Finished Compost**
Delta Solid Waste Management Authority	125	253.4
City of Gladstone Compost Site	156.3	225
Dickinson County Solid Waste Management Authority	1,055.9	2,393.3
Marquette County Solid Waste Management Authority	3,663.7	3,663.7
Forsyth Township	375	375
Partridge Creek Compost	218.1	190
TOTAL	**7,913.0**	**7,100.4**

Anaerobic digestion is a process that converts biodegradable organic waste into biogas containing methane, carbon dioxide, and biosolid digestates, without the assistance of oxygen. The biogas can be processed to create an energy source, and the solid digestates can be land-applied as fertilizer. Many of the anaerobic digestion facilities currently in operation convert animal waste products and other on-farm organic materials into recycled nutrient products. Mixed organic solid wastes and wastewater residuals can also be utilized in this same process to achieve similar recycled materials. Management options available for biosolids/sewage sludge in Michigan typically fall into three categories: landfilling, incineration, and land application, but anaerobic digestion presents additional opportunities for waste-to-energy and nutrient recovery.

At least one anaerobic digester is under construction in Menominee County for on-farm use, injecting produced gases directly into a nearby natural gas service trunkline. Anaerobic digesters are also generally present as components of wastewater treatment facilities. Due to concerns of contamination from human, commercial, industrial, and other sources, these materials undergo strict testing before being land applied or used in composting processes, or are otherwise disposed of in landfills. Anaerobic digestion generally eliminates bacterial concerns through heating and chemical breakdown processes. Typically, the residuals are clean enough to be classified for use as fertilizer.

With plentiful timberland and a large forest products industry, the collection of wood biomasses for mass timber or energy production has been outlined as an economic opportunity to meet generation and sustainability goals for local industry. The Upper Peninsula covers around 30% of total land and accounts for 45% of the forests in the state. Forest harvesting operations leave 25%–45% of harvested biomass including a mix of foliage, bark, small-diameter trees, branches and other materials on the

[48] (2026) County Planning Development Tools and Resources. EGLE. https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/planning/planning-development-items

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forest floor.[49] When removed at sustainable levels, residue harvest does not undermine key ecological processes in the organic decomposition cycle.[50] Wood biomass energy production is already in place in the central U.P. as part of the use of both virgin and wood residual materials at paper mills, and as energy production and heating systems at facilities and institutions like North Dickinson County Schools and Northern Michigan University. The current use of these materials in this manner is an identified gap in further organics diversion reporting.

The expansion of logging industry into biomass collection, processing, and transportation could support other project areas utilizing organic materials like composting and digester energy production. Providing supportive services, financial, and policy incentives that help identify these opportunities for new and expanding business may help foster growth in both areas. For the U.P., energy production from forest biomass needs to be framed as part of sustainable management of natural resources, and be identified as part of a resilient energy system that sustains communities from a variety of energy sources.

Gap Analysis: Systems for Organic Materials Management in the Planning Area

The central U.P. has a mixture of rural and urban settings. In rural areas, households on larger properties may typically dispose of organic materials on their own property. This may result in composting practices that require less management, and the resulting material takes years to accumulate, decompose, and become usable as soil amendment. In more urban areas, space and compost management are not always practical, and can invite pests and odors. Rural areas may also need to consider that wildlife that may be attracted to available organic material. In all areas, households can be educated in home composting methods and use completed compost as an amendment to their own gardens and lawns. Composting done by individuals at home is nearly impossible to measure and include in diversion reporting.

The key issues in the central Upper Peninsula regarding organics management are:

- Food waste diversion may be primarily achievable through education, behavior change, and food rescue organizations, but are not quantifiable in the current context.
- Household participation in organics diversion, particularly food waste diversion is voluntary, and many households already self-manage organics through backyard composting.
- Organic wastes are heavy and costly to transport; transportation distance offsets the effectiveness of diversion.
- Residents may support sustainable diversion goals but may resist paying for expanded services beyond solid waste and recycling without some more tangible benefits.

[49] Mittlefehldt, S., et. al. (2026). The Northern Woodshed Project: Assessing Local Bioenergy Production in the Northern Forest. Northern Michigan University.
[50] Swinton, et.al. (2020). Why Biomass Residue Is Not as Plentiful as It Looks: Case Study on Economic Supply of Logging Residues. Applied Economic Perspectives and Policy (2020) volume 00, number 00, pp. 1–23. doi:10.1002/aepp.13067

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With upwards of 38,000 tons of organic waste materials estimated to be generated within the planning area, and 7,000-8,000 tons of reported management, there is a large gap between the number of existing and needed facilities. The region currently has a strong foundation for yard waste diversion and an emerging but underdeveloped system for food waste diversion. Bridging the gap between these two systems represents a significant opportunity to increase overall diversion, improve system efficiency, and build a more comprehensive materials management framework. The expansion of organics collection services and sites face barriers in education, local participation, service cost, weather characteristics, and lack of supporting infrastructure. Expanding organics diversion across the region will require intentional integration with existing waste management systems, as well as the development of additional facility capacity at both local and regional scales.

In the immediate timeframe, composting of food wastes is expected to remain the responsibility of the individual where sufficient population density does not support the provision of a level of service to provide organized collection and management. For smaller communities interested in compost collection and composting facilities, starting a program by gauging resident interest and participation is important before committing to collection and processing facilities. Local participatory programs are likely to start at the neighborhood or community level with exempt facilities and organics drop-off locations. Larger organics programs should build upon the existing materials management infrastructure and service providers to reduce duplication and accelerate adoption. Existing systems can be scaled or replicated, and experiences shared, to capitalize on what has already been successfully demonstrated.

The most realistic entry points to increasing organics diversion in the planning area are:

- Incorporating organics diversion into educational campaigns and increasing awareness for existing diversion programs.
- Utilizing existing co-located organics sites at landfills to capture food waste without additional permitting concerns; establishing these as at-scale pilot programs to replicate in other areas.
- Establishing county or municipality-led pilot programs at “exempt”-sized sites to assess local participation and establish logistics.
- Developing partnerships with haulers to assess readiness to incorporate organics collection into existing agreements and services.

There are several challenges to scaling an organics program into a wider service area or higher level of service similar to existing materials management systems. Programs must achieve adequate participation levels to support operational efficiency and long-term infrastructure viability. Participation rates are increased by making organics management convenient and cost-effective; residents and businesses should be financially incentivized to divert organic materials into an alternative system rather than increasing costs for additional services. Organics programs should then be built upon the existing waste and recycling infrastructure and service providers to accelerate adoption and achieve an economy of scale.

The rural nature of the planning area may discourage the large-scale collection of organic wastes for composting at a central location. For cost-effectiveness, facilities should be located within communities (e.g., at community gardens, local farms, public parks, and schools), or a minimum number of sites in

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proximity to population to reduce transportation needs. Expanding the number of facilities available to receive organics will also help achieve service integration into existing systems by making hauling routes more efficient. However, the availability of adequate sites in population-dense areas is often limited. Furthermore, if land is available, the surrounding community may still oppose the construction of organics management infrastructure due to perceived concerns related to odor and pest management.[51]

In addition to siting and operational considerations, access to specialized equipment represents a significant barrier to entry for smaller or emerging composting programs. A coordinated, regional approach to equipment sharing offers an opportunity to reduce these barriers. For example, certain processing equipment (such as compost screening systems) may only be required periodically but carry high capital costs. Shared access to such equipment can enable smaller facilities to produce high-quality finished compost without the need for redundant investment, supporting the development of a distributed network of composting sites while maintaining economic efficiency. A similar network for marketing and sales of finished compost products will help develop stable local end markets for materials.

Finished compost should be utilized within the region for the local benefit of communities and residents. Communities can require that compost generated by a facility is used in soil projects- construction, recreation, remediation, and beautification projects. Alternatively, the finished compost products can be used as agricultural inputs at larger food producers, reducing their costs and dependence on synthetic fertilizers.



[51] An Assessment of the U.S. Recycling System

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OTHER MATERIALS UTILIZATION FACILTIES

Innovative Technology Facilities

Innovative Technology Facilities under Part 115 are materials management facilities that convert solid waste into energy or a usable product, in methods that do not otherwise classify them as MSW incinerators, materials recovery facilities, composting facilities, or anaerobic digesters. These facilities often use new and emerging technologies to process wastes into secondary saleable materials for reuse. Across technologies, many have been implemented, but their success at scale is mixed and context-dependent.

Innovative technology facilities and processes may include:

- Pyrolysis plants
- Gasification facilities
- Plasma arc systems
- Chemical recycling plants
- Refuse-Derived Fuel production (without on-site burning)
- Waste-to-liquid fuel facilities
- Tire-to-fuel systems
- Residue/ash material recovery systems

The basic functionality of these systems is to intake waste and process it down to the basic components for derivation into fuels or precursor chemicals. In that manner, they can be reused in other industries. Like other types of materials management facilities, innovative technology facilities rely on intense capital investment to startup and a consistent volume of materials to remain viable. Some rely on additional sorting to occur to create a homogenous stream of materials, with unusable material re-entering the waste stream for disposal.

Few examples in the United States at the present time are consistently successful and cost-competitive with other types of materials management. A proposal for an innovative technology facility at scale within the central Upper Peninsula should examine the feasibility of its implementation in the current system in detail, specifically identifying how to mitigate excess cost burden on residents through the transition, ensuring that environmental and regulatory concerns are mitigated, and providing contingency for a return to the traditional system upon facility closure if necessary.

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Waste Diversion Facilities

A Waste Diversion Center is defined as “a property or building, or a portion of a property or building, designated for the purpose of receiving or collecting diverted wastes and not used for residential purposes”. In practical terms, it is a location where specific waste materials are collected before being sent for recycling, reuse, treatment, or another preferred management method instead of disposal in a landfill or incinerator.

Examples include locations that receive and temporarily collect diverted wastes before sending them to authorized recycling, reuse, treatment, or disposal facilities, including:

- Household hazardous waste collection facilities.
- Electronics recycling collection sites.
- Battery collection and recycling drop-off centers.
- Light bulb and lamp collection sites.
- Community recycling drop-off centers that collect specified diverted wastes other than recyclables.
- Sharps collection programs that transfer collected materials to authorized medical waste treatment facilities.
- Temporary collection facilities operated by municipalities, counties, or private entities for diverted waste streams.

A Waste Diversion Center essentially functions as a collection and consolidation point, and is not a processing facility. Many other activities may be considered waste diversion, like reuse and redistribution of furniture, goods, textiles, building materials, and other items. Product take-back programs like the collection of pharmaceuticals, plastic grocery bags, paint, automotive residuals, mattresses and other items are also included. These activities divert materials from disposal by extending their useful life before they become waste.

Facilities like commercial scrapyards and metal recyclers that purchase or collect metal as a recycable commodity and market it to processors, mills, and foundries are not considered waste diversion facilities, and are otherwise regulated under other law. Michigan does not track scrap metal recycling similar to other types of recycling, so a breakdown of generation and available materials is difficult to determine. Programs that collect appliances may be considered waste diversion as long they are not otherwise processing the materials before shipment to a recycler. Often waste diversion is a stop in a network to an end facility, similar to waste transfer stations before disposal.

The primary waste diversion activities present in the central Upper Peninsula include household hazardous waste collection, electronics recycling, and battery collection. Part 115 requires facilities that primarily collect and temporarily store diverted wastes to voluntarily report their status to EGLE, or requires notification if the facility collects more than 50 tons of material per year. Similar to other materials management reporting, the collection of data relies on voluntary reporting to RETRAC and an inconsistent reporting methodology. Facilities voluntarily collecting source-separated materials like metals may report the collection and then send the materials to an additional facility (including other types of materials management facilities) for processing. Central U.P. reporting facilities have also

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included diversion of materials like recycling, which overlaps with transfer station and processing facility reporting. The result is that no central U.P. facility is a Part 115 mandatory reporting facility, and those that are currently voluntarily reporting materials other than metals are limited.

Table 14: FY 2025 Waste Diversion Facility Reporting
Source: EGLE
(volume in tons; FY 2025 data from RETRAC)[52]

Facility Name	Voluntary or Mandatory Reporter	Primary Type(s) of Diverted Material	Total Tons Diverted
Dickinson County Solid Waste Management Authority	Voluntary	Metals	53.47 tons
Sands Township Transfer Station	Voluntary	Metals, Batteries, Electronics	11.5 tons
Wood Island Landfill	Voluntary	Metals	77.24 tons
		TOTAL	**142.21 tons**

Household Hazardous Waste (HHW) includes paints, pesticides, solvents, automotive fluids, and other types of chemicals. While some household hazardous waste may legally be disposed of by residents in household trash, most materials are required by law to be diverted into specialized management systems. From a Part 115 perspective, when an HHW collection facility or Waste Diversion Center receives household hazardous waste, the intended destination is typically a licensed hazardous waste treatment, storage, or disposal facility, not a municipal solid waste landfill. Many landfills in the central U.P. maintain HHW collection sites, and some municipalities provide annual events for collection. These materials are aggregated and transported to processing and disposal sites outside of the planning area.

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[52] (2026) County Planning Development Tools and Resources. EGLE. https://www.michigan.gov/egle/about/organization/materials-management/solid-waste/planning/planning-development-items

Table 15: Central Upper Peninsula Household Hazardous Waste Collection Sites **Source:** CUPPAD	
Facility Name	**Status**
Alger Conservation District	Limited, program availability varies
Delta Solid Waste Management Authority	Permanent HHW collection site; free to county residents; also collects lightbulbs, mercury devices, batteries, etc.
Dickinson County Solid Waste Management Authority	Second Tuesday of each month from 9-10am only.
Marquette County Solid Waste Management Authority	Permanent HHW collection site; free to county residents; also collects lightbulbs, mercury devices, batteries, propane tanks, etc.
Menominee County	Holds biennial HHW collection events at a temporary site.

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MATERIALS MANAGEMENT GOALS

Introduction

The goals and recommendations contained in the Central Upper Peninsula Materials Management Plan reflect the long-term waste and sustainability goals of the State of Michigan and the six-county planning area, the input of stakeholders through extensive public engagement and plan development, and the analysis of local communities and needs. These goals are fact-based and take into account demographic characteristics, environmental conditions, and existing facility inventories detailed in previous sections of this plan.

With the realities of the preceding sections of this Plan in mind and the feasibility of scaling materials management activities in the region, all municipalities should proactively consider updates to their solid waste, recycling, and organics services if possible, as well as their regulatory frameworks for the operation and siting of materials management programs and facilities. The theme across the preceding sections of this Materials Management Plan is that the central Upper Peninsula must integrate various forms of materials management activities into the existing infrastructure and logistics of the entire region. The goals in this section attempt to translate that overarching theme into an implementation strategy that relies on the participation of individual households and municipalities to find success in increasing waste diversion and reducing disposal.

The low population density of the region creates unique challenges for materials management. Collection routes are longer, customer density is lower, transportation costs are higher, and economies of scale are more difficult to achieve than in more urban areas of Michigan. As a result, materials management systems that are successful elsewhere may require modification to function effectively within the planning area. Transportation is a primary cost driver for all materials management activities within the planning area. The Planning Committee assumes that transportation costs will continue to be a major factor influencing operational decisions throughout the planning period and that future systems should prioritize efficiency by utilizing existing transportation networks and infrastructure whenever possible.

The planning area currently contains sufficient municipal solid waste disposal capacity to manage projected waste generation throughout the planning horizon. Existing landfills are expected to remain the primary disposal facilities for materials that cannot be feasibly reused, recycled, composted, or otherwise diverted. No immediate need for new landfill development has been identified. Diversion activities should complement and extend the useful life of existing facilities while reducing long-term disposal demands. The Planning Committee assumes that future diversion growth will occur through integration with existing collection routes, transfer stations, drop-off facilities, and landfill-adjacent infrastructure. Projects that leverage existing facilities, hauling agreements, authority operations, and regional infrastructure will generally be preferred over projects requiring entirely new service networks.

Goals and recommendations that result in cost increases to local units of government and residents should identify sustainable long-term funding sources prior to their implementation. Suggested funding

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sources are identified within certain recommendations, but implementation will rely on fiscal constraints and the willingness of residents and business to pay for programs. As programs and services are implemented which are used by customers on a periodic or limited basis, a service fee charged to users of the services should recover the added cost of service.

No individual county in the planning area possesses sufficient population, infrastructure, markets, or financial capacity to independently develop a comprehensive materials management system at the scale envisioned by State policy goals. The Planning Committee therefore assumes that regional cooperation will remain necessary to achieve operational efficiencies, compete for grant funding, support infrastructure development, and expand diversion opportunities throughout the planning area.

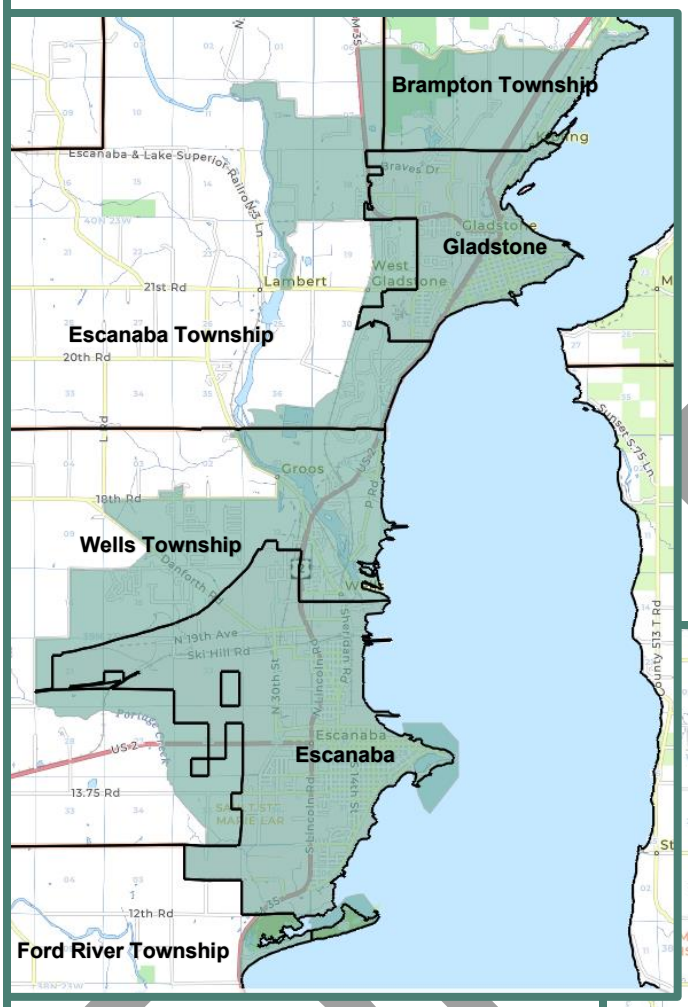
Goal 1: Support the Statewide Goal to Expand Curbside Recycling Access in Census-Identified Urban Areas by 2026

While many central U.P. communities have established municipal recycling programs or have contracted recycling services, several have historically not sought to implement service due to residential feedback and/or fiscal constraint. Part 115's Benchmark Recycling Standards require areas designated as "Census-Identified Urban Areas" to have access to a minimum level of curbside recycling service by January 1, 2026. Those areas lacking recycling services that are required to do so by the Benchmark Recycling Standards of Part 115 are actively working to implement those services.

The Central Upper Peninsula Materials Management Planning Committee has chosen to use "Adjusted Census Urban Area Boundaries" for determining the level of recycling service implementation. Adjusted Census Urban Areas are a modified version of the U.S. Census Bureau's map, with boundaries made contiguous by local input and state transportation agencies. These boundaries typically expand upon census data to include surrounding areas with urban characteristics (e.g., additional commercial or residential development along roadways).

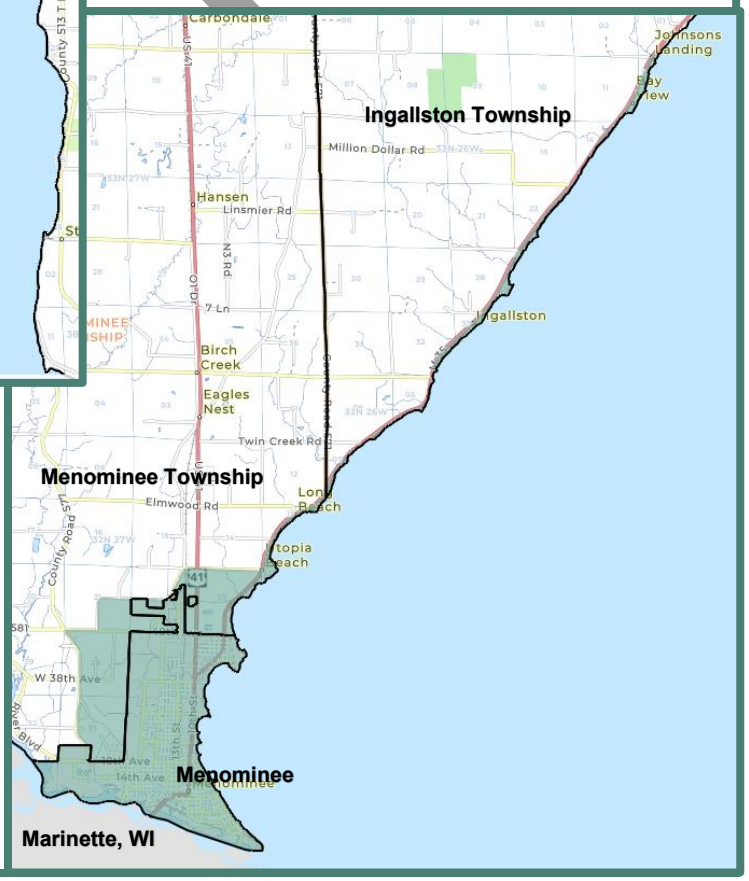
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Adjusted Census Urban Area Boundaries



Escanaba-Gladstone (left)

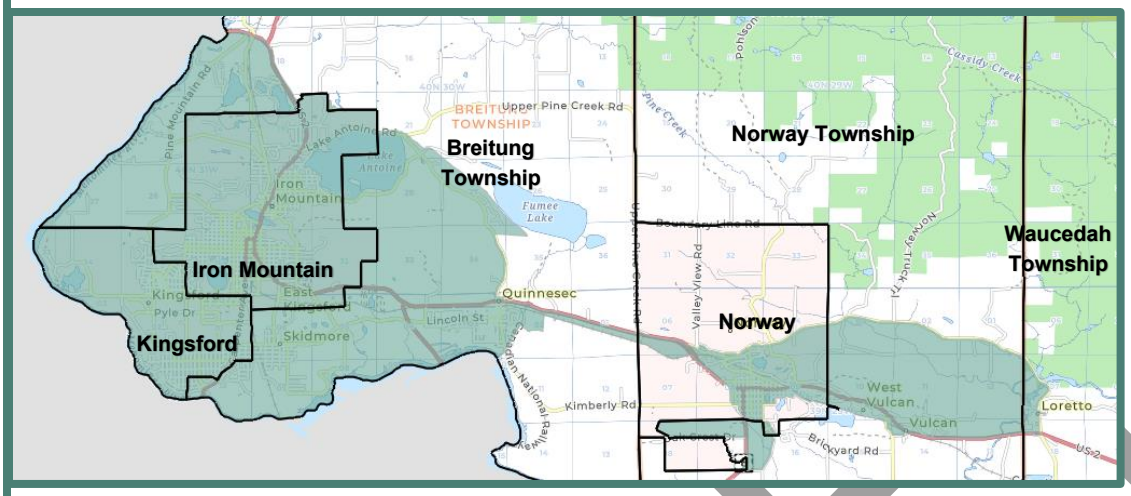
The boundary area includes the cities of Escanaba and Gladstone, as well as portions of Ford River, Wells, Escanaba, and Brampton Townships in Delta County.



Menominee-Marinette (right)

The boundary area includes the city of Menominee and portions of Menominee and Ingallston Townships. The area includes approximately 10 miles of area on the shore-facing side of M-35 from Evergreen Road to 11 Mile Road.

Adjusted Census Urban Area Boundaries



Iron Mountain-Kingsford-Norway (above)

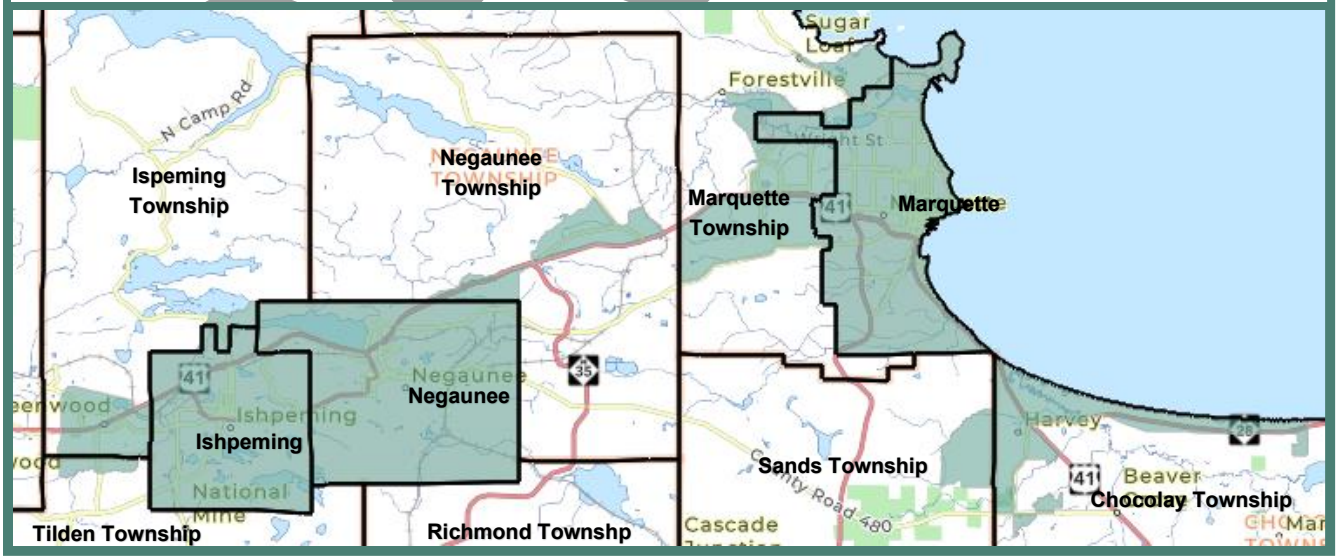
The boundary area includes the cities of Iron Mountain, Kingsford, Norway, and portions of Breitung, Norway, and Waucedah Townships in Dickinson County.

Marquette (below right)

The boundary area includes the city of Marquette and portions of Marquette, Sands, and Chocolay Townships in Marquette County.

Ishpeming-Negaunee (below left)

The boundary area includes the cities of Ishpeming and Negaunee, and portions of Ishpeming, Tilden, and Negaunee Townships.



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Objective 1.1 – Establish a minimum level of recycling service that incorporates Part 115's Benchmark Recycling Standards

The central U.P. will maintain a minimum level of recycling service in areas identified by the Benchmark Recycling Standards (MCL 324.11502(6)) that includes that:

- *90% of single-family dwellings in Benchmark Recycling Standard-identified areas shall be provided access to curbside recycling programs, either provided directly by their municipality by service or contract, or available through service offered by third-party hauling companies. This service shall include collection of materials at least twice per month.*
- *Recyclable materials included in these programs shall include plastic containers, mixed paper, metal containers, and cardboard.*
- *collected materials shall be delivered to a materials recovery facility that complies with Part 115 or are managed appropriately at an out-of-state recycling facility.*
- *The curbside recycling is provided by the municipality, or the resident shall have access to curbside recycling that is provided by the resident's chosen hauler.*

Figure 14: Minimum Level of Recycling Service Material Types



To support achieving this goal:

- The Central Upper Peninsula Materials Management Planning Committee has identified a required minimum level of recycling service in the planning area that includes the collection and processing of plastic containers, mixed paper, metal containers, and cardboard.
- The CUPMMPC has self-certified that the communities identified by the Benchmark Recycling Standards maintain recycling programs that provide access to at least 90% of single-family dwellings within the respective jurisdictions; communities without this access will continue to be supported in providing it within a reasonable timeframe.
- The CUPMMPC will advocate for municipalities to incorporate standard contract language and requirements into hauling service agreements, and advocate for haulers to expand access to curbside recycling in rural areas where it is feasible.
- The CUPMMPC has identified Recycle906 as the preferred facility with capacity for the delivery of recycable materials collected within the planning area; additional facilities able to provide

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capacity for increased recycling collection and/or processing are encouraged, and should adopt similar program and operational standards to increase efficiency and program effectiveness.

- The CUPMMPC will work within the planning area to support the expansion of collection and processing related to glass recycling and other niche recycable materials like Styrofoam, batteries, e-waste, plastic films, and textiles.

The Planning Committee assumes that diversion rates will increase incrementally over time and that sustained progress will require multiple planning cycles rather than a single five-year implementation period.

Objective 1.2 – Achieve the 2026 Benchmark Recycling Standard to provide recycling access in Census-identified urban areas

Generalized Census Urban Areas	Level of Recycling Service
Escanaba-Soo Hill-Wells-Gladstone-Kipling (Delta County)	Curbside recycling is provided in the cities of Escanaba and Gladstone by the municipalities; by private hauling companies in the remainder of the urban area.
Bass Lake/Moon Lake-Iron Mountain-Kingsford-East Kingsford-Quinnesec-Norway-Vulcan-Loretto (Dickinson County)	(Iron Mountain and Kingsford to initiate curbside recycling in 2027; Breitung Township currently assessing options)
West Ishpeming-Ishpeming-Negaunee-Trowbridge Park-Marquette-Harvey (Marquette County)	Curbside recycling is provided in cities of Marquette, Ishpeming, and Negaunee by contracts with private hauling companies. Ishpeming Township provides municipal curbside recycling service in West Ishpeming neighborhoods. Negaunee and Marquette Townships provide curbside recycling service through contracts with private haulers. Chocolay Township is served by a private subscription haulers who provide voluntary curbside recycling services.
Menominee-M-35 north of city limits (Menominee County)	The City of Menominee provides curbside recycling service through a contracted private hauler. Outside city limits, recycling service is available by private subscription.

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Goal 1: Support the Statewide Goal to Expand Curbside Recycling Access in Census-Identified Urban Areas by 2026			
Action	**Responsible Party**	**Timeline**	**Metric**
Establish a public-facing online map with Adjusted Census Urban Areas overlayed with waste hauler service areas and links to programs and businesses	CUPPAD	2027	Deliverable accessible
Verify by documentation that each hauler operating within the Adjusted Census Urban Areas is providing service that meets the minimum standards set by Part 115	CUPPAD, Counties	2027-2029	Annual certifications completed
Engage municipalities covered by the Adjusted Census Urban Areas and offer technical support to identify service gaps and program enhancement opportunities	CUPPAD, Municipalities, Haulers	2027-2029	Number of households receiving carts
Support municipalities without sufficient recycling access	CUPPAD, Municipalities, Haulers	2027-2028	90% of single-family dwellings served

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Goal 2: Support the Statewide Goal to Expand Curbside Recycling Access in Municipalities Over 5,000 residents by 2028

In addition to the Part 115 requirement to expand curbside recycling access in urban areas by 2026, municipalities with 5,000 or greater residents are required to expand curbside access under the same requirements by January 1, 2028. Those lacking recycling services that are required to do so by the Benchmark Recycling Standards of Part 115 are actively working to implement those services.

Objective 2.1 - Achieve the 2028 Benchmark Recycling Standard to provide recycling access in municipalities with over 5,000 residents

Municipality Over 5,000 Residents	Level of Recycling Service
City of Escanaba (Delta County)	Municipally-provided single-stream curbside recycling service available to single family dwellings twice per month
City of Gladstone (Delta County)	Municipally-provided single-stream curbside recycling service available to single family dwellings twice per month
Breitung Township (Dickinson County)	(Currently assessing options)
City of Iron Mountain (Dickinson County)	(Will initiate curbside recycling in 2027)
City of Kingsford (Dickinson County)	(Will initiate curbside recycling in 2027)
City of Ishpeming (Marquette County)	Municipally-contracted service with a hauler providing single-stream curbside recycling service available to single family dwellings twice per month
City of Marquette (Marquette County)	Municipally-contracted service with a hauler providing single-stream curbside recycling service available to single family dwellings twice per month
Chocolay Township (Marquette County)	Single-stream curbside recycling service available to single family dwellings twice per month by individual subscription through municipally-contracted waste hauler
Forsyth Township (Marquette County)	Single-stream curbside recycling service available to single family dwellings twice per month by individual subscription with haulers operating across the jurisdiction

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Goal 2: Support the Statewide Goal to Expand Curbside Recycling Access in Municipalities Over 5,000 residents by 2028			
Action	**Responsible Party**	**Timeline**	**Metric**
Establish a public-facing online map with municipalities and waste hauler service areas and links to programs and businesses	CUPPAD	2027	Deliverable accessible
Verify by documentation that each hauler operating within municipalities with over 5,000 residents is providing service that meets the minimum standards set by Part 115	CUPPAD, Counties	2027-2028	Annual certifications completed
Engage municipalities with over 5,000 residents to offer technical support to identify service gaps and program enhancement opportunities	CUPPAD, Municipalities, Haulers	2027-2028	Number of households receiving carts

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Goal 3: Support the Statewide Goal to Achieve a Statewide Recycling Rate of 30% by 2029 and ultimately 45%

Michigan has steadily increased its statewide recycling rate from 14.25% before 2019 to 23% in 2023, and 26% in 2025. The Upper Peninsula has historically lagged behind in recycling programs and participation; 2022 estimates based on available data from all Upper Peninsula counties revealed an estimated recycling rate of 2.3%. Data collection and reporting gains during the materials management planning process have increased that rate, but it still lags far behind downstate reporting. The central U.P. planning area recycling rate based on 2025 reporting is approximately 8.3%.

The transition from solid waste planning to materials management planning coincides with new reporting requirements and reporting systems established by the State of Michigan. Available recycling, organics, and diversion data remain incomplete in some areas due to voluntary reporting and differing methodologies. For planning purposes, available data is considered sufficiently accurate to establish baseline conditions. The Planning Committee anticipates that future reporting improvements will produce more reliable performance measurements and allow refinement of diversion estimates during future plan updates.

Objective 3.1 - Data Collection and Reporting
There is a lack of consistent data collection and reporting on materials recovered in the central U.P.. Data needs to be available on a county or community level, and categorized to include various commodity and other diversionable material types (food wastes, construction and demolition debris, metals, etc.) to separate total recycling and diversion from the municipal solid waste disposal total. Data collection resources are also crucial to the development of an auditing system to ensure year-on-year growth and accountability. Data reporting requirements may include service areas, number of parcels serviced, participation rate, tons collected by location, delivery location, material types.

Objective 3.2 – Increase the central U.P. recycling rate to 15% by 2030 and 20% by 2035
A 15% target by 2030 may be realized as effectively doubling the current recycling rate in less than five years. However, significant opportunities exist to realize reporting gaps and to provide a minimum level of recycling access as required by Part 115's benchmark recycling standards. Developing more robust reporting mechanisms and incrementally increasing participation by providing curbside and drop-off recycling access are sound strategies that will drive the increase in the recycling rate.

Target Central Upper Peninsula Recycling Rates	
Year	**Target Rate**
2027	10%
2028	11%
2029	13%
2030	15%
2032	18%
2035	20%

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Objective 3.3 – Achieve a recycling rate of 5% in Alger, Menominee, and Schoolcraft Counties by 2030

Lower recycling rate targets in Alger, Menominee, and Schoolcraft reflect current access barriers and rural settlement patterns where recycling participation and access to infrastructure will come more slowly to the region. A 5% goal realizes that the significant investments in recycling access in counties with higher rates like Marquette and Delta are not achievable in the short-term, and will take additional coordination and support to realize.

This objective represents a realistic and achievable first step toward improving diversion performance in counties where recycling infrastructure and participation remain limited. Efforts to achieve this objective should focus on improving convenient access to recycling opportunities for residents who currently lack curbside or nearby drop-off services. Expansion of public drop-off collection locations, integration of recycling infrastructure at transfer stations and landfill-adjacent facilities, and support for private-sector collection opportunities should be prioritized.

Objective 3.4 – Increase the recycling rate of Marquette County to 15% by 2030

Regardless of proportionality, urban Marquette municipalities currently maintain an average recycling rate between 10-13%. These areas all have curbside service with recycling carts or bins available to residents. Continued investment in collection infrastructure, public education, reporting systems, and processing capacity has demonstrated that increased access to convenient recycling opportunities results in measurable improvements in participation. Marquette County stakeholders should work to support wider access to curbside recycling service by addressing currently identified gaps within the system.

Efforts to achieve the 15 percent recycling target should focus on increasing participation in communities currently demonstrating lower recycling rates, expanding access to curbside recycling collection where feasible, and improving convenience in rural areas through strategically located drop-off facilities. Particular attention should be given to increasing participation in townships and service areas where current recycling rates remain significantly below the county average. Providing recycling carts, reducing barriers to participation, and continuing consistent public education campaigns are expected to increase household recycling activity and improve material capture rates.

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Goal 3: Support the Statewide Goal to Achieve a Statewide Recycling Rate of 30% by 2029 and ultimately 45%			
Action	**Responsible Party**	**Timeline**	**Metric**
Continue to advocate for a consistent and accessible reporting framework for state-level facility requirements and reporting with EGLE	EGLE, Counties, Facilities	Ongoing	Updates to current system
Establish a regionalized database for annual reporting of recycling and diversion activities	CUPPAD	2027	Number of reporting materials management facilities providing disposal, recycling, and diversion data
Improve reporting through RETRAC participation	Facilities, EGLE, CUPPAD	Annual	Number of facilities reporting
Promote standardized recycling collection	Counties, Municipalities, Haulers	2027-2032	Collection consistency across participating communities
Increase household recycling participation	Municipalities, Haulers	Annual	Participation rate increase
Encourage municipalities to adopt a goal and plan for achieving a recycling and/or diversion rate higher than the region average by a specific year	Municipalities	Annual	Number of participating municipalities
Dedicate educational resources to increasing the recycling participation rate in communities with higher population proportions, but lower recycling rates	CUPPAD, Counties, Municipalities	Annual	Educational resources delivered
Encourage Counties to adopt hauler licensing mechanisms with a requirement to report the amount of solid waste, recyclables, and compostables collected	Counties	2027-2032	Number of participating counties

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Goal 3: Support the Statewide Goal to Achieve a Statewide Recycling Rate of 30% by 2029 and ultimately 45%			
Action	**Responsible Party**	**Timeline**	**Metric**
Establish and implement a mechanism for collecting data from Part 115 reporting-exempt facilities, including waste diversion centers, scrap metal yards, thrift stores, reuse businesses, and others that contribute to a recycling/diversion rate	CUPPAD	2027-2029	Number of reporting-exempt facilities providing recycling or diversion data
Develop annual public education campaign	CUPPAD, Counties, Facilities	Annual	Campaign implemented
Work with haulers to expand curbside service	Municipalities, Haulers	2027-2032	Number of new service areas
Assist communities in infrastructure grant applications	CUPPAD	Ongoing	Grants awarded
Invest in automated recycling carts (64 and 96-gallon carts designed to be handled by side-loaded collection vehicles) in communities that currently have curbside recycling service	Municipalities, Haulers	Ongoing	Number of new carts available
Invest in additional drop-off infrastructure (collection containers, site safety, accessibility) in communities that already provide centralized drop-off facility locations	Counties, Municipalities, Authorities, Facilities	Ongoing	Number of sites upgraded
Support Recycle906 in expanding its capacity to process materials	Marquette County, Municipalities, MCSWMA	2027-2032	Tons processed annually

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Goal 4: Decrease the Amount of Organic Material Discarded within the Central Upper Peninsula through Source Reduction, Food Rescue, Composting, and End Market Access.

Expanding food waste diversion across the region will require intentional integration with existing waste management systems, as well as the development of additional compost activities and facility capacity at both regional and local scales. Residents and businesses should be financially incentivized to divert organic materials rather than discouraged by additional direct costs to add organics diversion to the existing system. Organics programs should build upon existing infrastructure and service providers to reduce duplication and accelerate adoption. Existing systems can be scaled or replicated, and should utilize shared capacity to capitalize on what has already been successfully demonstrated. The preferred use of finished compost should occur in close proximity to its generation to support local agriculture, landscaping, and soil restoration.

Implementation of organics diversion infrastructure should be guided by demonstrated demand, operational feasibility, and available funding opportunities. Priority should be given to projects that leverage existing public and private investments, increase access in underserved areas, and provide measurable increases in diversion. The Planning Committee encourages the use of pilot programs, grant-funded infrastructure projects, and partnerships with educational institutions, food rescue organizations, compost operators, agricultural producers, and private haulers to support the gradual expansion of organics management capacity throughout the planning area.

Objective 4.1 - Support the Statewide Goal to Achieve a Statewide Food Waste Diversion Rate of 50% by 2030

Michigan's 2022 MI Healthy Climate Plan was adopted to provide a roadmap to reach 100% carbon neutrality by 2050 in order to avert the worst impacts of climate change, create good-paying jobs, and build a healthier and more prosperous, equitable, and sustainable Michigan. The Plan includes incorporating the goals of Part 115's Benchmark Recycling Standards, and adds an additional goal to achieve a statewide food waste diversion rate of 50% by 2030.

Objective 4.2 – Provide Education, Capacity Building, and Technical Assistance to Support Increased Food Waste Diversion

Successful food waste diversion depends on public awareness, community participation, and the availability of local knowledge and resources. While the expansion of collection and processing infrastructure is important, meaningful progress toward reducing food waste generation and increasing diversion will require behavioral changes among households, institutions, businesses, and local governments. Education and technical assistance are often the most cost-effective methods available to increase participation in food rescue, source reduction, backyard composting, and community-scale organics management programs.

Objective 4.3 - Support the Regulatory Framework to Provide for Organics Diversion

Existing solid waste ordinances, collection contracts, zoning regulations, and municipal service agreements were largely developed prior to the transition from solid waste management planning to materials management planning and may not adequately address composting, food waste diversion, or organics collection activities. Municipal ordinances and service agreements can be valuable tools for establishing consistent expectations regarding collection services, siting considerations, reporting requirements, and participation in organics management programs. Regulatory approaches should be scalable and appropriate to the size, population density, and service capacity of individual communities.

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The Planning Committee will support assessments by local governments for enactment of pay-as-you-throw materials management funding mechanisms that provide incentives for the diversion of recycling and organic materials.

Objective 4.4 - Phase the Implementation of Organic Waste Collection and Processing into the Existing Materials Management System

Creating a comprehensive organics management system across a large and predominantly rural region cannot occur through a single investment or immediate expansion of services. Successful implementation will require a phased approach that builds upon existing infrastructure, operational practices, community interest, and demonstrated program success. Organics diversion systems must be developed in a manner that is financially sustainable, operationally practical, and integrated into the collection and transportation networks already used for solid waste and recycling management. The Planning Committee has determined that the most effective method for increasing food waste and organic materials diversion is to utilize and expand existing materials management facilities, transfer stations, hauling systems, recycling drop-off locations, landfill-adjacent composting operations, and private-sector service providers. This approach minimizes duplication of infrastructure, reduces transportation costs, and allows communities to expand diversion opportunities incrementally based on local participation and available resources.

Objective 4.5 – Provide capacity for additional anaerobic digestion facilities to be sited within the planning area.

Anaerobic digestion facilities are capital-intensive investments and require large, continuous feedstocks and an energy-market relationship. These take significant financial resources and time to implement at scale, and are more likely to exist on an onsite agricultural, industrial, or institutional basis. The conditions do not likely exist regionally to make anaerobic digestion a large-scale energy production source. The Planning Committee should then monitor large-scale waste generators, agricultural, and wastewater opportunities that may support implementation, and help to ensure that communities receive technical assistance and support to allow for their siting and operation.

Objective 4.6 – Support the expansion of forest biomass for the mass timber, energy generation, and organics management industries.

Within the existing timber industry of the central Upper Peninsula, opportunities exist to support diversion of additional forest biomass into innovative technologies and production methods. Forest biomass represents a renewable resource that can be utilized for higher-value products, energy generation, and organics management activities while reducing the amount of material that would otherwise be left unused or disposed of. The Planning Committee could tie the expansion of these activities to economic development and community resilience that supports rural communities and important local industries. Opportunities exist to increase the recovery and utilization of wood waste generated from forestry operations, land clearing activities, sawmills, construction activities, municipal yard waste programs, and other sources.

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Goal 4: Decrease the Amount of Organic Material Discarded within the Central Upper Peninsula through Source Reduction, Food Rescue, Composting, and End Market Access			
Action	**Responsible Party**	**Timeline**	**Metric**
Promote backyard composting	Municipalities, Conservation Districts	Annual	Compost bins distributed
Increase food rescue partnerships	Feeding America, Food Pantries	Ongoing	Pounds of food rescued
Increase the number of organics facilities reporting diversion	Facilities, CUPPAD	Annual	Number of reporting facilities
Integrate food waste collection into existing yard waste collection sites	Facilities	Ongoing	Facilities adopting food waste collection
Establish a reliable baseline for organics generation types and diversion reporting within the central U.P., and incorporate data into a centralized repository	CUPPAD	2028	Baseline organics diversion rates for yard waste, food waste, and other organics
Initiate an educational campaign and sign-up program for businesses and institutions that discard food waste to obtain compost bins and participate in available collection service	CUPPAD, Counties	2028	Participating businesses
Support expansion of Partridge Creek Compost and similar sites	Facility operators, Counties	2027-2032	Additional facilities
Establish county-led pilot food waste collection programs	Counties, Municipalities	2028-2030	Pilot programs launched
Develop pilot organics drop-off programs or additional capacity for processing at existing public facilities	Authorities, Municipalities, Facilities	2027-2032	Facilities incorporating additional diversion activities
Advocate for municipalities and haulers to determine the feasibility for residential and/or commercial organics collection in solicitations for contracted waste collection services	Municipalities, Haulers	Ongoing	Municipalities adopting service contracts

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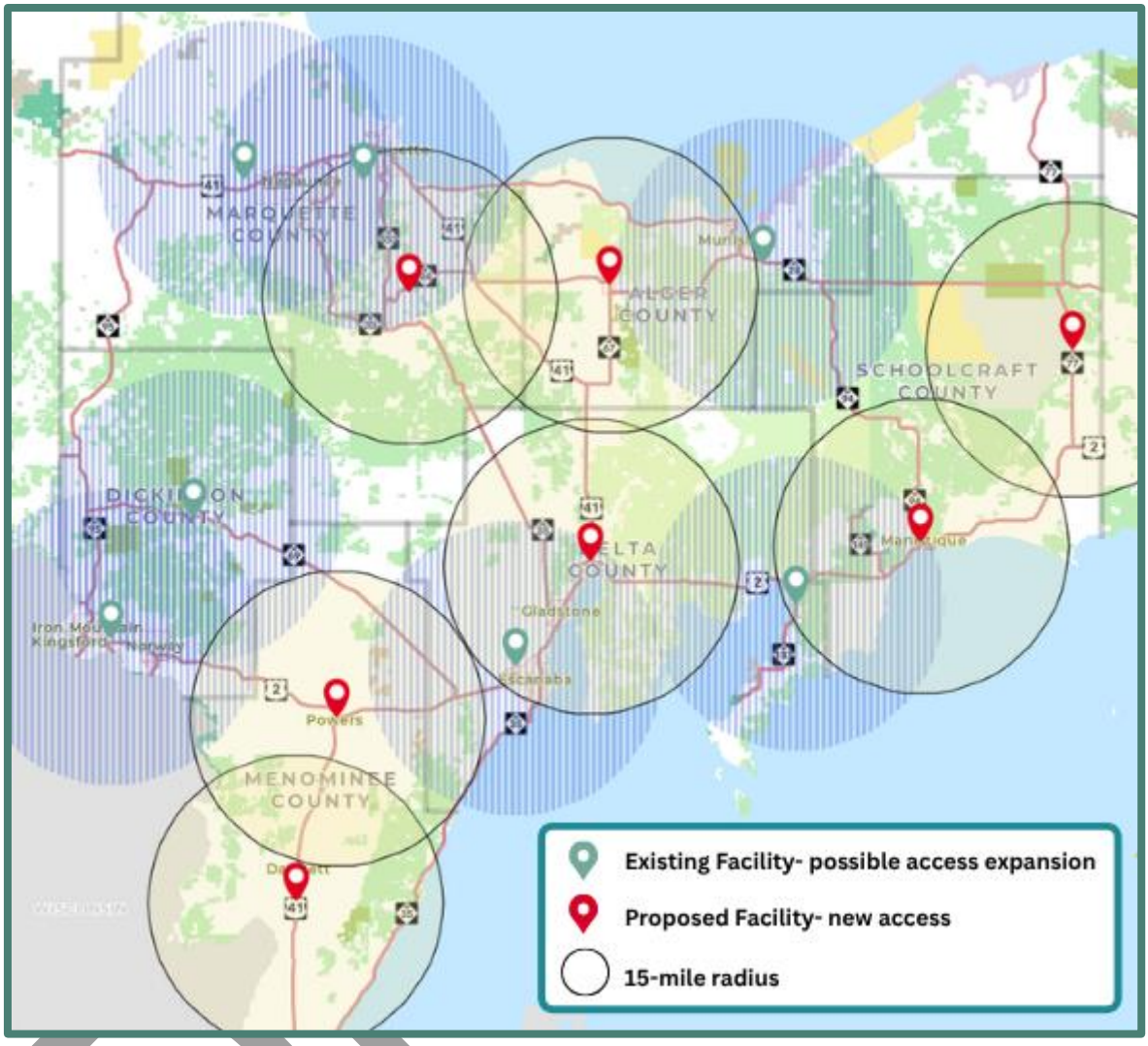
Goal 5: Support the Statewide Goal to Provide at Least One Recyclable Drop-Off Site in Each County for Every 10,000 Residents Without Access to Curbside Recycling at their Dwelling by 2032

Part 115's Benchmark Recycling Standards require that each county provide at least one drop-off site for recycling collection for every 10,000 residents without access to curbside recycling service. The drop-off location should be available to residents at least 24 hours per month. While the central U.P.'s large area and rural terrain makes it difficult to provide curbside service to all residents, the creation of additional drop-offs will serve rural community members by providing access to dispose of personal trash and recyclables.

Drop-off sites allow for access to recycling programs where curbside services are unfeasible, and offer opportunities to collect other types of materials beyond general recycling. In the central Upper Peninsula, there exist opportunities to expand already existing sites to provide more access, or to provide additional infrastructure to collect additional types of materials and greater volume. In addition, there are areas that would be best served by creation of a new drop-off site that may include municipal solid waste, recycling, and/or organic waste drop-off infrastructure. From public input done during the development of the Materials Management Plan, residents identified that less than 15 miles was a preferable distance to participate in drop-off programs. Using this metric, approximately 14 sites (7 existing, 7 proposed) would be able to provide capacity for the majority of the population.

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Figure 15: Existing and Proposed Drop-Off Infrastructure



Objective 5.1 – Establish at least one countywide drop-off site within Alger County by 2032
Alger County currently has limited recycling infrastructure available to residents when compared to other counties within the Central Upper Peninsula planning area. The county's low population density, large geographic area, seasonal population fluctuations, and distance from existing processing facilities present challenges to the development of traditional curbside recycling programs. Approximately 22% of Alger County residents have access to curbside recycling services by municipal contract. A centrally located and publicly accessible drop-off recycling site represents the most practical and cost-effective approach for increasing recycling access and supporting compliance with the Benchmark Recycling Standards established under Part 115.

Objective 5.2 – Establish at least one additional countywide drop-off site within Delta County by 2032
Delta Solid Waste Management Authority's site in Escanaba is a recycling, yard waste, and waste diversion drop-off site available to all county residents. In examining the availability of curbside recycling access in Delta County, approximately 48% of residents have access to curbside recycling by

municipally provided service, and the remaining majority have access to service by individual subscription haulers. While the DSWMA site is in proximity to many county residents, those in more-rural areas face travel barriers to access the service. DSWMA has set a goal to offer at least one additional site serving residents in the more northern and eastern areas of the county which are currently underserved.

Objective 5.3 – Expand the capacity of the existing countywide drop-off site in Dickinson County by 2032

Dickinson County municipalities participate in an Act 233 of 1955 authority for the management of solid wastes. The Dickinson County Solid Waste Authority was established in 1993 to consolidate municipal waste management systems and centralize collection at a local solid waste transfer station. The Dickinson County Solid Waste Processing Facility is a county-owned site available to residents with recycling drop-off infrastructure. This site has limited capacity to accept additional drop-off recyclable materials in its current form. The site also collects yard wastes from surrounding municipalities. Expanding the collection infrastructure and accessibility of the site would create a more convenient solution for users. The site has recently suffered from a lack of capacity for materials, as facility closures in Iron and Florence Counties have directed additional materials to the site. Over capacity has led to early closures on some days. Expanding how the members conduct the oversight of the Dickinson County Solid Waste Authority could help ensure that the site is able to maintain an acceptable level of capacity, and support the contracted hauler in providing a higher level of service to residents.

Objective 5.4 – Increase access to recycling drop-off points within Marquette County by 2032

Marquette County residents are well served by access to curbside recycling, or access to countywide and individual municipal drop-off sites. However, there remain gaps at existing facilities that offer drop-off waste collection, but not access to recycling or organics diversion. Expanding the availability and geographic distribution of recycling drop-off opportunities will improve convenience, increase participation, reduce transportation barriers, and support continued progress toward regional and statewide recycling goals.

Marquette County will work with municipalities to identify gaps in the current collection infrastructure in rural areas, and achieve a standard level of drop-off access for solid waste, recycling, and organics collection. MCSWMA will work to support the collection infrastructure to ensure that transportation capacity is available to support regular collection of these materials and delivery to its facility. Priority should be given to locations that improve service in rural communities and complement existing curbside and transfer station-based recycling programs. Grant funding and other external resources should be pursued to support the acquisition of collection containers, signage, site improvements, and transportation equipment needed to expand service.

Objective 5.5 – Establish at least three smaller-size drop-off sites within Menominee County by 2032

Menominee County's rural settlement pattern, large geographic area, and dispersed population create challenges for providing convenient access to recycling services through a single centralized facility. While curbside recycling access is well-established by municipal contract in the city of Menominee, and available by individual subscription to some areas of the county, recycling access is limited by geography and the rural nature of Menominee County. To provide equitable recycling access to residents, three countywide recycling drop-off sites are proposed to be established in Menominee, Stephenson, and Powers. These sites will be limited in infrastructure until participation in the system grows, or can be offset by expanded access to curbside recycling by private haulers. This approach is consistent with the county's geography and supports the development of a hub-and-spoke materials management system that integrates local collection with regional processing infrastructure.

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The Planning Committee encourages Menominee County, local municipalities, and service providers to identify opportunities to establish these sites at existing public facilities whenever feasible. Suitable locations may include transfer stations, municipal public works facilities, township halls, county-owned properties, parks, or other publicly accessible sites that provide safe and convenient access for residents. Site design should include appropriate collection containers, signage, access controls where necessary, and educational materials that encourage proper recycling practices and reduce contamination.

Objective 5.6 – Establish at least one countywide drop-off site within Schoolcraft County by 2032

Schoolcraft County currently has limited recycling infrastructure available to residents and reports relatively low levels of documented recycling activity. The county's large geographic area, dispersed population, seasonal residency patterns, and distance from regional processing facilities create challenges for expanding traditional curbside recycling services. A limited proportion of Schoolcraft County residents have access to subscription-based curbside recycling collection. Schoolcraft County will work to provide access to at least one countywide recycling collection drop-off site.

The County Board of Commissioners has already identified that a citizen-led materials management advisory committee should be established to lead the effort and engage residents to develop a recycling program framework. The advisory committee will explore organizational, funding, and implementation mechanisms and present their findings to the County Board for implementation. The Materials Management Planning Committee encourages Schoolcraft County and its municipalities to evaluate opportunities to locate the facility at an existing public property or materials management site. Site selection should consider accessibility, proximity to population centers, roadway access, seasonal use patterns, and the ability to support future expansion if participation levels increase. Public education and outreach should be integrated into implementation efforts to ensure residents understand the services available and how to participate properly.

Objective 5.7 – Support the expansion and capacity of drop-off sites to be accessible and accept wider varieties of materials

Drop-off recycling and materials collection sites serve an important role within the Central Upper Peninsula materials management system, particularly in rural areas where curbside collection programs may not be financially or operationally feasible. For many residents, drop-off locations provide the primary opportunity to participate in recycling and other diversion activities. Expanding the capacity, convenience, and functionality of these sites will increase participation, reduce the amount of recoverable material entering landfills, and improve equitable access to materials management services throughout the planning area.

In addition to the requirements of the Benchmark Recycling Standards, communities should provide additional capacity for diversion through greater access to drop-off facilities, and existing facilities should increase their ability to accept additional types of diversionable materials. Enhancing existing facilities is often a more cost-effective approach than developing entirely new infrastructure and can provide immediate benefits through increased diversion opportunities.

Where feasible, counties, municipalities, and facility operators should evaluate opportunities to expand accepted material types beyond traditional recyclables to include glass, electronics, batteries, textiles, household hazardous waste, scrap wood, food waste, yard waste, and other divertable materials. Expansion of accepted materials should be based on demonstrated local demand, available processing capacity, transportation logistics, and the availability of sustainable end markets.

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The Planning Committee encourages the development of drop-off locations as community materials management hubs that provide residents with a convenient and centralized location to access multiple diversion opportunities. Stakeholders should work to develop partnerships with local governments, nonprofit agencies, and local retailers to accept and/or establish locations in the community for drop-off of additional recyclable, reusable, or refurnishable items, including those that are bulky and hard to handle.

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Goal 5: Support the Statewide Goal to Provide at Least One Recyclable Drop-Off Site in Each County for Every 10,000 Residents Without Access to Curbside Recycling at their Dwelling by 2032			
Action	**Responsible Party**	**Timeline**	**Metric**
Develop new rural drop-off sites	Counties, Authorities	2027-2032	Number of new sites
Co-locate recycling and organics infrastructure at transfer stations	Counties, Municipalities, Facilities	2027-2032	Number of sites upgraded
Improve signage and site accessibility	Facilities	Ongoing	User satisfaction and participation
Establish at least one countywide drop-off site within Alger County by 2032	Alger County, Haulers	2032	Site established
Establish at least one additional countywide drop-off site within Delta County by 2032	Delta County Solid Waste Management Authority, Delta County	2032	Site established
Expand the capacity of the existing countywide drop-off site in Dickinson County by 2032	Dickinson County Solid Waste Management Authority, Dickinson County, Haulers	2032	Site upgraded
Increase access to recycling drop-off points within Marquette County by 2032	Marquette County Solid Waste Management Authority, Marquette County, Municipalities	2032	Sites established and upgraded
Establish at least three smaller-size drop-off sites within Menominee County by 2032	Menominee County, Municipalities, Haulers	2032	Sites established
Establish at least one countywide drop-off site within Schoolcraft County by 2032	Schoolcraft County, Municipalities, Haulers	2032	Site established
Increase access to additional diversion at drop-off facilities	Facilities, Municipalities, Haulers	Ongoing	Sites upgraded

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Goal 6: Achieve a Higher Level of Regional Collaboration in Materials Management and Support Hub-and-Spoke Operational Systems

The geographic scale, low population density, infrastructure limitations, and fragmented municipal organization of the Central Upper Peninsula create operational and financial barriers that individual municipalities are often unable to address independently. Regional collaboration is necessary to achieve economies of scale, improve infrastructure efficiency, expand service access, and support long-term materials management sustainability. The current system's approach, based on municipal boundaries, limits the ability to move recycled material across the larger region. A regional approach is necessary for the U.P. to reduce costs and create sustainable recycling systems. An opportunity exists to create a collaborative environment for county and local governments to build support for and expand access to recycling and composting through shared capacity.

The regional system will be designed to build additional capacity for diverse materials management by utilizing existing public and private investments, supporting infrastructure growth, and disseminating education. This system should be designed to be adaptable to market conditions and community characteristics, flexible in its implementation, scalable in additional communities, and appropriate to the local context and needs. Consistent language and regulation is crucial in creating and maintaining a larger materials management network.

Transportation cost is seen as a large barrier to Upper Peninsula materials management coordination, both in the lack of municipal infrastructure and vehicles to accommodate transporting materials, and the cost associated with private market collection and transportation. This difficulty has been evident in other local EGLE-assisted waste diversion programs (e-waste, tires), as the distance to processing and secondary market facilities can be a deterrent to contracted service providers.

This Plan assumes that successful implementation will require regional coordination, technical assistance, grant support, and shared resources to ensure that all communities can participate in achieving materials management goals regardless of local capacity.

Objective 6.1 – Organizational frameworks
Implementation of the Central Upper Peninsula Materials Management Plan should build upon the organizational framework established by intergovernmental agreement of Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft Counties to support materials management. No single jurisdiction or organization possesses the resources, infrastructure, or population necessary to independently achieve the goals established in this Materials Management Plan. Continued regional coordination is therefore essential to improving recycling access, expanding organics diversion, increasing reporting consistency, developing infrastructure, and pursuing funding opportunities throughout the planning area. This framework established the Central Upper Peninsula Materials Management Planning Committee as a diverse and equitable set of representatives and stakeholders that can guide MMP implementation, and build cross-jurisdictional capacity to support the Plan's goals.

The Committee serves as a regional forum for identifying challenges, evaluating opportunities, and coordinating implementation efforts across county and municipal boundaries. Continued operation of the Committee, or a successor body with similar representation, is critical to ensuring that the goals and recommendations of this Plan remain active following adoption. Because many materials management challenges extend beyond municipal and county boundaries, cooperative solutions often provide greater efficiency and long-term sustainability than independent efforts. The Planning Committee

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encourages counties and municipalities to continue utilizing intergovernmental cooperation as a means of improving service delivery and reducing costs.

The Planning Committee recognizes that implementation of the goals contained within this Plan extends beyond the five-year planning horizon. Organizational frameworks established during this planning period should be designed to support future plan updates, continued program expansion, and evolving state materials management requirements. Maintaining active regional coordination will improve the planning area's ability to respond to changing market conditions, emerging technologies, regulatory changes, and future opportunities for waste diversion and materials recovery.

Objective 6.2 - Education and Outreach

The successful implementation of the Central Upper Peninsula Materials Management Plan depends upon informed participation by residents, businesses, institutions, elected officials, and service providers. The central U.P. has a need for increased education and outreach to improve recycling participation and address a mentality of lack of trust in government-provided services. The education and training of County staff and other stakeholders to raise awareness, provide regular communication, educational materials, and public engagement are key to increasing participation.

The Planning Committee recognizes that many residents remain unfamiliar with accepted recyclable materials, composting opportunities, food waste reduction practices, and the environmental and economic benefits associated with diversion. In rural areas, where participation often requires transportation of materials to a transfer station or drop-off location, education plays an especially important role in encouraging participation and ensuring that available infrastructure is effectively utilized. Similarly, local officials and community leaders often require access to current information, technical resources, and best practices to support local decision-making and program development.

The Planning Committee supports the development of a coordinated regional education program that emphasizes consistency, accessibility, and long-term engagement. Educational materials should utilize common terminology, accepted material lists, and program messaging whenever possible to reduce confusion among residents served by different municipalities or service providers. Regional coordination can also reduce duplication of effort and improve the effectiveness of outreach investments. Efforts should be directed toward communities with low participation rates, underserved rural areas, and locations where contamination is known to be a concern.

Objective 6.3 – Infrastructure development

The Planning Committee recognizes that achieving Michigan's long-term materials management goals will require strategic and incremental investment in collection, transfer, processing, and diversion infrastructure throughout the planning area. The central U.P. lacks sufficient processing infrastructure, including Material Recovery Facilities (MRFs) and composting sites to meet the State’s long-term goal of achieving a 45% recycling rate locally. Existing facilities may be small, not accept all materials, or be too far away from the sources of generation. The need for infrastructure development aligns with the broader goals of increasing recycling and organics processing capacity.

At present, the planning area generates sufficient disposal and diversion capacity to meet the immediate needs of residents, businesses, and institutions. Existing landfill facilities provide decades of remaining disposal capacity, while Recycle906 and other existing processing facilities possess available capacity to accept additional recyclable materials beyond current collection levels. The Planning Committee has not identified an immediate need for the construction of new large-scale materials recovery facilities, landfills, or regional processing centers during the early years of Plan implementation. Instead, the primary infrastructure challenge is increasing access to collection and transporting materials to processing facilities.

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Infrastructure development plays a significant role in maintaining robust recycling programs, including investing in infrastructure and technology upgrades to improve recycling output quality. Central U.P. communities should seek grants for capital-heavy investments in transfer stations, roll-off containers, compactors, organics collection, educational infrastructure, and shared processing equipment to jumpstart investment in the materials management system. Operations should eventually transition to sustainable local revenue sources that incorporate amortized capital costs.

The Planning Committee supports the development of a regional hub-and-spoke materials management system that utilizes existing facilities as collection, aggregation, transfer, and processing hubs. By building upon infrastructure already in place, the planning area can improve diversion performance while minimizing duplication of facilities and reducing overall system costs. Because transportation represents one of the largest costs within the regional materials management system, future infrastructure investments should prioritize operational efficiencies and reduced transportation distances whenever feasible. Coordinated investments that serve multiple communities and support regional collaboration should be prioritized over fragmented, duplicative existing services.

Objective 6.4 – Local end market development

Without viable end markets, materials collected through recycling and diversion programs may experience reduced value, increased transportation costs, and limited opportunities for long-term recovery. The U.P. lacks local secondary market destinations for diverted materials, leading to challenges with transportation costs and the need to ship materials to other regions for processing. Transportation costs may limit the economic viability of exporting low-value recyclables, meaning that local market development is necessary to ensure an outlet for collected materials.

The Planning Committee recognizes that achieving Michigan's long-term recycling goals will require more than increasing collection volumes. As additional recyclable and organic materials are diverted from disposal, markets must exist to absorb and beneficially utilize those materials. Local end-market development therefore represents an important component of achieving both the diversion objectives and economic development opportunities envisioned by this Plan.

The Planning Committee supports the development of a regional circular economy in which recovered materials are viewed as economic resources rather than wastes requiring disposal. Whenever feasible, materials generated within the planning area should be collected, processed, and utilized within the region to maximize economic value and reduce transportation requirements. The region already benefits from several industries and facilities that utilize or market recovered materials. The Planning Committee supports continued collaboration between materials recovery facilities, composting operations, economic development organizations, and private businesses to identify opportunities for increasing local utilization of recovered materials.

Objective 6.5 - Support the effective use of existing authorities to participate in intra-county decision-making, and identify opportunities for cross-jurisdictional collaboration and capacity building.

The central Upper Peninsula has a long history of regional cooperation in solid waste management, including the use of county solid waste authorities, landfill authorities, intergovernmental agreements, and regional planning organizations. While individual counties maintain authority for local decision-making and implementation, many materials management challenges including transportation costs, rural service delivery, facility access, education, reporting, and market development extend beyond county boundaries. Regional collaboration can reduce duplication, increase efficiency, improve access to funding opportunities, and support equitable service delivery throughout the planning area.

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The overall goals of landfill authorities (disposal) and recycling programs (diversion) are now distinctly different enough that management under the current systems has become a barrier to financial viability. The Planning Committee supports actions that create an environment where recycling and organics decisions are distinct from the operation of disposal areas. If the goal is to create a system that builds upon the existing waste system, waste can no longer be a primary focus. Rather than creating new layers of governance, this objective emphasizes the effective use of existing organizations, authorities, and partnerships to support informed decision-making and coordinated action that supports the sharing of expertise, promotes consistency in policies and service expectations, and helps ensure that residents have equitable access to materials management opportunities regardless of jurisdiction.

Objective 6.6 – Adopt mechanisms to provide for recycling flow control to local facilities
The central Upper Peninsula has invested considerable resources in developing recycling infrastructure, including collection systems, transfer facilities, and materials recovery capacity. However, recyclable materials generated within the planning area are managed through a variety of collection arrangements, transportation networks, and private market decisions that may result in materials being transferred outside the region despite the availability of local processing capacity. Where public investments have been made, mechanisms can be adopted to ensure that certain types of materials flow to publicly-owned facilities to ensure their viability. The flow to and sale from public facilities allows for reinvestment in the infrastructure that serves participating communities.

The Planning Committee encourages counties, municipalities, authorities, and service providers to evaluate and utilize available regulatory, contractual, and operational mechanisms that support the delivery of recyclable materials to local and regional processing facilities whenever practical and economically feasible. Such mechanisms may include franchise agreements, collection contracts, hauler licensing provisions, facility designation processes, intergovernmental agreements, and other tools authorized by law. The intent is not to restrict market innovation or create unnecessary barriers, but rather to ensure that public and private investments in regional recycling infrastructure are supported by sufficient material volume to remain viable and continue expanding diversion opportunities throughout the planning area.

Objective 6.7 – Create an Upper Peninsula Recycling Authority
Many of the challenges limiting recycling growth in the central U.P. cannot be effectively addressed by individual municipalities or counties acting alone. Because local governments in the central U.P. often lack sufficient scale, staffing capacity, and financial resources to independently support advanced materials management systems, a regional authority structure may improve efficiency, coordination, grant competitiveness, and infrastructure planning. A regional recycling authority could solve capacity issues for local governments by centralizing programs across the U.P.'s low-density population areas. A single program could capture material more effectively, manage shared infrastructure, and secure funding from public and private partners. An authority could more efficiently capture materials, stabilize revenues against market fluctuations, and provide a stable supply chain for buyers.

The development of an Upper Peninsula Recycling Authority would create a long-term organizational structure capable of supporting the objectives of this Materials Management Plan beyond the current planning cycle. The purpose of this objective is to explore the feasibility, structure, responsibilities, and benefits of establishing an Upper Peninsula Recycling Authority as a voluntary regional partnership. Challenges to form a regional authority include limited collaboration among U.P. governments and the need for investment in new infrastructure. A staged organization of a regional recycling authority would be required to initialize, stabilize, and promote membership from additional participating municipalities.

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Goal 6: Achieve a Higher Level of Regional Collaboration in Materials Management and Support Hub-and-Spoke Operational Systems			
Action	**Responsible Party**	**Timeline**	**Metric**
Continue regular CUPMMPC meetings	CUPMMPC, CUPPAD	Quarterly	Meetings held
Develop annual regional materials management update	CUPMMPC, CUPPAD	Annual	Report published
Coordinate with western and eastern U.P. planning regions	CUPPAD	Annual	Regional coordination meetings
Evaluate shared infrastructure opportunities	Counties, Authorities	2027-2032	Feasibility studies completed
Assist communities in grant applications	CUPPAD	Ongoing	Grants awarded
Develop model recycling contract language	CUPPAD	2027	Model language accessible to municipalities
Develop region-wide recycling guides, contamination messaging, food waste education, and signage standards for facilities	CUPPAD, Authorities, Facilities	2028	Educational materials
Continue to provide and support programs aimed at decreasing illegal dumping	EGLE, Counties, Public Health Agencies	Ongoing	Reduction in number of reported sites
Prioritize supplying standardized automated recycling carts to communities that have curbside recycling service already available	Municipalities, Haulers	Ongoing	Municipalities over baseline utilizing carts
Invest in infrastructure to support recycling and/or organics collection beyond single-family dwellings in communities with higher proportions of multifamily households, educational institutions, hospitals, and other sources of generation not typically served by curbside recycling programs	Municipalities, Haulers, Businesses, Institutions	Ongoing	Recycling tonnage and participation rates

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Goal 6: Achieve a Higher Level of Regional Collaboration in Materials Management and Support Hub-and-Spoke Operational Systems			
Action	**Responsible Party**	**Timeline**	**Metric**
Invest in transportation infrastructure to help facilitate the movement of materials, including capital funding for trucks and standardized containers	Counties, Authorities, Haulers	Ongoing	Investments made
Support the identification and development of new end-market opportunities with additional focus on materials that are challenging to transport or recycle (glass, tires, electronics, etc.)	Economic Development Organizations		Increased local utilization of recovered materials

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Goal 7: Provide Capacity to Municipalities to Achieve the Goals of the Materials Management Plan

Rural local governments lack the capacity to meet the demands of regionalized materials management. Communities will most likely need additional support, technical assistance, and resources to address their materials management concerns and opportunities. Local government capacity gaps are the primary barriers to effective action and education to support equitable service provision and behavior change. Rural communities in the area have historically relied heavily on grants to invest in infrastructure systems. Education and outreach should extend beyond traditional public information campaigns and include direct technical assistance to municipalities, businesses, institutions, and community organizations interested in implementing materials management projects. Many communities possess the desire to expand diversion opportunities but lack the staff, experience, or resources necessary to develop programs independently.

The central U.P. recognizes that sustainable diversion systems require long-term operational funding structures rather than sole reliance on temporary grant opportunities. Future funding models should integrate recycling, organics management, and waste diversion into the existing solid waste financing systems through a combination of options like utility-based service fees, tipping fee reinvestment, regional cost-sharing, contractual service integration, or external infrastructure funding. These are most likely to be implemented through regulatory frameworks like ordinances and contract mechanisms.

Objective 7.1 – Each county, as a responsible County Approval Authority related to materials management, should work to ensure that municipalities are led by example, and are offered opportunities to maintain and participate in local control mechanisms

Counties and County Boards of Commissioners serve a critical role in implementation of materials management planning frameworks. They act as the designated approval authority for the oversight of planning, coordination, siting approvals, and long-term reporting and monitoring. However, the success of this Plan ultimately relies on active participation of local municipalities who are more responsible for providing everyday services, adopting ordinances, and maintaining infrastructure. Effective materials management under this Plan requires a partnership between counties and local units of government that respects local decision-making while advancing shared regional objectives.

Leading by example is an important component of this responsibility. Counties can demonstrate best practices through their own operations by implementing recycling and waste reduction programs at county facilities and in public spaces. Visible county leadership can foster public confidence, encourage municipal participation, and showcase practical approaches that may be replicated throughout the planning area.

At the same time, maintaining local control remains a fundamental principle of this Materials Management Plan. Communities should retain the flexibility to select the funding mechanisms, service delivery models, ordinance provisions, and implementation strategies that best meet local needs. A particular area of importance is within the siting process described in this Plan, which allows for local zoning to take precedence over materials utilization facilities. Counties should provide opportunities for local governments to participate in decision-making, and advocate for adopting and maintaining local police power and zoning ordinances with standard wording and regulations.

Objective 7.2 – Provide “Adoption Ready” police power and zoning ordinance language

Local ordinances are among the most effective tools available to municipalities for implementing the goals and recommendations of this Materials Management Plan. A review conducted during plan

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development found that numerous ordinances rely on outdated terminology, reference superseded state regulations, or do not adequately address modern materials management practices such as recycling, composting, and waste diversion. The varying zoning pattern and structure of regulations across municipalities within the six counties creates inconsistencies in permitting expectations and possible siting conflicts. For a rural multi-county materials management system like the central Upper Peninsula, the goal is not to eliminate local control, but to create predictability and consistency across jurisdictions. In the lack of local siting standards, this Materials Management Plan provides a standard process for the siting and approval of materials management facilities.

Providing communities with "adoption-ready" ordinance language allows local governments to efficiently evaluate, modify, and adopt regulatory provisions tailored to their individual circumstances while remaining consistent with the broader goals of the Materials Management Plan. The Planning Committee supports the development and maintenance of model police power and zoning ordinance language that municipalities may voluntarily adopt or adapt to local needs. By providing clear, legally defensible, and readily implementable ordinance provisions, the planning area can reduce barriers to implementation, strengthen local capacity, support regulatory consistency, and accelerate progress toward regional materials management goals.

Objective 7.3 – Support municipal and organizational participation in technical assistance and grant programs

Achieving the goals of this Materials Management Plan will require sustained investment in infrastructure, equipment, education, planning, and program development. Many rural local governments lack experience and expertise in development competitive grant proposals and developing programs from scratch. These constraints can make it difficult to evaluate new opportunities, pursue funding, develop projects, and navigate complex regulatory requirements. Grants, loans, technical assistance services, and planning resources can help offset the costs of infrastructure investments, pilot projects, public education campaigns, equipment purchases, data collection systems, and facility improvements.

The Planning Committee encourages municipalities, authorities, service providers, community organizations, and other stakeholders to actively participate in available technical assistance and grant programs that support materials management goals. Technical assistance programs like NextCycle and applications for infrastructure and business development granting programs from US EPA, EGLE, The Recycling Partnership can help strengthen local capacity and improve access to funding and support.

Objective 7.4 – Educate and assist local governments in the selection of funding and policy mechanisms for materials management system improvements

Under the current system, users typically pay for both waste disposal and diversion services, creating a financial disincentive to divert additional materials. Funding mechanisms that offset the cost of diversion can help correct this imbalance. In many municipalities, waste disposal service costs are currently mandatory, while additional diversion is voluntary. This economically disincentivizes additional diversion. The goal of using funding and policy mechanisms should not be to mandate participation, but to align economic incentives so that diversion becomes the more accessible and rational choice, and an overall social behavior shift occurs over time. Without more equitable rate structures, avid participants in recycling and organics waste diversion pay additional costs to participate in separate systems.

The Planning Committee supports a wider assessment of the feasibility of using “pay-as-you-throw” funding systems that charge households based on the amount of solid waste they produce and shift the cost of waste disposal to those who generate a higher volume. PAYT rate structures are designed to

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encourage households to reduce garbage and divert more material into recycling and organics. In support of other options, counties and municipalities should assess what funding or policy mechanisms are available based on local priorities, political feasibility, and desired scale of implementation. These assessments should be used to communicate and provide specific recommendations and actionable steps to local decision-making bodies.

Objective 7.5 - Amend the Marquette County Solid Waste Management Ordinance of 1999
The Marquette County Solid Waste Management Ordinance of 1999 has served as an important regulatory framework for the collection, transportation, and disposal of solid waste within the county for more than two decades. A more robust county-level solid waste management ordinance could allow for enforcement by municipal civil infraction for violations related to illegal dumping, hauler licensing, or contamination of source-separated materials, and provide for a countywide standard level of materials management service. An amended county-level ordinance could also require that residential or commercial services include mandatory collection of various types of materials (ex. commercially-generated cardboard) that represents a higher-value gap material currently lost in the existing system, and/or the feasible inclusion of pay-as-you-throw volume-based pricing.

The Planning Committee supports a comprehensive review and amendment of the Marquette County Solid Waste Management Ordinance to ensure that it reflects current legal requirements, supports modern materials management strategies, and provides the flexibility necessary to implement future recycling and diversion initiatives. In particular, the amendment should include a more distinct requirement for flow control of source-separated materials, retaining recycling and organics in the county similar to solid waste. Marquette County should examine examples like Emmet County's materials management ordinances to apply strategies to existing service structures, enforcement provisions, and administrative processes.

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Goal 7: Provide Capacity to Municipalities to Achieve the Goals of the Materials Management Plan			
Action	**Responsible Party**	**Timeline**	**Metric**
Develop model ordinances, licensing, and hauling contract agreements	CUPPAD	2027-2028	Package completed
Create capacity at the county-level for a materials management technical assistance program	Counties	Ongoing	Number of counties with staff
Implement recycling programs or provide infrastructure at county facilities and public spaces	Counties	Ongoing	Number of counties participating
Conduct elected official and public interest training sessions for materials management	CUPMMPC, Counties	Annual	Number of meetings
Encourage municipalities to adopt zoning ordinance language to incorporate additional types of materials management facilities regulated by Part 115, and provide for by-right development of community gardens, urban agriculture, and farmers markets offering organic, locally grown food and supporting organics diversion	CUPPAD, Counties	Ongoing	Adopted zoning updates
Advocate for municipalities to require performance guarantees and reporting requirements that demonstrate how progress towards the municipality's and this Plan's goals are being met	CUPMMPC, Counties, Municipalities	Annual	Municipalities incorporating supporting the Plan goals

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Goal 7: Provide Capacity to Municipalities to Achieve the Goals of the Materials Management Plan			
Action	**Responsible Party**	**Timeline**	**Metric**
Assess the use of Pay-as-you-throw funding systems to support the expansion of diversion activities without creating a financial burden on residents	CUPMMPC, Counties, Municipalities	2027-2032	Communities adopting Pay-as-you-throw systems
Support the adoption of updates to the Marquette County Solid Waste Management Ordinance	CUPMMPC, Marquette County, MCSWMA	2028	Adoption of updates

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Goal 8: Support the Adoption of Additional Goals that Encompass Additional Sources of Waste Generation and Opportunities for Diversion

Objective 8.1 – Support the diversion of Construction and Demolition Debris from Disposal
Construction and demolition debris (CDD) currently represent 14% of the entire planning area's disposal. These materials are generated through building construction, renovation, infrastructure improvements, disaster recovery efforts, and the demolition of residential, commercial, and industrial structures. Individual counties need to recognize how large an impact construction and demolition debris is having on its waste ecosystem and create reasonable goals to reduce CDD's impact. Methods of doing so include encouraging deconstruction rather than demolition, on-site materials organization, and educating builders and residents about proper separation and drop-off locations. Reducing the strain that CDD imposes on landfills and municipalities is crucial in creating a more sustainable materials cycle.

Advancing the diversion of construction and demolition debris aligns with the broader goals of this Materials Management Plan by reducing landfill dependence, extending disposal capacity, conserving natural resources, and creating opportunities for economic activity through material recovery and beneficial reuse. The Planning Committee encourages local governments, contractors, developers, facility operators, and other stakeholders to identify practical opportunities to recover value from construction and demolition materials before disposal. CDD diversion and reporting will also support an increase in the planning area's overall diversion rate.

Objective 8.2 – Disaster Debris Management
Recent major storm events in Michigan have highlighted the need to plan for organic and non-organic debris management. Disaster Debris Management sites are generally temporary in nature while a community recovers from an event, but are still required to be sited and regulated as materials management facilities. Communities can jumpstart the ability of a community to recover from a disaster by identifying and permitting these temporary sites well in advance of any emergency need.

The Planning Committee supports partnering with County Emergency Management and the Michigan State Police to provide language and site identification to be incorporated into each County's Hazard Mitigation Plan and future updates to this Plan. This Plan should also incorporate an automatic consistency determination for temporary disaster debris management sites to streamline the authorization process in the case of an emergency event.

Objective 8.3 – Extended Producer Responsibility
EPR (Extended Producer Responsibility) requires producers to bear responsibility for the end waste result of their goods. Under an EPR system, producers have to consider the entire product life of the materials it uses in its goods, and are financially responsible for ensuring product design and materials that allow for the safe disposal and recycling of said materials. Systems like these can reduce waste before it's even created, and rely on regulations provided by the government. EPR policies are not new, with the Bottle Bill and electronics regulations incorporating surcharges that are reinvested in the materials management system. Current EPR focus areas include batteries, packaging, and other hard-to-recycle materials.

The Planning Committee supports the actions of advocacy organizations to include EPR legislation, particularly those that return investments directly to the communities assessed. Current EPR

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frameworks aim to develop a standardized, statewide list of recyclable materials and provide convenient recycling services to all residents. This objective supports standardization of systems and growth of circular economy sustainable manufacturing and materials management.

Objective 8.4 – Zero Waste Facilities
While achieving true zero waste may not be immediately feasible in all communities, the development of facilities, programs, and policies that support zero waste principles can significantly reduce the quantity of materials requiring landfill disposal and increase public participation in sustainable materials management practices. The creation and designation of facilities and events as “zero waste” can serve to raise recycling awareness and assist in materials diversion. This designation means that 90% or more of the materials generated in the facility or at the event will be diverted. Organizations that have the flexibility to create these facilities and events are typically government groups and universities.

Establishing zero waste facilities can help connect residents and businesses with diversion opportunities while improving public awareness of the materials management hierarchy. An important component of zero waste systems is expanding access to public-space recycling infrastructure at parks, recreation facilities, downtown districts, government buildings, schools, community centers, campgrounds, special events, and other public gathering locations. The Planning Committee encourages activities that expand the adoption of “zero waste” principles and public space recycling. Individual municipalities should outline best practices for the creation of these facilities and events, and adopt waste diversion goals and action plans for their public facilities.

Objective 8.5 - Bottle Deposit Law and Redemption
In recent years, Michigan has experienced a steady decline in bottle redemption rates. Changing consumer behavior, reduced convenience, aging redemption infrastructure, population shifts, and the growth of alternative purchasing patterns have contributed to fewer containers being returned through the deposit system. This trend results in the loss of valuable recyclable materials, reduces opportunities for material recovery, and undermines one of Michigan's most effective waste diversion programs. Recent proposed legislation seeks to update the statute to address declining consumer redemption rates of deposit containers, expand the types of covered beverage containers, reduce burdens on retailers by investing in infrastructure, and expand convenient access for rural residents.

The Planning Committee supports updates to the Bottle Deposit Law that improve the accessibility, convenience, awareness, and effectiveness of the system. By increasing redemption participation and exploring opportunities for expanded collection, education, and public-space recovery, the planning area can capture additional recyclable materials, support recycling goals, reduce disposal volumes, and strengthen one of Michigan's most successful material diversion programs.

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Goal 8: Support the Adoption of Additional Goals that Encompass Additional Sources of Waste Generation and Opportunities for Diversion			
Action	**Responsible Party**	**Timeline**	**Metric**
Evaluate construction and demolition debris diversion within the planning area	CUPPAD, Industry stakeholders	2028	Assessment completed
Determine the capacity for existing transfer stations to divert, collect, and haul CDD materials	CUPPAD, Facilities	2029	Assessment completed
Expand electronics collection opportunities	Counties, Waste Diversion Centers	Ongoing	Collection events and sites
Expand permanent household hazardous waste programming	Counties	Ongoing	Residents served
Support tire, mattress, battery, and film plastic recovery programs	Municipalities, Retail Partners	Ongoing	Programs implemented
Support actions to achieve “zero waste” at institutions, events, and facilities	CUPPAD, Counties, Municipalities, Institutions	Annual	Stakeholders adopting “zero waste” principles or events
Advocate for Extended Producer Responsibility laws	Elected Officials, Other stakeholders	Ongoing	Updates to legislation
Advocate for legislative updates to the Bottle Deposit Law	Elected Officials, Other stakeholders	Ongoing	Updates to legislation

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Funding and Enforcement Mechanisms

An opportunity exists through the Materials Management Plan to streamline and standardize regulations for siting, operating, and providing enforcement activities for materials management facilities. A review of currently adopted local unit materials management ordinances and mechanisms in the central Upper Peninsula shows that the majority do not currently include recycling or organics provisions or even definitions. A list of municipalities with these adopted ordinances is maintained in *Appendix F: Local Unit Materials Management Ordinances*. Many of the adopted ordinances allow flexibility in how materials management services are provided by delegating operational requirements to the responsibilities of municipal administrators or other employees. However, through this delegation, a community's program requirements may change with little to no notice, or be based in contracted service provisions proposed by providers rather than maintained by the community. Many ordinances do not designate funding structures for individual unit activities, with a split in funding mechanisms through utility billing, voter-approved millage, and hauler licensing surcharges.

Table 16: Central Upper Peninsula Materials Management Regulation Characteristics
Source: CUPPAD

County	Notable Characteristics
Alger	Mostly private subscription service; City of Munising has the primary formal waste ordinance.
Delta	Most comprehensive county-level regulation, including hauler licensing; Escanaba and Gladstone have organized municipal systems.
Dickinson	Mix of municipal and contracted systems; several cities have ordinance-organized collection.
Marquette	Largest number of organized regulatory and collection programs; widespread contracted service and stronger recycling ordinance provisions.
Menominee	Predominantly private subscription-based services with limited ordinance requirements outside the City of Menominee.
Schoolcraft	Mostly private subscription-based services; City of Manistique has the most extensive ordinance provisions.

Where municipal ordinances are in place, few regulate hauling and collection activities in a way to provide a higher level of service to residents. Communities that create regulatory frameworks by ordinance for the management of materials create a base level of service and then can leverage growth in participation and volume to expand that service incrementally. Many ordinances reflect out-of-date state laws and definitions because they have not been reviewed regularly by legislative bodies. A lack of education at the local legislative level is also apparent in regard to what services municipalities can adopt and/or operate, and the county's ability to regulate materials management and provide overall

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oversight. Provisions like mandatory household and/or business participation in programs supports a predictable level of volume required for third-party service providers to maintain a viable business model and lower per-unit cost for service. Equity created through ordinance is ensured by allowing for all users to participate in a similar level of access and sharing the cost of services across the population.

Under the current conditions in the region, participants typically pay flat rates for waste disposal, and additional costs for recycling and organic waste diversion. This can create a disincentive to participation, whereby the people participating in the system receive less benefits than those that don't. Funding mechanisms that offset the cost of diversion can help to correct this imbalance. Typically called Pay-As-You-Throw (PAYT) systems, these use the volume of waste to calculate disposal costs rather than flat rates. Under a PAYT system, a household that generates less waste pays less for disposal. Few communities use per-bag or volume-based systems at present, with the majority of communities and haulers having gone to flat rate subscriptions or service contracts. A change to PAYT systems would require the haulers to provide additional infrastructure on trucks and in billing systems to accommodate the services, but as these are more widely adopted, they will be more readily available.

Local governments and representatives are also wary of using non-voter approved funding mechanisms that will impact residents' tax burdens. An historic resistance to additional fees or taxes assessed on non-users of services is a barrier that may be addressed through an extensive public education and marketing campaign promoting participation and perceived value. User fees may continue to be the backbone of the Plan's Management Component funding system, as they are at present in many areas. As behaviors change and recycling and organics diversion participation increases, it may be necessary to create additional financial mechanisms to support services. It is paramount that waste disposal and diversion fees for service do not create an undue burden on residents to participate in each county's materials management system.

Historically communities have relied on a variety of legislative mechanisms to provide solid waste services and infrastructure. These include municipal utility systems, special assessments, service charges, user fees, and licensing programs established under state statute, contractual service arrangements, voter-approved taxes and millages, and designated facility requirements. Many of the disposal, collection, and transfer systems currently operating within the central Upper Peninsula utilize one or more of these authorities. The transition to a materials management framework does not require the creation of entirely new governance structures; rather, it creates opportunities to apply existing authorities to support recycling, organics diversion, waste reduction, and other materials utilization activities in addition to traditional solid waste services.

Standards for materials management operations and service provisions can be adopted through a variety of means. The most typical is the use of police-power regulatory ordinances that create standard definitions, assign responsibilities, ensure collection frequency, and create enforceable mechanisms. A police power ordinance can only be enforced in a single jurisdiction and be based in the powers and responsibilities available to different types of local governments. Counties can adopt police power ordinances that apply across local jurisdictions for materials management since that is a responsibility designated by statute and through Part 115. Intergovernmental service agreements for

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materials management can be created by joint groups of local governments to create authorities, provide for financing, or provide common services. These are typically used and adopted where the scope of an issue, such as materials management, extends beyond the borders of single jurisdictions.

Michigan's available enabling legislation for local governments provides considerable flexibility to tailor programs to local needs. Because the planning area includes both densely populated urban centers and sparsely populated rural communities, no single mechanism is likely to be appropriate for every jurisdiction. The most effective mechanisms will be those that provide reliable funding, equitable access to services, administrative efficiency, and long-term sustainability while remaining responsive to local circumstances. Funding mechanisms provide the financial resources necessary to construct infrastructure, deliver services, and maintain operations, while enforcement mechanisms ensure consistent participation, establish performance expectations, and create accountability among service providers and users.

At present, Marquette and Dickinson County use intergovernmental agreements under the provisions of Act 233 of 1955 to create and maintain their solid waste management systems and authority operations and governing bodies. An intergovernmental agreement does not necessitate the creation of another body to oversee and administer it, and can be limited in scale and scope to the goals of the common bodies. Mechanisms like Act 35 of 1951 “The Intergovernmental Contracts Between Municipal Corporations Act” or Public Acts 7 and 8 of 1967 “The Urban Cooperation Act” and “The Intergovernmental Transfers of Functions and Responsibilities Act”, respectively, can provide for the creation of administrative authorities and/or joint contracting mechanisms.

Since the geographic size and low population density of the planning area are limiting factors in providing additional materials management services from a business standpoint, joint action by local governments can result in lower costs and provision of services where they would not be otherwise provided by the private sector. Consistent service provisions and public funding mechanisms for municipally run or administered programs is critical, and communities must choose the method that best meets their needs and desired service level. Waste disposal and diversion costs should be spread across the community, not just come from those that participate, in order to maintain a consistent public program and guarantee a level of participation in alternative systems. The use of public funds for recycling and organics diversion also provides additional opportunities to leverage additional state and federal funding to provide a higher level of service through support that is not available to the private sector. Because of these qualities, a public structure and funding mechanism is considered an appropriate option for satisfying the mandate to provide waste diversion programs where the same are not currently or feasibly available through the private market.

County-level materials management ordinances can be used as a larger-scale vehicle of service implementation, ensuring that programs and services are provided in common across local units. Two central U.P. counties, Delta and Marquette, use a county-wide ordinance to implement services that were previously described in their county Solid Waste Management Plans. These formed the substantive basis for further regulation, and the Materials Management Plan can be used by other local governments within the planning area for the same purpose.

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An initial ordinance created at the formation of the Delta County Solid Waste Management Authority creates a flow control mechanism that provides for waste generated within the county to be delivered to the Delta County Landfill. A second, more recent ordinance sets a common standard for waste hauler licensing to ensure the Authority's ability to track and enforce transportation, delivery, and creates a financial mechanism through surcharges to administer the Authority's operations. At the creation of the Marquette County Solid Waste Management Authority, its Act 233 intergovernmental agreement set standards for the operation and financing of the Authority. The agreement set an in-county flow control that requires that all solid waste generated to enter the Authority's facilities through haulers licensed in each municipality. These licenses help track the amount of waste entering the landfill from each municipality, and create the billing mechanism between the Authority, municipalities, and haulers for the Authority's operations. A second police power ordinance adopted by the Marquette County Board of Commissioners sets the standards for defining managed materials, collection and disposal frequency, and an enforcement mechanism for flow control and ordinance violations. Through regulatory frameworks, Delta and Marquette County both incentivize and control the flow of waste to their own facilities through flow control mechanisms, which ensure waste is delivered to publicly funded and maintained facilities, and prohibit wastes from being imported or exported to other areas.

Depending on the regulatory or organizational options chosen, local governments can fund and implement a program themselves, require through ordinance or contract that a service provider offer a minimum level of service and bill residents directly, or delegate responsibility wholly to the private sector. If a local government identifies that recycling and organics collection and/or hauling services should be provided by the private market, and the municipality will use public funds to provide those services, it should issue a "Request for Proposal" (RFP) that includes the relevant needs. An RFP is a formal document that entities use to solicit bids from potential vendors or contractors for a project or service. At a minimum, RFPs should align to common recycling program provisions and frequencies, along with ensuring that the collected materials can be accepted at local Materials Recovery Facilities. A municipality would not want to collect glass or certain types of materials if their local recovery facilities do not accept that material.

Ordinances can create the framework for funding and enforcement mechanisms to provide common services and clear operational standards. Contractual agreements created by local units of government can be used to align materials management goals to service provisions. Requirements placed directly within RFPs and then contracts are more readily enforceable with haulers and service providers. At a minimum, to address the deficiencies cited by this Plan, ordinances and contracts should incorporate standardized services definitions, collection frequencies, and operational provisions. They should use hauler licensing to track, monitor, and report the generation, transportation, and disposal or diversions of materials.

In the central U.P., municipalities and legislative bodies should review how proposed changes might affect current service agreements with haulers or require contract modifications. Consider timing ordinance updates to coincide with contract renewals or service transitions to minimize operational disruptions. It is also beneficial to establish measurable outcomes and reporting systems to evaluate the effectiveness of ordinance changes, creating a framework for future adjustments based on real-

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world performance and community feedback. Communities that rely exclusively on voluntary participation may experience lower service utilization and reduced economies of scale, whereas communities that establish clear service requirements often achieve more stable funding and higher diversion rates. For this reason, the Planning Committee encourages local governments to evaluate funding and enforcement tools together as complementary components of an integrated materials management system.

Siting Process for Materials Management Facilities

The Central Upper Peninsula Materials Management Planning Committee has identified that there exists sufficient capacity to accommodate the disposal of solid wastes through existing facilities, but that an extensive capacity gap exists in the development of materials utilization facilities. Under Part 115, any expansion or development of a new type II landfill for municipal solid waste shall include a demonstration that the materials utilization options within the planning area have been exhausted, and that a request for such shall be communicated by the County Board of Commissioners.[53] Additional materials management facilities that require communication or general permitting by EGLE shall demonstrate consistency with this Materials Management Plan through a review of such by the CUPMMPC and approval by the respective County Board of Commissioners.

The CUPMMPC began a review of the siting regulations contained in each county's respective Solid Waste Management Plan, and identified common requirements that would be applicable to the siting and development of disposal and materials utilization facilities. Understanding that local control is a priority, the Committee's siting process is designed to delegate siting authority to local units as much as possible under the processes outlined in Part 115. This goal ensures that currently existing facilities can continue and expand their operations, and allow for the development of new materials utilization facilities under a minimum barrier of requirements.

The following process describes the criteria and procedures to be used to site materials management facilities and determine consistency with this Plan. In the case that a local unit of government is delegated the authority to site a materials management facility, an applicant should confirm with the municipality that the local zoning regulations are complied with. The Committee's review of a siting application shall include documentation from the applicant and local unit of government for any zoning or host community approval required. See *Appendix E: Local Unit Zoning Ordinances with Siting Requirements*, to confirm if a municipality has incorporated requirements that may be applicable to specific types of materials management facilities.

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[53] MCL 324.11509(9): The department shall not approve an application for a construction permit for a new type II landfill that is not contiguous to an already permitted type II landfill or for a new municipal solid waste incinerator unless the approval is requested by the county board of commissioners. The county board of commissioners' request shall include a demonstration that materials utilization options have been exhausted.

Process

Any proposal to construct a disposal facility or a materials utilization facility shall be deemed inconsistent with this Plan unless the proposal can demonstrate consistency with this Plan, and meet the process and siting criteria contained herein. A proposal shall demonstrate that it meets the requirements of this section; a classification as "automatically consistent" does not exempt any proposal from these requirements or procedures.

The text of this section shall take precedence over any charts or visuals included.

Authorized Facility Types

By the authorization of this Plan, materials management facilities may only be included in the Plan if they meet the requirements set forth in the following process. All types of disposal facilities and materials utilization facilities regulated by Part 115 may be authorized within the planning area.

Demonstration of Consistency with the Materials Management Plan

A proposal may be deemed automatically consistent with this Plan if it can meet one of the following processes:

1. [Following 324.11585(1)] The proposed facility is a Disposal Area that does not require a license or permit under Part 115, or the facility is a Materials Utilization Facility. These proposals shall be automatically consistent with this Plan if the applicant presents documentation from the local unit of government exercising zoning authority demonstrating the proposal's compliance with the local zoning ordinance.

2. [Following 324.11585(2)] A proposed facility shall be automatically consistent with this Plan if the proposal demonstrates one of the following:
   a. The proposal is related to expansion or construction of a disposal or materials utilization facility that existed prior to this Plan's initial adoption.
   b. The proposal meets a local unit of government's zoning requirements and provides a copy of the approved zoning permit and the minutes of the meeting(s) in which the approval body considered the proposal, if applicable.
   c. The proposal is for a facility that is required to provide a notification to the Department of Environment, Great Lakes, and Energy, but is not required to register, obtain a general permit, or obtain an operating license and construction permit.
   d. The proposal is for a facility to expand beyond its initial proposed capacity into another classification of regulation required by Part 115.

A proposal that is not automatically consistent with this Plan may be considered consistent if it meets the following requirements:

1. [Following 324.11585(3)(a)] A proposed facility is a captive type III landfill that accepts only waste generated by the owner or operator of the landfill, and the landfill met local land use requirements when initially sited.

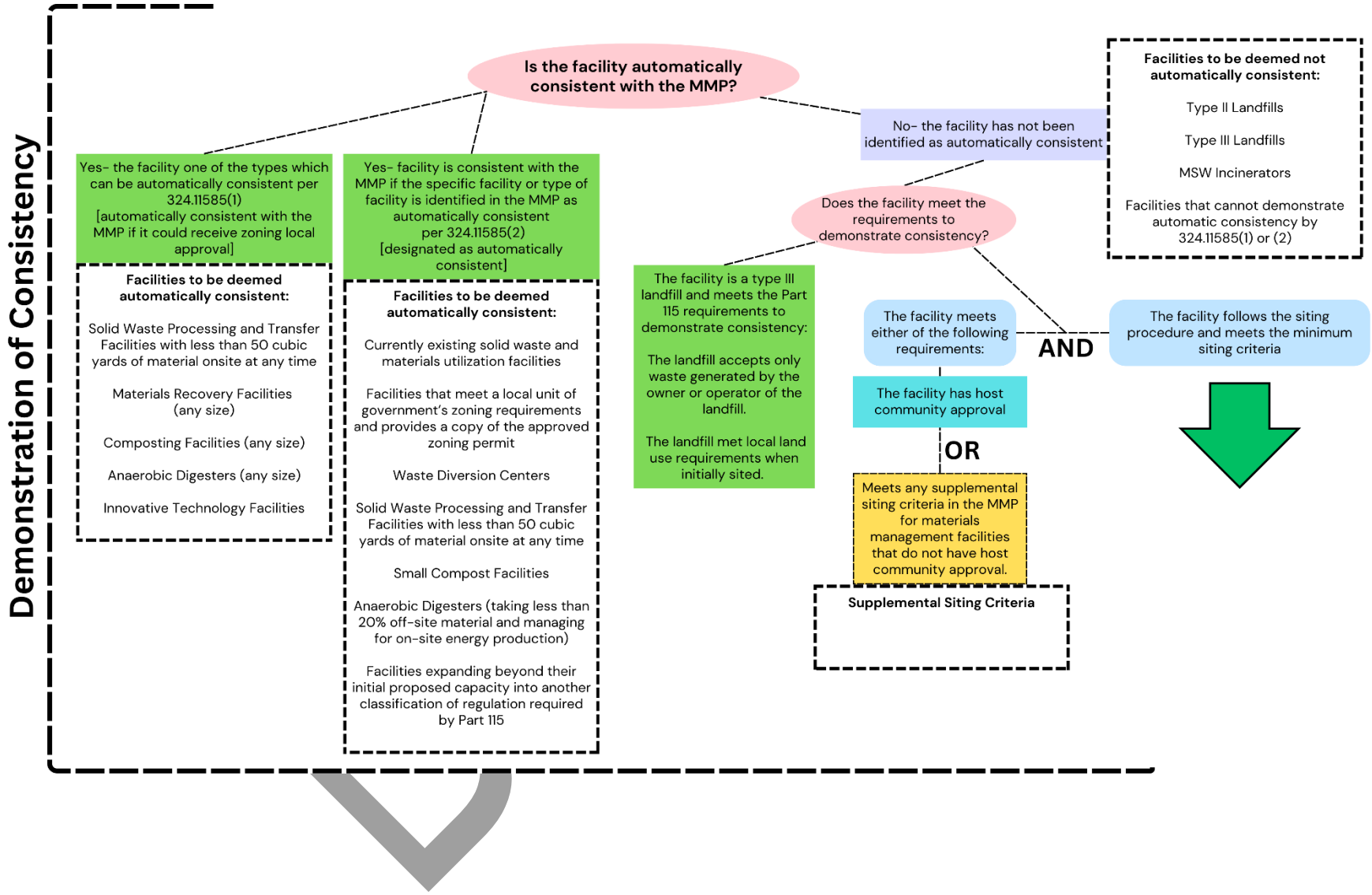
2. [Following 324.11585(3)(b) and (c)] A proposed facility meets the following requirements:

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a. The proposal demonstrates that the siting procedure and minimum siting criteria in this Plan are met.
b. The proposal demonstrates host community approval, or meets the supplemental siting criteria of this Plan for facilities that do not have host community approval.

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Figure 16: *Siting Process Demonstration of Consistency*



Demonstration of Consistency Review Procedure and Requirements

1. To initiate a review under this Plan, the facility developer shall submit at least one physical copy and one reproducible digital copy of the proposal and any other documents related to demonstrating the requirements of this process to the Central Upper Peninsula Materials Management Planning Committee. The scale associated with any document shall be sufficient to demonstrate the requirements.

2. The Designated Planning Agency shall have 30 days to review the application for administrative completeness in accordance with the requirements listed below. If an application is not administratively complete, the Designated Planning Agency shall notify the developer and allow an opportunity to provide additional information to make the application complete. A determination of administrative completeness shall be made within 30 days of the request for further information by the Designated Planning Agency.

3. A proposal for a materials management facility shall include the following:
    a. The proposal shall specify the type of materials management facility being proposed.
    b. The proposal shall contain information on the site location and orientation. This shall include a legal land description of the project area, a map and description of all access and public roadways showing their location and surface materials, and the surrounding zoning and present usage of all property within one-half mile of the site. For disposal areas, the proposal shall include a map documenting that the facility is not located within isolation distance of any wellhead protection area.
    c. The proposal shall include a name, address, and telephone number for the applicant, the property owner(s) of the site, and a designated contact person for the facility applicant (if different than the applicant).
    d. The proposal shall demonstrate any minimum requirements specified in Part 115 for the respective facility type, and shall include a written and signed statement from a licensed professional engineer that the proposed development is consistent with Part 115. For disposal facilities, the proposal shall include any application materials related to the construction permit necessary for local health department and EGLE approval.
    e. The proposal shall contain a written description of the proposed site and facility design, including a site plan of exterior and interior features, and shall include a statement concerning the facility's potential capacity to manage an annual amount of materials, specified by type of material, on a proposed operational level.
    f. The proposal shall contain documentation of how the site, facility, and operations meet local zoning requirements, if applicable, for the type of facility proposed.
    g. The proposal shall evaluate how the facility and operations address an identified need or goal in the Central Upper Peninsula Materials Management Plan.

4. Upon a positive determination by the Designated Planning Agency that an application is considered administratively complete, the Designated Planning Agency shall place the review of the proposal on the agenda of the next regular or special meeting of the Central Upper Peninsula Materials Management Planning Committee. If no meeting is presently scheduled,

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one shall be called within a reasonable timeframe for consideration of the proposal.

5. The Central Upper Peninsula Materials Management Planning Committee shall review the proposal and shall make a recommendation to the respective host County Board of Commissioners under whose jurisdiction the proposal is to be sited. The recommendation shall include the reasons and facts supporting the decision. The Committee shall include in its review whether the proposal demonstrates that it addresses an identified capacity need or goal included in the Central Upper Peninsula Materials Management Plan.

6. Upon receiving the Central Upper Peninsula Materials Management Planning Committee's recommendation, the applicable County Board of Commissioners shall provide a determination of whether the proposal is consistent with the Materials Management Plan. The County Board of Commissioners shall promptly notify the owner or operator initiating the proposal of its determination.

7. If a determination by the County Board of Commissioners has not been rendered within 45 business days from the transmission of the recommendation of the Central Upper Peninsula Materials Management Planning Committee, the application shall be considered automatically consistent.

The Minimum Siting Process Criteria

Where there are no local siting criteria in place, a proposal may demonstrate that its siting meets the minimum requirements of Part 115, and any additional requirement below, for the respective facility type. In the absence of Part 115 siting requirements, a proposal shall at a minimum demonstrate the following:

1. A materials utilization facility shall be sited at a minimum setback distance of 200 feet measured from the property line of any property that contains a residential use.
2. A landfill shall be sited at a minimum setback distance of 1,000 feet from the property line of any property that contains a residential use.
3. A materials management facility shall be located on, or have direct access by documented easements, a paved, all-season public road. If the facility does not have direct access to such a roadway, the developer shall sign a statement with the local road-owning authority for an agreement to provide for upgrading and/or maintenance of the road serving the facility.
4. A materials management facility shall be sited at a minimum setback distance of 50 feet measured from the nearest edge of a public road right-of-way.
5. A materials management facility shall not be sited in a designated historic or archaeological area as defined by the state historical preservation officer.

[Wording may be needed here to include specific requirements for individual counties in excess of the minimum requirements]

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Demonstration of Host Community Approval

The proposal may demonstrate host community approval by one of the following:

1. A copy of an approved permit from the issuing body that the proposal has received zoning approval from a local unit of government.

2. A signed agreement, resolution, letter, or other document from the chief elected official of the municipality in which the proposal is sited that the proposed facility meets the satisfaction of the local governing body.

Supplemental Siting Criteria for Proposals that Do Not Have Host Community Approval

A proposal that does not have documentation of host community approval shall, in addition to the determination of consistency with the materials management plan, be subject to any additional requirements determined by the County Board of Commissioners under whose jurisdiction the proposal is to be sited.

[Wording may be needed here to include specific requirements received from County Boards of Commissioners]

Exceptions to Demonstrations of Consistency

The County Board of Commissioners, under whose jurisdiction the proposal is to be sited, may base its determination of consistency with the materials management plan on the following exceptions:

1. [Following 324.11585(6)] If the proposal is for a type II landfill or municipal solid waste incinerator, a proposal may be deemed inconsistent with the materials management plan if there is at least 66 months of available solid waste disposal capacity within the planning area.

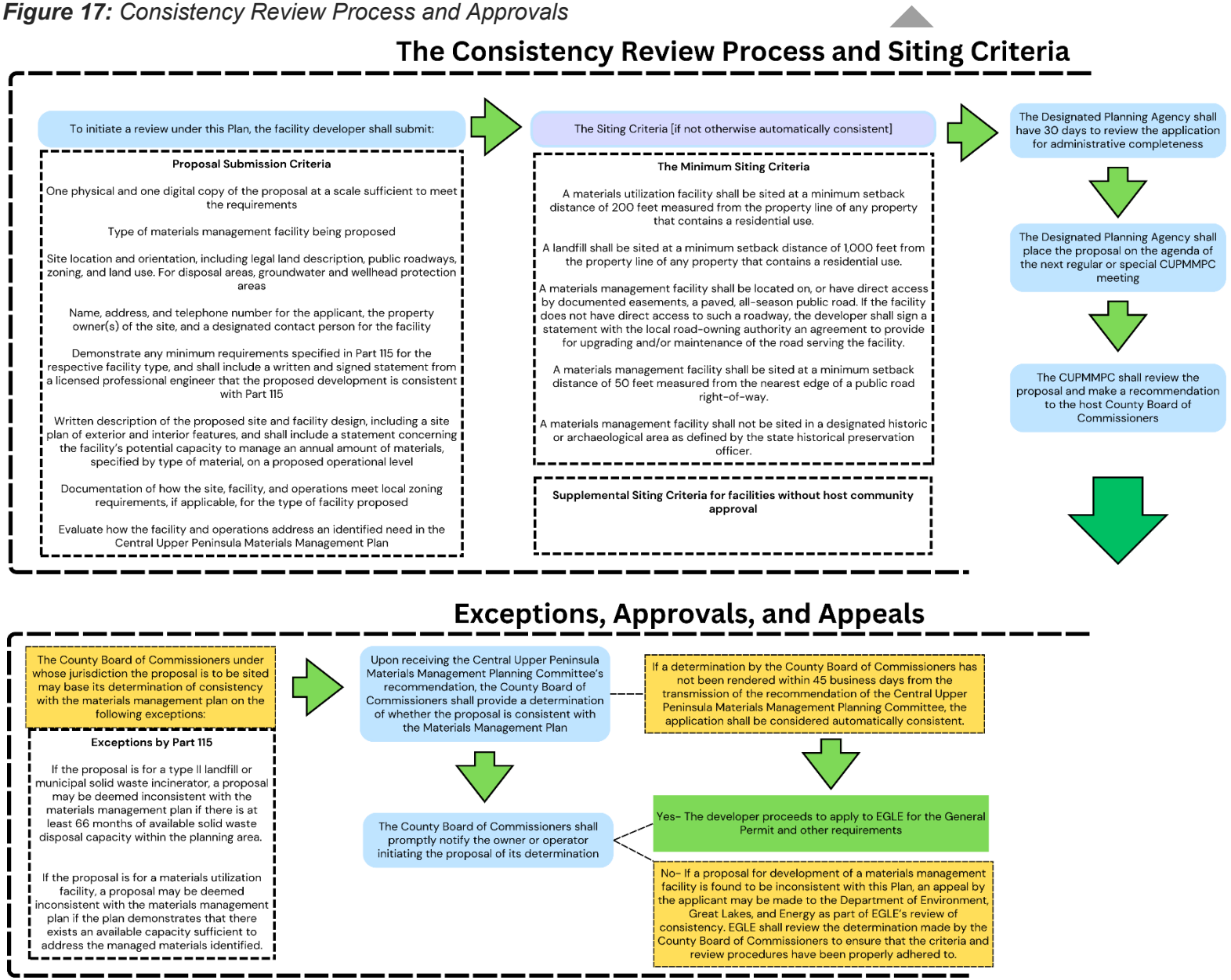
2. [Following 324.11579(2)] If the proposal is for a materials utilization facility, a proposal may be deemed inconsistent with the materials management plan if the plan demonstrates that there exists an available capacity sufficient to address the managed materials identified.

Appeals Process

If a proposal for development of a materials management facility is found to be inconsistent with this Plan, an appeal by the applicant may be made to the Department of Environment, Great Lakes, and Energy as part of EGLE's review of consistency. EGLE shall review the determination made by the County Board of Commissioners to ensure that the criteria and review procedures have been properly adhered to.

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Figure 17: *Consistency Review Process and Approvals*



Education

Educating residents on best practices is essential for maximizing the effectiveness and cost-efficiency of materials management programs. While infrastructure investments are necessary to expand recycling, composting, and waste diversion opportunities, the success of those investments ultimately depends on public participation. Educational outreach can effectively increase participation rates, improve procedures, and decrease material contamination rates, making a program more cost-effective, sustainable, and long-lasting.

When residents understand which materials can be collected in each system and how to properly prepare them, they significantly reduce contamination that forces entire loads to be sent to landfills instead of materials recovery facilities. Well-informed residents also achieve higher participation and diversion rates, reducing disposal costs while extending landfill lifespan and deferring capital costs for expansion and closure. By investing in comprehensive resident education, municipalities can transform their programs from costly solid waste management disposal services into efficient resource recovery systems that benefit both the environment and budgets.

Public engagement conducted during development of this Plan consistently identified confusion regarding what materials can be recycled, where materials can be taken for diversion, whether materials are actually recycled after collection, and the environmental and economic benefits associated with materials management. These concerns are not unique to the central Upper Peninsula and have been identified nationally as barriers to participation in recycling and organics diversion programs. A successful education strategy should focus on increasing public awareness, reducing contamination in collection programs, promoting source reduction and reuse activities, supporting behavior change, and increasing participation in recycling and organics management systems.

Educational materials should be clear, consistent, visually recognizable, and coordinated throughout the planning area to reduce confusion among residents and visitors moving between communities. Whenever practical, participating counties, municipalities, authorities, haulers, and facilities should utilize common terminology, collection guidance, signage, and educational resources.

The Planning Committee recommends that CUPPAD, the Materials Management Planning Committee, local governments, authorities, and participating service providers collaborate to develop a regional education and outreach program. Regional coordination can reduce duplication of effort while ensuring that accurate and current information is available throughout the planning area. Educational efforts should include:

- A centralized public-facing materials management website containing information on recycling, composting, disposal, hazardous waste, and diversion opportunities.
- Interactive maps showing recycling drop-off sites, composting facilities, transfer stations, public-space recycling locations, and household hazardous waste collection sites.

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- Development of standard educational materials that can be customized by counties and municipalities.
- Regional advertising campaigns promoting recycling, organics diversion, waste reduction, and litter prevention.
- Social media, radio, newspaper, utility billing inserts, and public service announcements.
- Translation of educational materials into formats accessible to persons with disabilities and seasonal residents when practical.

Figure 18: Local Educational Flyer Example



Communities implementing new recycling programs should incorporate education before, during, and after program rollout. Households receiving collection carts should receive accompanying educational materials explaining accepted materials, collection schedules, and program benefits. Recycling education should be repeated periodically, recognizing that new residents enter communities and accepted materials may change over time.

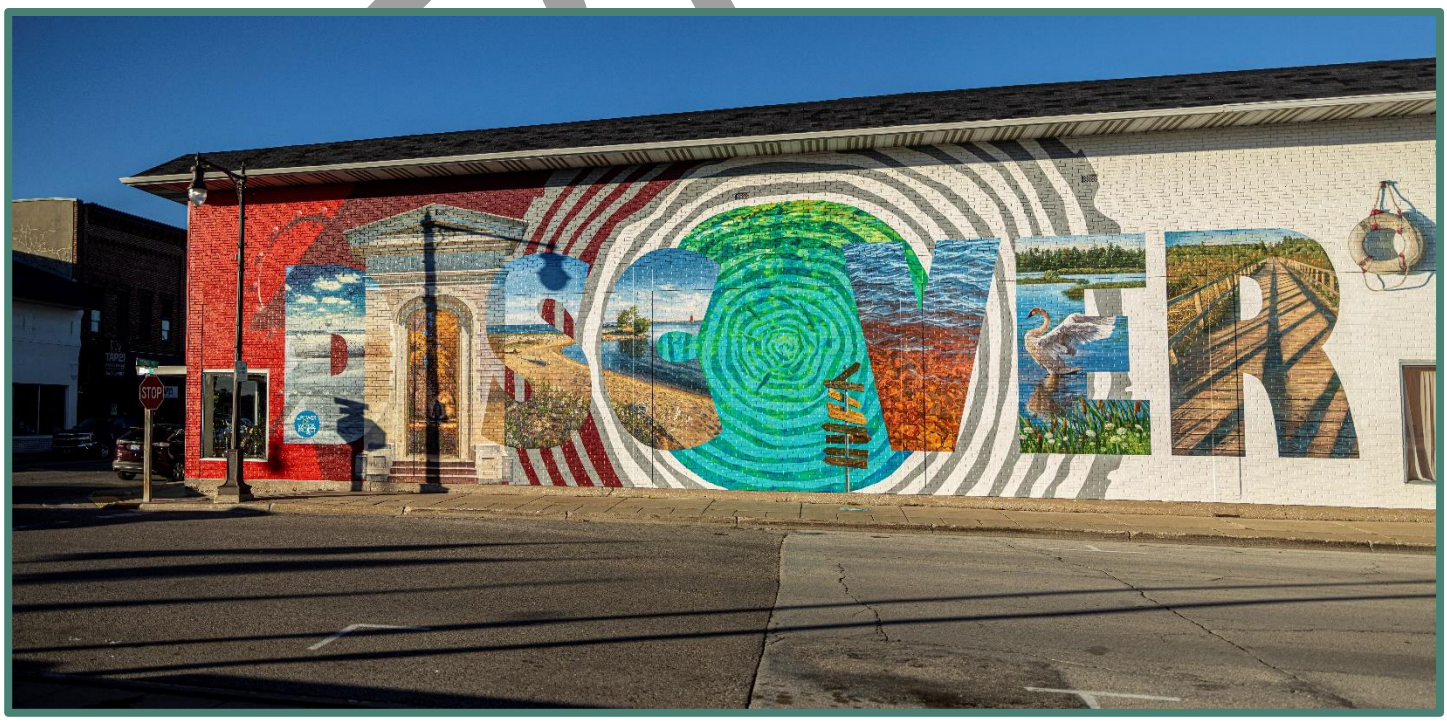
Food waste and yard waste represent some of the largest opportunities for increased diversion within the planning area. However, participation in food waste diversion programs remains limited and many residents are unfamiliar with composting options. Where practical, educational materials should demonstrate the economic benefits of reducing food waste and highlight successful local composting programs operating within the planning area.

Long-term success depends upon building awareness among future generations. Educational partnerships with schools, colleges, universities, libraries, and youth organizations create opportunities to integrate sustainability concepts into everyday learning. Education at younger ages helps establish lifelong habits and increases household participation. Without ongoing

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education and outreach at all levels, expanded infrastructure alone is unlikely to achieve the diversion goals established by this Plan.

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ADMINISTRATION

Administering and implementing the Central Upper Peninsula Materials Management Plan is the responsibility of the entities identified in Part 115, with consideration for their authority and capacity to undertake materials management activities. Overall, each County Board of Commissioners within the planning area is the respective County Approval Authority, and shall be responsible for the implementation and enforcement of this Plan. The Board of Commissioners may designate additional entities to provide oversight and ensure the initiation of the activities required or proposed. The ultimate decision-making rests with the respective Board of Commissioners under whose jurisdiction the activity will occur.

The Board of Commissioners may take such actions as needed at a county-level to provide for funding, implementation, and enforcement of the Materials Management Plan, including, but not limited to, applying for federal, state, and other grants, or using funding sources that may be available, such as the levy of fees, surcharges, or millages. The Board of Commissioners is also responsible for any legislative action that may be necessary to accomplish the goals of this Plan that do not conflict with any federal or state statutes.

Table 17: Central Upper Peninsula Materials Management Responsibilities

Responsibilities	Name/Title/Organization	Qualifications/Authority
Implementing the access requirements of the benchmark recycling standards: Curbside recycling access in Census-identified urban areas by 2026	(Delta County) Escanaba-Soo Hill-Wells-Gladstone-Kipling: City of Escanaba, City of Gladstone, Brampton Township, Escanaba Township, Ford River Township, Wells Township	Local units of government within Census-identified urban areas
	(Dickinson County) Bass Lake/Moon Lake-Iron Mountain-Kingsford-East Kingsford-Quinnesec-Norway-Vulcan-Loretto: City of Iron Mountain, City of Kingsford, City of Norway, Breitung Charter Township, Norway Township, Waucedah Township	Local units of government within Census-identified urban areas
	(Marquette County) West Ishpeming-Ishpeming-Negaunee-Trowbridge Park-Marquette-Harvey: City of Ishpeming, City of Marquette, City of Negaunee, Chocolay Charter Township, Ishpeming Township, Marquette Charter Township, Negaunee Township, Sands Township	Local units of government within Census-identified urban areas
	(Menominee County) Menominee-M-35 north of city limits: City of Menominee, Menominee Township	Local units of government within Census-identified urban areas

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Table 17: Central Upper Peninsula Materials Management Responsibilities		
Responsibilities	**Name/Title/Organization**	**Qualifications/Authority**
Implementing the access requirements of the benchmark recycling standards: Curbside recycling access in communities over 5,000 residents by 2028	City of Escanaba	Local unit of government with a population over 5,000
	City of Gladstone	Local unit of government with a population over 5,000
	Breitung Charter Township	Local unit of government with a population over 5,000
	City of Iron Mountain	Local unit of government with a population over 5,000
	City of Kingsford	Local unit of government with a population over 5,000
	City of Norway	Local unit of government with a population over 5,000
	City of Ishpeming	Local unit of government with a population over 5,000
	City of Marquette	Local unit of government with a population over 5,000
	Chocolay Charter Township	Local unit of government with a population over 5,000
	Forsyth Township	Local unit of government with a population over 5,000
Implementing the access requirements of the benchmark recycling standards: At least 1 drop-off in each county for every 10,000 residents without curbside recycling service by 2032	Alger County	County containing residents without access to curbside recycling service
	Delta County	County containing residents without access to curbside recycling service
	Dickinson County	County containing residents without access to curbside recycling service
	Marquette County	County containing residents without access to curbside recycling service
	Menominee County	County containing residents without access to curbside recycling service
	Schoolcraft County	County containing residents without access to curbside recycling service

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Table 17: Central Upper Peninsula Materials Management Responsibilities		
Responsibilities	**Name/Title/Organization**	**Qualifications/Authority**
Identifying the materials utilization framework and the achievement of the materials management goals.	Central Upper Peninsula Materials Management Planning Committee	The permanent public body created by interlocal agreement to effectuate the joint exercise of powers and duties of the counties within the planning area to identify, create, review, coordinate, and implement a materials management plan.
	Central Upper Peninsula Planning and Development Regional Commission	The Designated Planning Agency designated by interlocal agreement to serve as the primary governmental resource for materials management planning, prepare the materials management plan, administer the materials management planning committee, and coordinate the adoption and implementation of the materials management plan for the planning area.
Otherwise monitoring, implementing, and enforcing the MMP and providing any required reports to the department.	Alger County Board of Commissioners	County Approval Agency for Alger County
	Delta County Board of Commissioners	County Approval Agency for Delta County
	Dickinson County Board of Commissioners	County Approval Agency for Dickinson County
	Marquette County Board of Commissioners	County Approval Agency for Marquette County
	Menominee County Board of Commissioners	County Approval Agency for Menominee County
	Schoolcraft County Board of Commissioners	County Approval Agency for Schoolcraft County
Administering the funding mechanisms that will be used to implement the MMP	County Approval Authorities, Local units of government	Local units of government with fiscal oversight responsibilities within the planning area.

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Amendments

The Central Upper Peninsula Materials Management Plan (CUPMMP) is intended to be a dynamic planning document that may require modification over time to reflect changes in materials management practices, infrastructures, policies, and regulatory requirements. This amendment process establishes triggers and procedures for modifying this Plan in a manner consistent with Part 115 of the Natural Resources and Environmental Protection Act, as amended, and guidance issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) for materials management planning.

Amendments may be necessary to address:

- Development of new materials management facilities
- Expansion or closure of existing facilities
- Changes to siting criteria or procedures
- Changes in county ordinances affecting materials management
- Updates to data, maps, or planning assumptions
- Revisions to materials management goals, programs, or strategies
- Changes required to maintain compliance with Part 115.

The amendment process ensures that any changes to the CUPMMP are reviewed by appropriate stakeholders, approved by local government, and reviewed by EGLE when required.

Plan amendments may be classified as Administrative Amendments or Substantive Amendments, depending on the nature and impact of the proposed change.

Administrative Amendments
Administrative amendments include minor updates that do not significantly affect the policies, facility capacity, or siting provisions of the Plan. Examples include:

- Transportation infrastructure changes
- Population and population density changes
- Updates to existing facility inventory information or ownership
- Inclusion of local ordinances to the extent that the ordinances regulate noise, litter, odor, dust, and other site nuisances at a materials management facility, in addition to landscaping, screening, other ancillary construction details, and hours of operation at a materials utilization facility; do not regulate the development or other operational aspects of a materials management facility or the location of a disposal area; and are not more stringent than the requirements of Part 115.
- Minor corrections or clarifications to text
- Updates to maps, tables, or figures
- Administrative changes to agency names or program descriptions
- Updates to data that do not affect planning conclusions

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Administrative amendments shall be reviewed and approved by the Central Upper Peninsula Materials Management Planning Committee (CUPMMPC). Documentation of administrative amendments shall be maintained in the official Plan record, and shall be incorporated in the next substantive amendment of the MMP.

Administrative amendments do not require formal approval by municipalities or EGLE unless otherwise required by state law.

Substantive Amendments

Substantive amendments involve changes that may affect the overall planning framework or capacity assumptions of the CUPMMP. Examples include:

- Addition of new materials management facilities
- Expansion of landfill capacity or service area
- Changes to the facility siting process or siting criteria
- Substantive modifications to county materials management policies or programs
- Changes to the planning area, participating jurisdictions, or responsible parties
- Adoption of new ordinances that affect materials management infrastructure
- Modifications required by EGLE to maintain compliance with Part 115.

Substantive amendments must follow the full amendment review and approval process described below.

Amendment Initiation

A proposed amendment to the CUPMMP may be initiated by:

- A County Approval Authority within the Planning Area
- The Central Upper Peninsula Materials Management Planning Committee
- The Designated Planning Agency
- The Michigan Department of Environment, Great Lakes, and Energy (EGLE)

Requests for plan amendments shall be submitted in writing to the Designated Planning Agency and shall include sufficient information to identify and describe the proposed change(s) and their impact on the materials management system.

Upon receipt of a proposed amendment, the Designated Planning Agency shall:

1. Review the proposed amendment and determine whether it would constitute an administrative or substantive amendment, and determine its consistency and impact to the CUPMMP.
2. Prepare draft amendment language and supporting information.
3. Present the proposed amendment to the CUPMMPC for review and recommendation to take action on the amendment.

The Committee may request additional information or modifications before recommending the amendment for further consideration.

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For administrative amendments, the approved amendment text shall be communicated to each County Approval Authority.

For substantive amendments, public participation and approvals shall follow the amendment process for materials management plans in accordance with Part 115 and EGLE guidance.

The Designated Planning Agency shall maintain records of all CUPMMP amendments, including:

- Amendment requests and supporting documentation
- CUPMMPC recommendations
- Public notices and comments
- Approval resolutions from the County Approval Authorities and participating municipalities
- EGLE approval documentation, when applicable.

Approved amendments will be incorporated into the official Materials Management Plan and maintained as part of the permanent planning record.

Periodic Plan Review

The Central Upper Peninsula Materials Management Planning Committee will periodically review the Central Upper Peninsula Materials Management Plan to ensure continued compliance with Part 115 and to evaluate progress toward the planning area's materials management goals, including waste reduction, recycling, and diversion objectives. Plan amendments may be initiated as needed to address identified changes or emerging materials management needs.

The CUPMMPC shall prepare and submit a CUPMMP review to each County Approval Authority in response to a County Approval Authority requesting a review, or shall provide one prior to the fifth anniversary date of the approval of the initial MMP, whichever occurs first. The purpose of the review is to ensure that the CUPMMP complies with Part 115 and to evaluate the progress that has been made in meeting the CUPMMP's materials management goals, including the benchmark recycling standards.

After considering the CUPMMP review provided, each CAA shall communicate whether an amendment to the CUPMMP is needed, or one is not needed, in order to advance the materials management goals. The Designated Planning Agency shall provide these communications to the CUPMMPC and EGLE.

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APPENDICIES

Appendix A: Materials Management Facility Inventory

Appendix B: Transportation Infrastructure

Appendix C: Waste Characteristics

Appendix D: Residential Services

Appendix E: Local Unit Zoning Ordinances with Siting Requirements

Appendix F: Local Unit Materials Management Ordinances

Appendix G: Example Ordinance Provisions

Appendix H: Public Input During MMP Development

Appendix I: Intergovernmental Agreement

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Appendix A: Materials Management Facility Inventory

Facility Name	EGLE WDS ID	Facility Acknowledgement for MMP	Type of Facility										Operator	Public or Private Facility	Service Group	Materials Collected													Physical Characteristics				
			Type II Landfill	Type III Landfill	Incinerator	Transfer Station	Materials Recovery Facility	Composting Facility	Anaerobic Digester	Innovative Technology Facility	Waste Diversion Center	Exempt Site				Municipal Solid Waste	Plastics (1-7)	Other Plastics	Paper	Cardboard	Metals	Glass	Organics	Yard Waste Only	Styrofoam	E-waste	Scrap Tires	Batteries	Other Materials	Household Hazardous Waste	County	Physical Address	Latitude/Longitude	Acreage	Capacity
Delta County Solid Waste Management Authority	410730	Yes	X				X	X			X		Delta County Solid Waste Management Authority	Public	General Public/Commercial	X	X	X	X	X	X		X			X	X	X		X	Delta	5701 19TH AVE N ESCANABA, MI 49829	45°45'58.22"N 87°07'32.97"W	278	
Marquette County Solid Waste Management Authority	451188	Yes	X				X	X			X		Marquette County Solid Waste Management Authority	Public	General Public/Commercial	X	X	X	X	X	X	X	X			X	X	X		X	Marquette	600 COUNTY ROAD NP MARQUETTE, MI 498	46°29'45.56"N 87°27'57.76"W	210	4.7 million cu.yds.
Michigan Environs, Inc.	442570	Yes	X			X							WM	Private	General Public/Commercial	X	X	X	X	X	X	X									Menominee	W6111 ELMWOOD RD MENOMINEE, MI 49	45°10'11.80"N 87°38'09.68"W	420	
Wood Island Waste Management, Inc.	444301	Yes	X			X							GFL	Private	General Public/Commercial	X	X	X	X	X	X	X					X				Alger	E10081 M-28 WETMORE, MI 49894	46°22'34.62"N 86°35'44.93"W	331	50000 cu.yds.
Hiawatha Shores Landfill, Inc.	485207		X			X							Hiawatha Shores, Inc.	Private	General Public/Commercial	X															Schoolcraft	3098N RIVER RD GULLIVER, MI 49840	46°03'56.71"N 86°03'40.45"W	45	
Niagara Development, LLC.	470397			X									Niagara Development, LLC	Private	Commercial/Industrial																Dickinson	KIMBERLY ROAD, QUINNESEC MI, 49876	45°46'13.19"N 87°57'28.75"W	68	
Billerud Quinnesec, LLC	474294			X									Billerud Americas	Private	Onsite															Dickinson	W6582 US-2 NORWAY, MI 49870	45°46'42.23"N 87°57'29.29"W	94	
Billerud Escanaba, LLC	395326			X									Billerud Americas	Private	Onsite															Delta	7100 COUNTY 426 M.5 RD ESCANABA, MI	45°49'20.01"N 87°05'30.43"W	132	
Haywire Landfill	478695			X									Zellar MP Real Estate, Inc.	Private	Commercial/Industrial																Schoolcraft	453 S MACKINAC AVE MANISTIQUE, MI 498	46°00'06.09"N 86°15'40.70"W	550	
Stony Creek Transfer Station	496286					X							[CLOSED]	[CLOSED]																Alger	E21999 CARPENTER ROAD GRAND MARAIS,	46°39'21.74"N 85°58'22.48"W	3	
Monache Type B Transfer Station	496188					X							[CLOSED]	[CLOSED]																Alger	N13387 M-77 GRAND MARAIS, MI, 49839	46°38'19.11"N 85°59'23.95"W	37	
Garden Township Transfer Station	451194					X							Garden Township	Public	Garden and Fairbanks Township Re	X	X	X	X	X	X					X	X			X	Delta	8788 Oo 25 ROAD, GARDEN, MI, 49835	45°51'47.83"N 86°31'30.54"W	7.5	
Dickinson County Solid Waste Transfer Station	450003	Yes				X		X					GFL	Public	General Public/Commercial	X	X	X	X	X	X	X	X				X	X		X	Dickinson	2500 BALER ROAD, QUINNESEC, MI, 49876	45°48'38.48"N 88°00'31.12"W	276	219 tons MSW/day
Felch Township Waste Transfer Station	497146					X							Felch Township	Public	Felch Township Residents	X	X	X	X	X	X	X		X							Dickinson	W4243 HIGHWAY M69, FELCH, MI	45°59'29.71"N 87°49'48.18"W	2	
Wells Township Transfer Station	496295					X							Wells Township	Public	Wells Township Residents	X															Marquette	38295 CR 426, ARNOLD, MI, 49819	46°02'49.04"N 87°28'32.06"W	10	
Turin Township Transfer Station	466470					X							Turin Township	Public	Turin Township Residents	X															Marquette	~17199 STATE HWY M-35, ROCK, MI, 4988	46°10'40.80"N 87°14'32.61"W	6	
Forsyth Township Department of Public Works	496217	Yes				X							Forsyth Township	Public	Forsyth Township Residents	X	X	X	X	X	X			X				X			Marquette	180 WEST DEPOT ROAD, GWINN, MI 49841	46°16'38.15"N 87°26'19.69"W	2	3,600 sq.ft.
Sands Township Transfer Station	485024					X							Sands Township	Public	Sands Township Residents	X	X	X	X	X	X	X				X		X			Marquette	987 STATE HWY M-553 GWINN, MI 49841	46°27'35.46"N 87°25'34.74"W	18	
Skandia/West Branch Transfer Facility	474286	Yes				X							Skandia/West Branch Townships	Public	Skandia/West Branch Township Re	X	X	X	X	X	X	X					X	X		X	Marquette	159 HOLME ROAD, SKANDIA, MI 49885	46°20'51.08"N 87°13'46.60"W	20	
GFL Solid Waste Midwest, LLC. Negaunee Transfer Stati	496287	Yes				X							GFL	Private	City of Negaunee Residents	X															Marquette	800 CR 480 NEGAUNEE, MI 49866	46°30'05.08"N 87°35'40.30"W	21	150 cu.yds/week
North Country Disposal	488788					X							North Country Disposal	Private	General Public/Commercial	X								X			X				Marquette	83 EAGLE MILLS ROAD, NEGAUNEE, MI 4986	46°30'50.67"N 87°30'34.31"W	10	
Marquette Transfer Station	390757	Yes				X							WM	Private	General Public/Commercial	X															Marquette	910 BARAGA AVENUE MARQUETTE, MI 4985	46°32'38.39"N 87°24'59.50"W	5	
City of Marquette Household Rubbish Site	498822	Yes				X							City of Marquette	Public	City of Marquette Residents	X	X	X	X	X	X	X		X							Marquette	1415 PIONEER RD MARQUETTE, MI 49855	46°31'30.68"N 87°25'10.52"W	10	200 cu.yds./day; open 40 days/yea
Republic Transfer Station	496218					X							Republic Township	Public	Republic Township Residents	X	X	X	X	X	X			X			X				Marquette	8850 WILLOW DRIVE REPUBLIC, MI 49879	46°22'33.91"N 87°58'35.85"W	50	
Powell Township Transfer Station	465515					X							Powell Township	Public	Powell Township Residents	X	X	X	X	X	X	X						X			Marquette	223 DUMP ROAD, BIG BAY, MI 49808	46°48'55.15"N 87°44'23.16"W	5	
West Marquette County Sanitation Authority	448702					X							West Marquette County Sanitation Authority	Public	West End Municipality Residents	X								X							Marquette	2150 US-41 WEST, ISHPEMING, MI 49849	46°29'19.54"N 87°44'08.84"W	160	
North County Transfer Station	470420					X							GFL	[CLOSED]																Menominee	N16089 NORMENCO RD , SPALDING, MI, 49	45°41'38.08"N 87°29'27.39"W	3	
Mid County Transfer Station	470418					X							GFL	[CLOSED]																Menominee	US-2 HIGHWAY 41 8231, DAGGETT, MI, 498	45°28'39.94"N 87°36'11.11"W	6	
Menominee-Ingallston Transfer Station	470547					X							Menominee/Ingallston Townships	Public	Menominee/Ingallston Township R	X	X	X	X	X	X	X									Menominee	N2314 RANGE LINE DRIVE MENOMINEE, MI	45°11'56.80"N 87°34'04.70"W	49	
City of Menominee Public Works Transfer Station	435938					X							City of Menominee	[CLOSED]																Menominee	1301 5TH AVE , MENOMINEE, MI, 49858	45°06'14.04"N 87°37'09.07"W	9	
Zellar Sanitation Refuse Transfer Station	412868					X							Zellar Sanitation	Public	General Public/Commercial	X	X	X	X	X	X							X			Schoolcraft	415 S CHIPPEWA AVE , MANISTIQUE, MI, 49	45°57'23.41"N 86°15'25.89"W	4	
TRICO Opportunities, Inc.	397347						X						TRICO Opportunities	Nonprofit	General Public/Commercial				X	X											Dickinson	610 N HOOPER ST KINGSFORD, MI 49802	45°48'02.30"N 88°04'39.99"W	4	
Omaha Track Creosote-Treated Railroad Tie Biomass P	500203						X						Tetra Tech	Private	Industrial													X		Delta	2172 N 30TH ST, ESCANABA, MI 49829	45°45'54.73"N 87°05'40.10"W	5	
City of Munising Yard Waste Collection Site	NA	Yes						X					City of Munising	Public	City of Munising Residents								X							Alger	LEHNEN RD MUNISING, MI 49862	46°23'48.8"N 86°37'40.2"W	5.5	
City of Gladstone Compost Site	438659	Yes						X					City of Gladstone	Public	City of Gladstone Residents							X								Delta	P5 RD, GLADSTONE, MI, 49837	45°51'39.30" N 87°02'45.64"W	10	6000 sq.ft.
City of Kingsford Compost Drop-off Site	NA											X	City of Kingsford	Public	City of Kingsford Residents								X							Dickinson	1500 CARTER DR, KINGSFORD, MI 49802	45°48'08.15"N 88°05'33.06"W		
City of Iron Mountain Compost Drop-off Site	NA	Yes										X	City of Iron Mountain	Public	City of Iron Mountain Residents								X							Dickinson	125 N STEPHENSON AVE, IRON MOUTAIN, M	45°49'22.24" N 88°03'43.31"W	0.25	10000 sq.ft.
Breitung Township Yard Waste Collection Site	NA	Yes										X	Charter Township of Breitung	Public	Breitung Township Residents								X							Dickinson	SECOND ST, QUINNESEC, MI 49876	45°48'10.53" N 88°00'27.15"W	0.6	6500 sq.ft. ~650-1,400 cu.yds.
City of Negaunee Compost Site	489499	Yes						X					City of Negaunee	Public	City of Negaunee Residents								X							Marquette	300 COUNTY ROAD 480, NEGAUNEE, MI 498	46°30'19.36"N 87°34'12.46"W	28	355 cu.yds.
Partridge Creek Compost	499069							X					Partridge Creek Compost	Nonprofit	General Public/Commercial							X								Marquette	200 WASHINGTON STREET, ISHPEMING, MI	46°28'22.11"N 87°41'21.87"W		
City of Menominee Yard Waste Collection Site	NA	Yes										X	City of Menominee	Public	City of Menominee Residents								X							Menominee	23RD AVE MENOMINEE, MI 49858	45°07'15.8" N 87°36'59.7"W	3	7000 sq.ft.
Enviro-cycle Compost Site	NA							X						Private	General Public							X							Schoolcraft	422 N FIFTH ST MANISTIQUE, MI 49854	45°58'10.5"N 87°16'00.5"W	3	

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Appendix B: Transportation Infrastructure

Name	Type	Local Administrative Physical Address	Service Areas	Disposal Areas Utilized
Green For Life	Residential, Commercial, Transfer	1005 EAST BLVD KINGSFORD, MI 49802	Menominee County, Dickinson County, Alger County, Delta County (commercial), Marquette County	Wood Island Landfill, Delta County SWMA, Marquette County SWMA
Waste Management	Residential, Commercial, Transfer	910 West Baraga AVE Marquette, MI 49855	Menominee County, Dickinson County, Marquette County	Michigan Environs Landfill, Marquette County SWMA
North Country Disposal	Residential, Commercial	83 EAGLE MILLS ROAD NEGAUNEE, MI 49866	Marquette County, Alger County (western)	Marquette County SWMA
Zellar Sanitation	Residential, Commercial	415 S CHIPPEWA AVE MANISTIQUE, MI, 49854	Schoolcraft County, Alger County (eastern)	Hiawatha Shores Landfill
Soo Hill Sanitation	Residential, Commercial	3706 19TH AVE N, ESCANABA, MI 49829	Delta County	Delta County SWMA
Delta Disposal	Residential, Commercial	1500 3RD AVE N, ESCANABA, MI 49829	Delta County, Menominee County (northern), Schoolcraft County (western)	Delta County SWMA
Peninsula Sanitation	Residential, Commercial	409 SOUTH 13TH STREET ESCANABA, MI 49829	Delta County	Delta County SWMA
Grinsteiner Disposal	Residential, Commercial	N6629 RANGELINE DR M1, WALLACE, MI 49858	Menominee County (southern)	Michigan Environs Landfill
Bryan Lancour	Specialized	325 BROOKTON ROAD MARQUETTE, MI 49855	Turin Township (Marquette County)	Marquette County SWMA
UP Dumpsters	Specialized	100 STONEVILLE ROAD ISHPEMING, MI 49849	Marquette County	Marquette County SWMA

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Appendix B: Transportation Infrastructure

Name	Type	Local Administrative Physical Address	Service Areas	Disposal Areas Utilized
A-1 Landfill Hauling and Property Cleanup	Specialized	435 BISHOP WOODS ROAD, MARQUETTE, MI 49855	Marquette County	Marquette County SWMA
Paul Whitmarsh Drop-Off Service	Specialized	5281 ROCK RIVER RD, CHATHAM, MI 49816	Rock River Township (Alger County)	Wood Island Landfill
906 Hauling & Disposal, LLC	Specialized	66 SMITH LANE, MARQUETTE, MI 49855	Escanaba area (Delta County)	Delta County SWMA
Municipal Hauling Services				
City of Escanaba	Residential	410 LUDINGTON ST, ESCANABA, MI 49829	City of Escanaba	Delta County SWMA
City of Gladstone	Residential	1100 DELTA AVE GLADSTONE, MI 49837	City of Gladstone	Delta County SWMA
City of Kingsford	Residential	305 S CARPENTER AVE KINGSFORD, MI 49802	City of Kingsford	Dickinson County SWMA
City of Norway	Residential	915 MAIN ST, NORWAY, MI 49870	City of Norway	Dickinson County SWMA
Sagola Township	Residential	PO BOX 195, CHANNING, MI 49815	Limited residential routes	Dickinson County SWMA

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Appendix C: Waste Characteristics

Tons of Generation and Disposal By Landfill and County of Origin, FY2023

Landfill	Alger	Delta	Dickinson	Marquette	Menominee	Schoolcraft	Other UP Counties	Other Michigan Counties	Wisconsin	Canada	Other	Total
Muncipal Solid Waste												
Dafter Sanitary Landfill (*Chippewa County)	8.83											8.83
Delta County Landfill (Delta County)		20948.76			2360.23	1322.12						24631.11
Hiawatha Shores Landfill (Schoolcraft County)						6741.64	65.82					6807.46
Marquette County Solid Waste Management Authority (Marquette County)				37459.71								37459.71
Michigan Environs Landfill (Menominee County)					6208.70				15685.44			21894.14
Wood Island Landfill (Alger County)	10510.00		15817.00						24011.00			50338.00
Total Municipal Solid Waste	**10518.83**	**20948.76**	**15817.00**	**37459.71**	**8568.93**	**8063.76**	**65.82**	**0.00**	**39696.44**	**0.00**	**0.00**	**141139.25**
												39%
Industrial Waste												
Hiawatha Shores Landfill (Schoolcraft County)						5638.00						5638.00
Michigan Environs Landfill (Menominee County)					37227.04				8145.38			45372.42
Niagara Development Landfill (Dickinson County)			8928.85						1756.51			10685.36
Billerud Escanaba (Delta County)		17694.70										17694.70
Billerud Quinnesec (Dickinson County)		59791.00										59791.00
Wood Island Landfill (Alger County)	4394.00											4394.00
Haywire Landfill (Schoolcraft County)								2000.00				2000.00
Total Industrial Waste	**4394.00**	**77485.70**	**8928.85**	**0.00**	**37227.04**	**5638.00**	**0.00**	**2000.00**	**9901.89**	**0.00**	**0.00**	**145575.48**
												41%
Construction and Demolition												
Delta County Landfill (Delta County)		2426.35										2426.35
Hiawatha Shores Landfill (Schoolcraft County)						2226.70						2226.70
Marquette County Solid Waste Management Authority (Marquette County)				17973.25								17973.25
Michigan Environs Landfill (Menominee County)					1945.15				2002.11			3947.26
Niagara Development Landfill (Dickinson County)			799.25						132.15			931.40
Haywire Landfill (Schoolcraft County)								203.50				203.50
Total Construction and Demolition	**0.00**	**2426.35**	**799.25**	**17973.25**	**1945.15**	**2226.70**	**0.00**	**203.50**	**2134.26**	**0.00**	**0.00**	**27708.46**
												8%
Other Wastes												
Delta County Landfill (Delta County)		63.91										63.91
Michigan Environs Landfill (Menominee County)				188.06	77.68				1797.88			2063.62
Total Other Wastes	**0.00**	**63.91**	**0.00**	**188.06**	**77.68**	**0.00**	**0.00**	**0.00**	**1797.88**	**0.00**	**0.00**	**2127.53**
												1%
Alternate Daily Cover												
Delta County Landfill (Delta County)		2512.76			1757.00							4269.76
Marquette County Solid Waste Management Authority (Marquette County)				14556.40								14556.40
Michigan Environs Landfill (Menominee County)					3103.30				19735.22			22838.52
Total Alternate Daily Cover	**0.00**	**2512.76**	**0.00**	**14556.40**	**4860.30**	**0.00**	**0.00**	**0.00**	**19735.22**	**0.00**	**0.00**	**41664.68**
												12%
Total Waste Disposal	**14912.83**	**103437.48**	**25545.10**	**70177.42**	**52679.10**	**15928.46**	**65.82**	**2203.50**	**73265.69**	**0.00**	**0.00**	**358215.40**
*Outside Planning Area, only in-area generation is recorded												

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Appendix C: Waste Characteristics

Tons of Generation and Disposal By Landfill and County of Origin, FY2024

Landfill	Alger	Delta	Dickinson	Marquette	Menominee	Schoolcraft	Other UP Counties	Other Michigan Counties	Wisconsin	Canada	Other	Total
Municipal Solid Waste												
Delta County Landfill (Delta County)		20604.00			2631.00	1376.59						24611.59
Hiawatha Shores Landfill (Schoolcraft County)						6391.24						6391.24
Marquette County Solid Waste Management Authority (Marquette County)				37271.50								37271.50
Michigan Environs Landfill (Menominee County)					4805.03				16569.52			21374.55
Wood Island Landfill (Alger County)	11633.00		17823.00						22055.00			51511.00
Total Municipal Solid Waste	**11633.00**	**20604.00**	**17823.00**	**37271.50**	**7436.03**	**7767.83**	**0.00**	**0.00**	**38624.52**	**0.00**	**0.00**	**141159.88**
												31%
Industrial Waste												
Hiawatha Shores Landfill (Schoolcraft County)						5504.67						5504.67
Michigan Environs Landfill (Menominee County)	20.98				4778.91				4962.59			9762.48
Niagara Development Landfill (Dickinson County)			863.33						2196.20			3059.53
Billerud Escanaba (Delta County)		29672.50										29672.50
Billerud Quinnesec (Dickinson County)		131016.00										131016.00
Wood Island Landfill (Alger County)	2782.00											2782.00
Haywire Landfill (Schoolcraft County)						39902.64						39902.64
Total Industrial Waste	**2802.98**	**160688.50**	**863.33**	**0.00**	**4778.91**	**45407.31**	**0.00**	**0.00**	**7158.79**	**0.00**	**0.00**	**221699.82**
												48%
Construction and Demolition												
Delta County Landfill (Delta County)		2820.00										2820.00
Hiawatha Shores Landfill (Schoolcraft County)						3937.96						3937.96
Marquette County Solid Waste Management Authority (Marquette County)				54529.94								54529.94
Michigan Environs Landfill (Menominee County)					1622.42				1926.92			3549.34
Niagara Development Landfill (Dickinson County)			894.59						193.24			1087.83
Haywire Landfill (Schoolcraft County)												0.00
Total Construction and Demolition	**0.00**	**2820.00**	**894.59**	**54529.94**	**1622.42**	**3937.96**	**0.00**	**0.00**	**2120.16**	**0.00**	**0.00**	**65925.07**
												14%
Other Wastes												
Delta County Landfill (Delta County)		43.00										43.00
Michigan Environs Landfill (Menominee County)				729.85	0.78				556.51			1287.14
Dafter Sanitary Landfill (*Chippewa County)						0.02						0.02
Total Other Wastes	**0.00**	**43.00**	**0.00**	**729.85**	**0.78**	**0.00**	**0.00**	**0.00**	**556.51**	**0.00**	**0.00**	**1330.14**
												0.3%
Alternate Daily Cover												
Delta County Landfill (Delta County)		416.40			4359.78							4776.18
Michigan Environs Landfill (Menominee County)					1136.11				18344.63			19480.74
Wood Island Landfill (Alger County)	3061.00											3061.00
Total Alternate Daily Cover	**3061.00**	**416.40**	**0.00**	**0.00**	**5495.89**	**0.00**	**0.00**	**0.00**	**18344.63**	**0.00**	**0.00**	**27317.92**
												6%
Total Waste Disposal	**17496.98**	**184571.90**	**19580.92**	**92531.29**	**19334.03**	**57113.10**	**0.00**	**0.00**	**66804.61**	**0.00**	**0.00**	**457432.83**
*Outside Planning Area, only in-area generation is recorded												

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Appendix C: Waste Characteristics

Tons of Generation and Disposal By Landfill and County of Origin, FY2025

Landfill	Alger	Delta	Dickinson	Marquette	Menominee	Schoolcraft	Other UP Counties	Other Michigan Counties	Wisconsin	Canada	Other	Total
Municipal Solid Waste												
Delta County Landfill (Delta County)		28062.80			2790.37	4752.25						35605.42
Hiawatha Shores Landfill (Schoolcraft County)						6736.37						6736.37
Marquette County Solid Waste Management Authority (Marquette County)				38673.46								38673.46
Michigan Environs Landfill (Menominee County)					5092.01				20682.42			25774.43
Wood Island Landfill (Alger County)	13835.00		14868.00						5457.00			34160.00
Dafter Sanitary Landfill (*Chippewa County)	32.03											32.03
K&W Landfill (*Ontonagon County)				22.94								22.94
Total Municipal Solid Waste	**13867.03**	**28062.80**	**14868.00**	**38673.46**	**7882.38**	**11488.62**	**0.00**	**0.00**	**26139.42**	**0.00**	**0.00**	**140981.71**
												30%
Industrial Waste												
Hiawatha Shores Landfill (Schoolcraft County)						2448.12						2448.12
Michigan Environs Landfill (Menominee County)					6548.60	4442.15			2887.87			13878.62
Niagara Development Landfill (Dickinson County)			797.42		238.35				719.05			1754.82
Billerud Escanaba (Delta County)		70786.70										70786.70
Billerud Quinnesec (Dickinson County)		145423.00										145423.00
Wood Island Landfill (Alger County)	2025.00											2025.00
Haywire Landfill (Schoolcraft County)						5787.46						5787.46
Total Industrial Waste	**2025.00**	**216209.70**	**797.42**	**0.00**	**6786.95**	**12677.73**	**0.00**	**0.00**	**3606.92**	**0.00**	**0.00**	**242103.72**
												52%
Construction and Demolition												
Delta County Landfill (Delta County)		4020.07										4020.07
Hiawatha Shores Landfill (Schoolcraft County)						2854.77						2854.77
Marquette County Solid Waste Management Authority (Marquette County)				36193.89								36193.89
Michigan Environs Landfill (Menominee County)					1628.81				1442.15			3070.96
Niagara Development Landfill (Dickinson County)			735.58						141.68			877.26
Haywire Landfill (Schoolcraft County)												0.00
K&W Landfill (*Ontonagon County)		1.56										1.56
Total Construction and Demolition	**0.00**	**4021.63**	**735.58**	**36193.89**	**1628.81**	**2854.77**	**0.00**	**0.00**	**1583.83**	**0.00**	**0.00**	**47018.51**
												10%
Other Wastes												
Delta County Landfill (Delta County)		227.68										227.68
Michigan Environs Landfill (Menominee County)					32.73				7.09			39.82
Dafter Sanitary Landfill (*Chippewa County)	2.26											2.26
Total Other Wastes	**0.00**	**227.68**	**0.00**	**0.00**	**32.73**	**0.00**	**0.00**	**0.00**	**7.09**	**0.00**	**0.00**	**267.50**
												0.1%
Alternate Daily Cover												
Delta County Landfill (Delta County)		580.28			3321.05							3901.33
Michigan Environs Landfill (Menominee County)					626.31	11363.50			16629.28			28619.09
Wood Island Landfill (Alger County)	3154.00											3154.00
Marquette County Solid Waste Management Authority (Marquette County)				21.40								21.40
Total Alternate Daily Cover	**3154.00**	**580.28**	**0.00**	**21.40**	**3947.36**	**11363.50**	**0.00**	**0.00**	**16629.28**	**0.00**	**0.00**	**35695.82**
												8%
Total Waste Disposal	**19046.03**	**249102.09**	**16401.00**	**74888.75**	**20278.23**	**38384.62**	**0.00**	**0.00**	**47966.54**	**0.00**	**0.00**	**466067.26**
*Outside Planning Area, only in-area generation is recorded												

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Appendix D: Residential Services

County	Municipality	Service Type	Municipal Trash Contract	Municipal Recycling Contract	Recycling Carts Present?	Private Subscription Hauler(s)	Residential Drop off Trash	Residential Drop off Recycling
Alger	Au Train Township	Contracted/Franchise	Green For Life	No Recycling Program				
Alger	Burt Township	Individual Subscription				Zellar Sanitation		Burt Township Recycling Center
Alger	City of Munising	Contracted/Franchise	Green For Life	Green For Life				
Alger	Grand Island Township	Individual Subscription				Green For Life; North Country Disposal		
Alger	Limestone Township	Individual Subscription				Green For Life; North Country Disposal		
Alger	Mathias Township	Individual Subscription				Green For Life; North Country Disposal		
Alger	Munising Township	Individual Subscription				Green For Life		
Alger	Onota Township	Contracted/Franchise	Green For Life	No Recycling Program			Onota Township Hall	
Alger	Rock River Township	Individual Subscription				Green For Life	Paul Whitmarsh Drop-Off Service	
Delta	Baldwin Township	Individual Subscription				Delta Disposal		
Delta	Bark River Township	Individual Subscription				Delta Disposal; Peninsula Sanitation; Soo Hill Disposal		
Delta	Bay De Noc Township	Individual Subscription				Delta Disposal		
Delta	Brampton Township	Individual Subscription				Delta Disposal; Peninsula Sanitation; Soo Hill Disposal		
Delta	City of Escanaba	Municipal	City of Escanaba	City of Escanaba	Yes- Municipal			
Delta	City of Gladstone	Municipal	City of Gladstone	City of Gladstone	Yes- Municipal			
Delta	Cornell Township	Individual Subscription				Delta Disposal		
Delta	Ensign Township	Individual Subscription				Delta Disposal		
Delta	Escanaba Township	Individual Subscription				Delta Disposal; Peninsula Sanitation; Soo Hill Disposal		
Delta	Fairbanks Township	Individual Subscription				Delta Disposal		
Delta	Ford River Township	Individual Subscription				Delta Disposal; Peninsula Sanitation; Soo Hill Disposal		
Delta	Garden Township	Individual Subscription				Delta Disposal	Garden Township Transfer Station	Garden Township Transfer Station
Delta	Maple Ridge Township	Individual Subscription				Delta Disposal		
Delta	Masonville Township	Individual Subscription				Delta Disposal		
Delta	Nahma Township	Individual Subscription				Delta Disposal		
Delta	Wells Township	Individual Subscription				Delta Disposal; Peninsula Sanitation; Soo Hill Disposal		
Dickinson	Breen Township	Hybrid- Drop-off, Individual				Green For Life; WM	Breen Township Fire Hall	
Dickinson	Breitung Township	Contracted/Franchise	Green For Life	No Recycling Program				
Dickinson	City of Iron Mountain	Contracted/Franchise	Green For Life	Green for Life	Yes- Municipal			
Dickinson	City of Kingsford	Contracted/Franchise	City of Kingsford	Green for Life	Yes- Municipal			
Dickinson	City of Norway	Contracted/Franchise	City of Norway	No Recycling Program				City of Norway DPW Drop-off
Dickinson	Felch Township	Hybrid- Drop-off, Individual				Green For Life; WM	Felch Township Community Center	Felch Township Community Center
Dickinson	Norway Township	Individual Subscription				Green for Life; WM		
Dickinson	Sagola Township	Hybrid- Municipal, Individual	Sagola Township	Sagola Township				
Dickinson	Waucedah Township	Individual Subscription				Green for Life; WM		
Dickinson	West Branch Township	Individual Subscription				Green for Life; WM		

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Appendix D: Residential Services

County	Municipality	Service Type	Municipal Trash Contract	Municipal Recycling Contract	Recycling Carts Present?	Private Subscription Hauler(s)	Residential Drop off Trash	Residential Drop off Recycling
Marquette	Champion Township	Contracted/Franchise	North Country Disposal	No Recycling Program				
Marquette	Chocolay Township	Contracted/Franchise	WM	WM	Yes- Hauler by subscription			Chocolay Municipal Complex
Marquette	City of Ishpeming	Contracted/Franchise	North Country Disposal	North Country Disposal				
Marquette	City of Marquette	Contracted/Franchise	WM	MW	Yes- Municipal		WM Transfer Station	WM Transfer Station
Marquette	City of Negaunee	Contracted/Franchise	Green For Life	Green For Life	Yes- Hauler		Municipal Drop Off Site	
Marquette	Ely Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Hauler	North Country Disposal		
Marquette	Ewing Township	Contracted/Franchise	Green for Life	No Recycling Program			Ewing Township Hall	
Marquette	Forsyth Township	Individual Subscription				North Country Disposal; Green For Life; WM	Forsyth Township Transfer Station	Forsyth Township Transfer Station
Marquette	Humboldt Township	Contracted/Franchise	North Country Disposal	North Country Disposal		North Country Disposal		
Marquette	Ishpeming Township	Hybrid- Municipal, Individual	Green for Life / Department of Public Works	Green For Life	Yes- Municipal		West End Transfer Station	
Marquette	Marquette Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Municipal			
Marquette	Michigamme Township	Contracted/Franchise	Green for Life	Green For Life	Yes- Municipal			
Marquette	Negaunee Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Municipal			
Marquette	Powell Township	Contracted/Franchise	North Country Disposal	No Recycling Program		North Country Disposal	Powell Township Transfer Station	Powell Township Transfer Station
Marquette	Republic Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Hauler		Republic Township Transfer Station	
Marquette	Richmond Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Hauler		Richmond Township Hall	Richmond Township Hall
Marquette	Sands Township	Contracted/Franchise	Green For Life	No Recycling Program			Sands Township Transfer Station	Sands Township Transfer Station
Marquette	Skandia Township	Contracted/Franchise	Green For Life	No Recycling Program		Green For Life	Skandia/West Branch Transfer Station	Skandia/West Branch Transfer Station
Marquette	Tilden Township	Contracted/Franchise	North Country Disposal	North Country Disposal	Yes- Hauler	North Country Disposal		
Marquette	Turin Township	Hybrid- Drop-off, Individual					Turin Township Transfer Station	
Marquette	Wells Township	Contracted/Franchise	North Country Disposal	No Recycling Program			Wells Township Hall	
Marquette	West Branch Township	Hybrid- Drop-off, Individual				Green For Life	Skandia/West Branch Transfer Station	Skandia/West Branch Transfer Station

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Appendix D: Residential Services

County	Municipality	Service Type	Municipal Trash Contract	Municipal Recycling Contract	Recycling Carts Present?	Private Subscription Hauler(s)	Residential Drop off Trash	Residential Drop off Recycling
Menominee	Cedarville Township	Individual Subscription						
Menominee	City of Menominee	Contracted/Franchise	Green For Life	Green For Life				
Menominee	City of Stephenson					Green For Life		
Menominee	Daggett Township	Individual Subscription				Green For Life		
Menominee	Daggett Village	Individual Subscription				Green For Life		
Menominee	Faithorn Township	Individual Subscription				Green For Life		
Menominee	Gourley Township	Individual Subscription				Green For Life		
Menominee	Hannahville Indian Community	Contracted/Franchise				Delta Disposal		
Menominee	Harris Township	Individual Subscription			Yes- Hauler by subscription	Delta Disposal		
Menominee	Holmes Township	Individual Subscription				Green For Life		
Menominee	Ingallston Township	Individual Subscription				Green For Life; WM	Menominee-Ingallston Transfer Station	Menominee-Ingallston Transfer Station
Menominee	Lake Township	Individual Subscription				Green For Life		
Menominee	Mellen Township	Individual Subscription				Green For Life		
Menominee	Menominee Township	Individual Subscription				Green For Life; WM	Menominee-Ingallston Transfer Station	Menominee-Ingallston Transfer Station
Menominee	Meyer Township	Individual Subscription			Yes- Hauler by subscription	Green For Life; Delta Disposal		
Menominee	Nadeau Township	Individual Subscription				Green For Life		
Menominee	Spalding Township	Individual Subscription			Yes- Hauler by subscription	Green For Life; Delta Disposal		
Menominee	Stephenson Township	Individual Subscription				Green For Life		
Schoolcraft	City of Manistique	Individual Subscription			Yes- Hauler by subscription	Zellar Sanitation; Delta Disposal	Zellar Transfer Station	Zellar Transfer Station
Schoolcraft	Doyle Township	Individual Subscription				Zellar Sanitation		
Schoolcraft	Germfask Township	Individual Subscription				Zellar Sanitation		
Schoolcraft	Hiawatha Township	Individual Subscription			Yes- Hauler by subscription	Zellar Sanitation; Delta Disposal		
Schoolcraft	Inwood Township	Individual Subscription			Yes- Hauler by subscription	Zellar Sanitation; Delta Disposal		
Schoolcraft	Manistique Township	Individual Subscription				Zellar Sanitation		
Schoolcraft	Mueller Township	Individual Subscription				Zellar Sanitation		
Schoolcraft	Seney Township	Individual Subscription				Zellar Sanitation		
Schoolcraft	Thompson Township	Individual Subscription			Yes- Hauler by subscription	Zellar Sanitation; Delta Disposal		

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Appendix E: Local Unit Zoning Ordinances with Siting Requirements

An "X" indicates that an interpretation of a local unit of government's zoning ordinance at the time of inclusion in the Materials Management Plan includes regulations for a particular type of facility, or a reasonable interpretation of a particular facility type by definition. The chart in this Appendix should be used as a guide to identify whether a local unit of government may have a siting process requirement not otherwise included in the processes contained in this Plan. An applicant should confirm with a local unit of government the requirements for the siting of any proposed materials management facility before initiating a review under this Plan.

County	Municipality	Zoning Ordinance	Landfills Type II; III	MSW Incinerators	MSW Processing and Transfer Facilities	Composting Facilities	Materials Recovery Facilities	Innovative Technology Facilities
Alger	Alger County	No						
Alger	Au Train Township	Yes						
Alger	Burt Township	Yes	X		X			
Alger	City of Munising	Yes						
Alger	Grand Island Township	Yes						
Alger	Limestone Township	No						
Alger	Mathias Township	Yes						
Alger	Munising Township	Yes						
Alger	Onota Township	Yes	X					
Alger	Rock River Township	Yes						
Alger	Village of Chatham	No						
Delta	Delta County	Yes			X			
Delta	Baldwin Township	County zoned						
Delta	Bark River Township	Yes						
Delta	Bay De Noc Township	County zoned						
Delta	Brampton Township	County zoned						
Delta	City of Escanaba	Yes						
Delta	City of Gladstone	Yes						
Delta	Cornell Township	County zoned						
Delta	Ensign Township	County zoned						
Delta	Escanaba Township	Yes						
Delta	Fairbanks Township	County zoned						
Delta	Ford River Township	Yes	X					
Delta	Garden Township	Yes						
Delta	Maple Ridge Township	County zoned						

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Appendix E: Local Unit Zoning Ordinances with Siting Requirements

County	Municipality	Zoning Ordinance	Landfills Type II; III	MSW Incinerators	MSW Processing and Transfer Facilities	Composting Facilities	Materials Recovery Facilities	Innovative Technology Facilities
Delta	Masonville Township	Yes						
Delta	Nahma Township	County zoned						
Delta	Wells Township	County zoned						
Delta	Village of Garden	No						
Dickinson	Dickinson County	No						
Dickinson	Breen Township	Yes						
Dickinson	Breitung Township	Yes	X					
Dickinson	City of Iron Mountain	Yes			X		X	
Dickinson	City of Kingsford	Yes		X				
Dickinson	City of Norway	Yes					X	
Dickinson	Felch Township	Yes	X		X		X	
Dickinson	Norway Township	Yes					X	
Dickinson	Sagola Township	Yes						
Dickinson	Waucedah Township	Yes			X			
Dickinson	West Branch Township	Yes	see note	see note	see note	see note	see note	see note
Marquette	Marquette County	No						
Marquette	Champion Township	Yes	X		X			
Marquette	Chocolay Township	Yes			X	X	X	
Marquette	City of Ishpeming	Yes			X		X	
Marquette	City of Marquette	Yes			X	X	X	
Marquette	City of Negaunee	Yes			X		X	
Marquette	Ely Township	Yes			X			
Marquette	Ewing Township	No						
Marquette	Forsyth Township	Yes					X	
Marquette	Humboldt Township	Yes	X		X		X	
Marquette	Ishpeming Township	Yes						
Marquette	Marquette Township	Yes	X				X	
Marquette	Michigamme Township	Yes	X		X			
Marquette	Negaunee Township	Yes						
Marquette	Powell Township	Yes			X			
Marquette	Republic Township	Yes	X					
Marquette	Richmond Township	Yes	X		X		X	
Marquette	Sands Township	Yes	X		X		X	
Marquette	Skandia Township	Yes	X		X			
Marquette	Tilden Township	Yes						
Marquette	Turin Township	No						
Marquette	Wells Township	Yes	X		X			
Marquette	West Branch Township	Yes			X			
Menominee	Menominee County	No						

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Appendix E: Local Unit Zoning Ordinances with Siting Requirements

County	Municipality	Zoning Ordinance	Landfills Type II; III	MSW Incinerators	MSW Processing and Transfer Facilities	Composting Facilities	Materials Recovery Facilities	Innovative Technology Facilities
Menominee	Cedarville Township	Yes						
Menominee	City of Menominee	Yes			X			
Menominee	City of Stephenson	Yes						
Menominee	Daggett Township	No						
Menominee	Faithorn Township	No						
Menominee	Gourley Township	No						
Menominee	Hannahville Indian Community	N/A						
Menominee	Harris Township	Yes						
Menominee	Holmes Township	No						
Menominee	Ingallston Township	Yes						
Menominee	Lake Township	Yes						
Menominee	Mellen Township	Yes						
Menominee	Menominee Township	No						
Menominee	Meyer Township	No						
Menominee	Nadeau Township	No						
Menominee	Spalding Township	No						
Menominee	Stephenson Township	Yes						
Menominee	Village of Carney	No						
Menominee	Village of Daggett	No						
Menominee	Village of Powers	Yes						
Schoolcraft	Schoolcraft County	Yes	X					
Schoolcraft	City of Manistique	Yes					X	
Schoolcraft	Doyle Township	County zoned						
Schoolcraft	Germfask Township	County zoned						
Schoolcraft	Hiawatha Township	County zoned						
Schoolcraft	Inwood Township	County zoned						
Schoolcraft	Manistique Township	County zoned						
Schoolcraft	Mueller Township	County zoned						
Schoolcraft	Seney Township	County zoned						
Schoolcraft	Thompson Township	County zoned						
		57	16	2	21	3	15	1

*Note- West Branch Township allows "waste collection sites" as a permitted use its Public Land District

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Appendix F: Local Unit Materials Management Ordinances

Municipality	Ordinance	Collection and Transportation of Solid Waste						Waste Hauler/Facility Licensing			Waste Service Rates		Recycling						Organics	
		Organized Solid Waste Collection	Waste Service Required	Minimum Service Frequency	Restrictions on Time of Collection	Type of Container Specified	Hauler Must Report Amount	Licensing of Haulers Required	Hauler Must Be Bonded or	Waste Facilities Licensed	Volume-based Fees	Fees Set By	Organized Recycling Collection	Who provides the cart	Mandatory Recycline	Waste Haulers Must Collect	Hauler Must Report Amounts	Scavenging Recvcables	Organized Organics Collection	Backyard Composting
Alger County	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Au Train Township	N/A	Contracted											Contracted							
Burt Township	N/A	Subscription											Drop-off							
City of Munising	Yes	Contracted	N/A	Once per week	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Contracted	Hauler	N/A	N/A	N/A	N/A	N/A	N/A
Grand Island Township	N/A	Subscription											Subscription							
Limestone Township	N/A	Subscription											-							
Mathias Township	N/A	Subscription											-							
Munising Township	N/A	Subscription											Subscription							
Onota Township	N/A	Contracted											Drop-off							
Rock River Township	N/A	Subscription											Drop-off							
Village of Chatham	N/A	Subscription											Drop-off							
Delta County	Yes	-	N/A	N/A	N/A	N/A	N/A	Yes	Yes	N/A	Yes	Schedule	Drop-off		N/A	N/A	N/A	N/A	Drop-off	N/A
Baldwin Township	N/A	Subscription											Subscription	Hauler						
Bark River Township	N/A	Subscription											Subscription	Hauler						
Bay De Noc Township	N/A	Subscription											Subscription	Hauler						
Brampton Township	N/A	Subscription											Subscription	Hauler						
City of Escanaba	Yes	Municipal	Yes	Once per week	Yes	Yes	N/A	N/A	N/A	N/A	No	Ordinance	Municipal	City	Yes	N/A	N/A	N/A	Yes*	Yes
City of Gladstone	Yes	Municipal	N/A	Once per week	N/A	Yes	N/A	Yes	N/A	N/A	No	Schedule	Municipal		N/A	N/A	N/A	N/A	Drop-off	N/A
Cornell Township	N/A	Subscription											Subscription	Hauler						
Ensign Township	N/A	Subscription											Subscription	Hauler						
Escanaba Township	N/A	Subscription											Subscription	Hauler						
Fairbanks Township	N/A	Subscription											Subscription	Hauler						
Ford River Township	N/A	Subscription											Subscription	Hauler						
Garden Township	N/A	Subscription											Subscription	Hauler						
Maple Ridge Township	N/A	Subscription											Subscription	Hauler						
Masonville Township	N/A	Subscription											Subscription	Hauler						
Nahma Township	N/A	Subscription											Subscription	Hauler						
Wells Township	N/A	Subscription											Subscription	Hauler						
Village of Garden	N/A	Subscription											Subscription	Hauler						
Dickinson County	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Breen Township	N/A	Subscription																		
Breitung Township	Yes	Contracted	N/A	Once per week	Yes*	Yes	N/A	N/A	N/A	N/A	No	Schedule	N/A		N/A	N/A	N/A	N/A	Yes*	N/A
City of Iron Mountain	Yes	Contracted	N/A	N/A	N/A	Yes	N/A	N/A	N/A	N/A	No	Schedule	N/A		N/A	N/A	N/A	N/A	Yes*	N/A
City of Kingsford	Yes	Municipal	N/A	Once per week	N/A	Yes	N/A	N/A	N/A	N/A	No	Schedule	N/A		N/A	N/A	N/A	N/A	N/A	N/A
City of Norway	Yes	Municipal	N/A	Once per week	N/A	Yes	N/A	N/A	N/A	N/A	No	Schedule	Drop-off		N/A	N/A	N/A	N/A	Drop-off	Yes
Felch Township	N/A	Subscription																		
Norway Township	N/A	Subscription																		

Appendix F: Local Unit Materials Management Ordinances

		Collection and Transportation of Solid Waste						Waste Hauler/Facility Licensing			Waste Service Rates		Recycling						Organics	
Municipality	Ordinance	Organized Solid Waste Collection	Waste Service Required	Minimum Service Frequency	Restrictions on Time of Collection	Type of Container Specified	Hauler Must Report Amount	Licensing of Haulers Required	Hauler Must Be Bonded or	Waste Facilities Licensed	Volume-based Fees	Fees Set By	Organized Recycling Collection	Who provides the cart	Mandatory Recycling	Waste Haulers Must Collect	Hauler Must Report Amounts	Scavenging Recycables	Organized Organics Collection	Backyard Composting
Sagola Township	Yes	Municipal	Yes	Once per week	Yes	Yes	N/A	Yes*	N/A	N/A	Yes*	Schedule	Municipal	User	N/A	N/A	N/A	N/A	N/A	Yes
Waucedah Township	N/A	Subscription																		
West Branch Township	N/A	Subscription																		
Marquette County	Yes	-	N/A	Sufficient frequency	N/A	N/A	N/A	Yes^	N/A	N/A	N/A	N/A	-	-	-	-	-	-	-	-
Champion Township	N/A	Contracted																		
Chocolay Township	N/A	Contracted											Contracted	Hauler						
City of Ishpeming	Yes	Contracted	Yes	Once per week	N/A	Yes	N/A	Yes*	N/A	N/A	No	Schedule	Contracted		N/A	N/A	N/A	N/A	N/A	N/A
City of Marquette	Yes	Contracted	N/A	Once per week	Yes	N/A	N/A	Yes	N/A	N/A	No	Schedule	Contracted	City	N/A	N/A	N/A	N/A	Drop-off	N/A
City of Negaunee	Yes	Contracted	N/A	Once per week	N/A	Yes	N/A	N/A	N/A	N/A	No	Schedule	Contracted	Hauler	Yes	N/A	N/A	N/A	Drop-off	N/A
Ely Township	N/A	Contracted											Contracted	Hauler						
Ewing Township	N/A	Subscription											Drop-off							
Forsyth Township	N/A	Subscription(1)											Drop-off			Yes				
Humboldt Township	N/A	Contracted											Contracted	Hauler						
Ishpeming Township	N/A	Municipal(2)											Municipal(2)	Township						
Marquette Township	Yes	Contracted	Yes	N/A	N/A	Yes	N/A	Yes	Yes	N/A	No	Schedule	Contracted	Township	N/A	N/A	N/A	N/A	N/A	N/A
Michigamme Township	N/A	Contracted											Contracted	Township						
Negaunee Township	Yes	Contracted	Yes	Once per week	Yes	Yes	N/A	Yes*	N/A	N/A	No	Schedule	Contracted	Township	N/A	N/A	N/A	N/A	N/A	N/A
Powell Township	N/A	Subscription											Drop-off							
Republic Township	Yes	Contracted	Yes	Once per week	Yes	Yes	N/A	Yes*	N/A	N/A	Yes^	Schedule	Contracted	Hauler	N/A	N/A	N/A	N/A	N/A	N/A
Richmond Township	N/A	Contracted											Contracted	Hauler						
Sands Township	N/A	Municipal											Drop-off							
Skandia Township	N/A	Subscription											Drop-off							
Tilden Township	N/A	Contracted											Contracted	Hauler						
Turin Township	N/A	Subscription																		
Wells Township	N/A	Contracted																		
West Branch Township	N/A	Contracted											Drop-off							
Menominee County	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cedarville Township	N/A	Subscription																		
City of Menominee	Yes	Contracted	N/A	Once per week	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Contracted	Hauler	N/A	N/A	N/A	N/A	N/A	N/A
City of Stephenson	Yes	Subscription	N/A	N/A	N/A	Yes*	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Daggett Township	N/A	Subscription																		
Faithorn Township	N/A	Subscription																		
Gourley Township	N/A	Subscription																		
Hannahville Indian Community	N/A	Contracted																		
Harris Township	N/A	Subscription																		
Holmes Township	N/A	Subscription																		
Ingallston Township	N/A	Subscription																		

Appendix F: Local Unit Materials Management Ordinances

		Collection and Transportation of Solid Waste						Waste Hauler/Facility Licensing			Waste Service Rates		Recycling						Organics	
Municipality	Ordinance	Organized Solid Waste Collection	Waste Service Required	Minimum Service Frequency	Restrictions on Time of Collection	Type of Container Specified	Hauler Must Report Amount	Licensing of Haulers Required	Hauler Must Be Bonded or	Waste Facilities Licensed	Volume-based Fees	Fees Set By	Organized Recycling Collection	Who provides the cart	Mandatory Recycling	Waste Haulers Must Collect	Hauler Must Report Amounts	Scavenging Recvcables	Organized Organics Collection	Backyard Composting
Lake Township	N/A	Subscription																		
Mellen Township	N/A	Subscription																		
Menominee Township	N/A	Subscription																		
Meyer Township	N/A	Subscription																		
Nadeau Township	N/A	Subscription																		
Spalding Township	N/A	Subscription																		
Stephenson Township	N/A	Subscription																		
Village of Carney	N/A	Subscription																		
Village of Daggett	N/A	Subscription																		
Village of Powers	N/A	Subscription																		
Schoolcraft County	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
City of Manistique	Yes	Subscription	Yes	Yes	N/A	Yes	Yes	Yes	Yes	N/A	N/A	Schedule*	Subscription	Hauler	N/A	N/A	N/A	N/A	N/A	N/A
Doyle Township	N/A	Subscription																		
Germfask Township	N/A	Subscription																		
Hiawatha Township	N/A	Subscription											Subscription	Hauler						
Inwood Township	N/A	Subscription											Subscription	Hauler						
Manistique Township	N/A	Subscription																		
Mueller Township	N/A	Subscription																		
Seney Township	N/A	Subscription																		
Thompson Township	N/A	Subscription											Subscription	Hauler						
		(1)Requires by contract that any waste hauler also provide recycling service (2)Muncipal service is provided in a select area, rural service is by subscription			*Yes, set by contract	*Approved container required, but not detailed		*License required, but no method detailed ^Hauler licensing is done through operational agreements			*Uses a per-bag/tag system ^Per-pound fee at township drop-off site	*Fees for landfill closure costs on top of user service fee							*Infrequent	

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Appendix G: Example Ordinance Provisions

Below are examples of materials management ordinance provisions collected from adopted ordinances in a variety of municipalities. This example is not meant to be used as a template, and any municipality adopting these provisions should review with their municipal attorney the definition and application of such before adoption.

Police Power Ordinances and Contracts

“Backyard compost” means the process of layering and mixing grass clippings or other green nitrogen material, chopped leaves or other brown carbon material or soil and water to produce a rich humus or soil amendment used in landscape practices.

“Bulk refuse” means appliances, furniture and other bulky refuse items, excluding construction and demolition debris, which cannot readily be placed in an approved container.

“Construction and demolition debris” means refuse generated from building construction, alterations or repairs by contractors or tradesmen.

“Domestic solid waste” means the waste materials resulting from the usual routine of housekeeping, including garbage and rubbish and excluding hazardous waste, construction and demolition debris, industrial solid waste and medical waste.

"Hauler" means a person or corporation who owns or operates a managed materials transporting unit.

"Managed materials transporting unit" means a container, which may be an integral part of a truck or other piece of equipment, used for the transportation of managed materials. A managed materials transporting unit shall be designed and operated to prevent littering or any other nuisance.

“Recyclables” means all glass, plastic, and metal containers and cardboard and paper products as are approved for collection through the [unit of government’s] recycling program.

“Residential unit” A building, or portion thereof, designated for occupancy exclusively for residential purposes and having cooking facilities and separate sanitary facilities.

“Solid waste or waste” means all putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes.

“Yard waste” means plant material (leaves, grass clippings, branches, brush, flowers, roots, etc.) organic debris commonly thrown away in the course of maintaining yards and gardens, including sod and other biodegradable organic material. Yard waste excludes food waste, plastic and synthetic fibers, lumber and soil contaminated with hazardous waste.

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Appendix G: Example Ordinance Provisions

Accumulation of Refuse or Garbage. No owner and/or person in control of a residential unit, commercial establishment or industrial facility shall permit the accumulation of refuse, garbage or solid waste upon his or her premises for a period that would pose a health hazard, subject adjacent property occupants to unreasonably offensive odors or become a public nuisance. The accumulation of refuse, garbage or solid waste for a period in excess of fourteen days shall be burden of proof of a health hazard and creating a public nuisance. The terms of a lease shall not excuse either the property owner nor the tenant from complying with the requirements of this section.

Solid waste collection and storage. All solid waste shall be removed at least once weekly from all occupied residential units in residential areas and from all other premises as required by this Ordinance. Temporary storage of solid waste prior to removal shall comply with this Ordinance.

Recycling collection and storage. All recycables shall be removed at least biweekly from all occupied residential units in residential areas and from all other premises as required by this Ordinance. Temporary storage of recycables prior to removal shall comply with this Ordinance.

Composting Storage. Leaves, yard waste and vegetable waste may be stored for composting purposes as long as they do not harbor rodents, subject adjacent property owners to an unreasonably offensive odor or become a public nuisance, provided compost is stored in the rear yard and located not closer than ten feet from the property line.

Backyard Composting. Backyard compost piles may include a combination of yard and garden waste, such as weeds, branches, bark, grass clippings, leaves, stalks and stems, brush or vines; wood ashes; wood chips; coffee grounds; tea leaves; shredded raw fruit and vegetable waste; eggshells; and nutshells. Compost piles shall not include such products as meat and fish scraps, dairy products, bones, cooked food, vegetable oils, salad dressing, peanut butter, or animal manure. Compost piles shall be maintained in a manner that does not emit offensive odors or impair the health, safety, or welfare of the people or animals.

Containers required; specifications. It shall be the duty of every person in possession, charge or control of any dwelling or real property where solid waste or recyclables are generated or accumulated to have a cart or carts as provided by [the local unit of government] and to deposit or cause to be deposited therein all managed materials as permitted or required by this Ordinance.

Disposing of solid waste on public or private property prohibited. It is unlawful for any person to dump or in any manner dispose of solid waste upon any street, alley, public place or private property owned by another person within the [municipality].

Bulk Refuse. All bulk refuse shall be separated and must be removed using an approved method. Approved methods of removal shall be limited to arrangements with the contractor or private arrangements to transfer the bulk refuse to an appropriate disposal site or facility.

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Appendix G: Example Ordinance Provisions

Placing burning material in container prohibited. It is unlawful for any person to deposit in any solid waste container any burning materials or materials sufficiently hot to create combustion when the same come in contact with other solid waste.

Authorized waste collectors; condition of collection. The collection of all solid wastes is conditioned upon the observance of all provisions of this Ordinance. Collection is subject to weather and other conditions beyond the [local unit of governments] control. It shall be unlawful for any person other than municipal employees, solid waste collectors or other authorized persons to interfere with solid waste placed in the streets, alleys and public places for collection or to interfere in any manner with solid waste or recycling carts.

Hauler Registration. No person shall engage in the business of collecting, transporting, delivering, or disposing of solid waste bulk refuse, commercial or construction debris, garbage, hazardous or industrial solid waste in the [local unit of government] without first obtaining a license from the [local unit of government] as provided for in this Ordinance.

Transportation of waste on streets; vehicle condition. The transportation of all garbage, offal, rubbish or other waste material through the streets, alleys or thoroughfares of the [municipality] shall be conducted in a manner so as to create no nuisance. Managed Material Transporting Units conveying waste must be of such construction and so operated that the contents shall not spill on the public streets or alleys or otherwise create a nuisance.

Prohibited Waste. It shall be unlawful for any person to place any material in a container or receptacle which might endanger the collection personnel, or to deposit or deliver to a disposal site any hazardous material, waste material which would be detrimental to the normal operation of collection, incineration, recycling, diversion, or disposal, such as gaseous, solid or liquid poison, dead animals, ammunition, explosives, flammable liquid, un-drained garbage of a liquid or semiliquid nature, whether in containers or not, concrete, dirt, automobile or equipment parts, or any material that possesses heat sufficient to ignite any other collected materials. No motor vehicles shall be dumped or abandoned at any disposal site.

Prohibited yard waste disposal. No person shall: Mix or permit the mixing of yard waste with solid waste for curbside collection or place or permit the placing of yard waste out for curbside collection in the absence of a program designed for such purpose.

Permitted yard waste disposal. It shall be lawful to: Deposit yard waste at any authorized compost site in accordance with the rules and regulations promulgated by the facility; participate in a collection program for the diversion of organic wastes including yard wastes if the program is designed for such; and compost yard waste on the lot where it originated in a manner not creating a nuisance.

Depositing or scattering of litter prohibited. No person shall deposit or cause to be deposited, sort, scatter or leave any rubbish, earth, ashes, cinders, sawdust, hay, glass, manure, filth, paper, ice, dirt, grass, leaves, twigs, shrubs, garbage or other offensive material in

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any public roadway, alley, or public property, nor on any private or vacant property, except for collection and disposal in appropriate containers or an authorized facility for such purpose.

Placement of containers and special materials for collection. Between the hours of 1:00 p.m. and 10:00 p.m. on the day preceding the scheduled garbage and/or rubbish, recyclables, or organics collection, residents who are making use of the curbside pickup shall place their containers in the area between the sidewalk and curb, or between two and eight feet from the edge of the roadway in areas where there are no sidewalks or curbs. These containers shall be placed in front of the owner's property and in a location accessible to materials management transporting unit equipment. During the winter months, garbage and recyclables containers shall be placed in a driveway opening or some other established opening in the snowbank. Within 12 hours after pickup, all garbage and recyclables containers shall be removed out of view from the public street to a location on the owner's property.

Commercial, industrial, institutional, and multi-family buildings. All owners of commercial, industrial, and institutional properties, and multi-family units with six or more apartments not serviced by the [local unit of government's] collection service, shall provide and maintain safe, clean, on-site storage facilities for garbage and rubbish generated on the property. Said storage shall be located on the property in accordance with the provisions of the [local unit of governments's] zoning regulations, covered and completely screened from view from the public street, with adequate capacity to store the volume generated between collections. The property owner shall provide for collection and disposal in accordance with all applicable laws and regulations. All garbage shall be collected and properly disposed of at least once per week. The property owner shall restrict parking and provide snow removal, as may be necessary, to facilitate regular garbage collection.

Open burning. No person shall cause or permit any open burning of fuel, garbage or other combustible refuse or waste material. Leaves, brush, tree trimmings and grass may be burned provided maintenance of such a fire is not likely to create a hazard or nuisance condition to adjacent property or persons, and that the purpose for which such fire is to be maintained is legitimate. This provision shall not be construed to prohibit fires of charcoal or of a non-ash-producing fuel when used on private property for the exclusive preparation of food for human consumption or household heating. No person shall leave a fire unattended.

Unauthorized Collection of Residential and Commercial Solid Waste; Anti-Scavenging. It shall be a violation of this Ordinance for any person unauthorized by [local unit of government] to collect or pick up or cause to be collected or picked up solid waste, recyclables, or organics set out for collection. Each collection in violation hereof from a collection point or stop shall constitute a separate, distinct offense.

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Appendix G: Example Ordinance Provisions

Zoning Ordinance Language

Anaerobic Digester: a facility that uses microorganisms to break down biodegradable material in the absence of oxygen, producing methane and an organic product.

Composting Facility: a facility where composting processes occur, excluding household composting, temporary accumulation of organic/yard wastes, and on-farm organics management.

Innovative Technology Facility: a materials management facility that converts solid waste into energy or a usable product that is not a materials recovery facility, composting facility, or anaerobic digester.

Landfill, Type II: a landfill that receives primarily household and commercial municipal solid waste.

Landfill, Type III: a landfill that is not a Type II landfill and primarily receives types other than municipal solid waste.

Materials Recovery Facility: A facility that receives primarily source separated materials and sorts, bales, or processes the source separated material for reuse, recycling, or utilization as a raw material or product.

Materials Management Processing and Transfer Facility (Transfer Station): a facility used for the handling, storage, transfer, or processing of managed materials, and is not located at the site of generation or disposal of the managed materials.

Waste Diversion Center: a facility or part of a facility that is designated to receive or collect diverted wastes.

Sample provisions for materials management facilities

All uses shall be established and maintained in accordance with all applicable State of Michigan and federal statutes.

A uniformly finished fence or wall at least [X] feet in height shall be provided along the exposed sides of the site. The fence height shall be great enough to screen all materials from the road and abutting properties, and to prevent the blowing or movement of materials off-site.

All fenced-in areas shall be set back at least [X] feet from a public street or highway right-of-way line.

Whenever the installation abuts upon property within a residential district, a buffer/transition strip at least [X] feet in width shall be provided between the fenced-in area and the property within a residential district. Such strip shall contain plant materials, grass, and structural screens as required by this Ordinance.

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Garbage storage and disposal and recycling bins shall be designed to ensure no vermin or rodent infestation.

Garbage and Dumpster Screening. If the garbage and dumpster area is not screened by an intervening building from a perpendicular view from any public street rights-of-way or adjacent residential zoning district then an enclosure of sufficient height to completely screen the dumpster is required on three (3) sides of the dumpster. An enclosure gate is optional. The height of the enclosure shall be not less than [X] feet or at least [X] feet above the height of the dumpster, whichever is greater. Enclosures shall meet the following standards:

1. The enclosure must be constructed of brick, decorative concrete, pressure treated or rot-resistant wood, chain link with slats, or vinyl composite material that matches or complements the principal building or structure. Materials not listed may be proposed and may be considered by the [local unit of government's] Planning Commission or Zoning Administrator for approval with a Site Plan or Zoning Compliance Permit.
2. Enclosure gates must be constructed of solid metal or steel-reinforced wood, cedar, chain link with slats, or vinyl composite material. If wood other than cedar is used, it must be rated for outdoor use.

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Appendix H: Public Input During MMP Development

As of July 30, 2026

Results of Public Engagement Regarding Materials Management

An overall assessment of public input over the past five years of materials management planning efforts indicates that residents of the central Upper Peninsula support expanded recycling opportunities and are willing to participate when services are convenient, accessible, and affordable. A consistent level of support for recycling-related questions in multiple planning efforts suggests a regional consensus rather than isolated interest based on geography.

The primary barrier is the lack of available service infrastructure, particularly in rural areas. Increasing recycling rates will likely depend more on expanding access than convincing residents to recycle; however, education remains an important factor in influencing people who are not currently recycling. Public support drops when recycling is presented as an independent cost to a household; residents are more supportive when services are marketed with their convenience, service is bundled with existing waste collection services; and the benefits of participation are clearly explained.

Based on public preferences and identified barriers, the strongest strategies for expansion include:

- Expanding curbside recycling collection
- Developing more drop-off infrastructure
- Supporting regional partnerships and funding opportunities
- Recognizing demand for niche materials collection
- Utilizing grant-funded investments to minimize taxpayer impacts
- Maintaining education and outreach using direct mail and social media

Alger County Recycling Survey, 2022

In 2022, CUPPAD assisted the Alger County Recycling Committee in distributing a mailed and online, county-wide survey on recycling preferences. 547 surveys were returned, equaling 6% of residents. From the results, respondents indicated that Alger County residents were largely split on the need for recycling services, but stressed the desire for curbside recycling pickup if service was available. 46% of respondents indicated that they currently participated in recycling activities. 82% of respondents who currently have trash service would like to have recycling included in that service, and 64% are willing to pay an additional cost. Lack of availability for curbside service was cited often as a reason that people who do not currently recycle would do so. The majority of respondents utilized the Wood Island Landfill as their recycling drop off site, and are willing to travel about 5 miles to use it (approximately the distance of most of the households in the greater Munising area). Those that did not participate in recycling cited a lack of awareness (34%) of recycling options, and inconvenience (30%) of existing drop off sites. A

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number of comments addressed recent price increases for entry and limited hours at the Wood Island facility as reasons they had discontinued recycling.

Clean UP: An Effort to Increase Recycling in the Upper Peninsula, 2022

During the development of the Alger County Recycling Survey, CUPPAD was asked to assist participants in their NextCycle Intergovernmental Initiatives and Public-Private Partnerships track. The Alger County Recycling Committee, Schoolcraft Conservation District, and the Hiawatha Sportsman's Club used the technical assistance program to discuss feasible options for increasing recycling participation in the UP. CUPPAD collated information being developed for another grant project into a presentation given at the Fall 2022 NextCycle Pitch Competition in Troy. The presentation used available information, results from recycling surveys in Marquette and Alger Counties, and stakeholder feedback to identify that lack of education, convenient options, distance to drop-off facilities, and limited coordination between communities were barriers to increasing a 2% recycling rate calculated for the entire Upper Peninsula. The NextCycle technical assistance included events in Alger and Schoolcraft Counties with local stakeholders, and representatives from EGLE, Michigan Recycling Coalition, and The Recycling Partnership in attendance.

Breitung Township Master Plan Survey, 2022

Beginning in 2022, an effort was made to begin including materials management-aligned questions in surveys conducted by CUPPAD. During the development of the Breitung Township Master Plan, questions on interest in recycling participation were incorporated into a public survey, with specific questions used to help the Township explore upcoming contract development with their waste provider. 41% of 569 respondents indicated that they were willing to pay additional monthly fees for curbside recycling collection service if it was added to existing waste collection service.

Materials Management Community Engagement Events, 2023

In 2022, CUPPAD partnered with the six counties to conduct materials management inventory and engagement regarding potential updates to Part 115. This project included early outreach on materials management planning in coordination with EGLE staff, and organizing local events in early 2023 in each county to identify stakeholders, introduce materials management planning, and identify collaboration opportunities. The resulting *Central Upper Peninsula Materials Management County Engagement Report* provided a inventory and snapshot of materials management activities available in the area, and confirmed data collected by the State for their *MegaData* project.

Each of the six events included a presentation, discussion on issues and opportunities, and a stakeholder engagement questionnaire. Throughout the events, a lack of established reportable data was described as a major hurdle in the development of an understanding of local materials

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management issues in greater detail. 43 of 60 attendees completed the stakeholder questionnaire, identifying cost of service, access, and education as the largest difficulties encountered with current materials management programs. When asked, “do you know where the recycling you collect ultimately ends up?” 44% of respondents indicated “no” opposed to 41% “yes”, highlighting a lack of education on processes. Participants identified greater education and a lack of funding as the top needs of their county to increase the materials capture rate.

The following deficiencies in materials management activities were identified from the inventory and public engagement conversations:

- Large rural areas that prevent convenient access to drop-off or feasible curbside recycling.
- Lack of governmental capacity to organize and administer expanded materials management programs.
- Lack of a diverse set of stakeholders and regular engagement around solid waste, recycling, and organics issues in the area.
- Lack of end markets for materials and little public visibility of use of local materials as recycled products.

The development of the Report concluded with its presentation to the CUPPAD Regional Commission, and each County Board of Commissioners, outlining the opportunities for regional collaboration in materials management planning. These boards indicated interest in multicounty collaboration, and when the Materials Management Planning process was initiated, CUPPAD pursued this organizing framework.

Dickinson County Conservation District, 2023

In 2023, the Dickinson County Conservation District participated in a NextCycle Intergovernmental Initiatives and Public Private Partnership track to examine the feasibility of curbside recycling in its cities, and rural drop-off recycling sites. The District conducted a public input survey, with 62% of 214 respondents indicating that they currently participated in recycling activities. 46% of respondents identified that a lack of curbside or drop-off recycling services prevented them from participating more. 76% of respondents indicated that they would be willing to pay for more comprehensive recycling services than what was currently available. The District’s feasibility study identified three drop-off sites in addition to the current County facility to provide rural and multifamily convenient access to service.

Dickinson County Master Plan Survey, 2024

During the development of the Dickinson County Master Plan, a question on the public’s priority for expanding recycling access was incorporated into a public input survey. Of the 241 responses, 58% of respondents indicated that Dickinson County should put a higher priority on expanding access to recycling.

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Appendix H: Public Input During MMP Development

Schoolcraft Conservation District Conservation Needs Assessment, 2024

During public input on their Conservation Needs Assessment, Schoolcraft Conservation District asked which priorities were most important for the District to address in Schoolcraft County over the next 5 years. Of 128 respondents, 47% indicated that recycling was one of those priorities.

Marquette County Climate Adaptation Task Force Learning Circles, 2024

The Marquette County Climate Adaption Task Force held a series of events through 2024 called their “Learning Circle” series on a variety of topics, one of which was trash and recycling. The events brought together local stakeholders to review the local state of practice and identify opportunities and barriers to collaborative change. The participants in the event identified that: sustainable practices, support for infrastructure and policy investigations, governmental involvement and collaboration, individual behavior change, and community engagement and education were necessary to support a vision for sustainable materials management over the next 10-25 years.

Bark River Township Master Plan, 2025

During the development of the Bark River Township Master Plan, a question on the public’s priority for expanding recycling access was incorporated into a public input survey. Of 164 respondents, 78% indicated that the Township should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

Ely Township Master Plan, 2025

During the development of the Ely Township Master Plan, a question on the public’s priority for expanding recycling access was incorporated into a public input survey. Of 183 respondents, 88% indicated that the Township should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

Escanaba Township Master Plan, 2026

During the development of the Escanaba Township Master Plan, a question on the public’s priority for expanding recycling access was incorporated into a public input survey. Of 204 respondents, 76% indicated that the Township should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

Masonville Township Master Plan, 2026

During the development of the Masonville Township Master Plan, a question on the public’s priority for expanding recycling access was incorporated into a public input survey. Of 186 respondents, 69% indicated that the Township should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

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Appendix H: Public Input During MMP Development

Delta County Master Plan, 2025-2026 (active)

During the development of the Delta County Master Plan, a question on the public's priority for expanding recycling access was incorporated into a public input survey. Of 1,060 respondents (at time of writing), 71% indicated that the County should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

Menominee County Master Plan, 2026 (active)

During the development of the Menominee County Master Plan, a question on the public's priority for expanding recycling access was incorporated into a public input survey. Of 460 respondents (at time of writing), 76% indicated that the County should place a priority on increasing the availability of recycling, hazardous waste collection, and other waste collection programs.

Central Upper Peninsula Materials Management Survey, 2025-2026 (active)

The Central Upper Peninsula Materials Management Survey was distributed to local governments, organizations, news agencies, and identified stakeholders to gather information and public opinion on recycling issues in the six counties. After a slow start and overweighted geographic distribution of responses, the results skew towards priorities in Schoolcraft County and the greater Marquette area. The majority of the 604 respondents (at time of writing) represent the general public (80%), providing a strong indication of community perspectives regarding recycling, waste diversion, composting, and materials management services.

Key findings indicate that residents are generally supportive of recycling and waste diversion efforts but face significant barriers related to limited service availability, distance to facilities, and lack of education about available programs. Participation rates are highest for traditional household recycling, while specialized recycling streams and composting opportunities experience lower participation.

The survey suggests a strong opportunity for planning efforts focused on:

- Expanding access to recycling services.
- Increasing food waste diversion and composting opportunities.
- Improving public education and outreach.
- Developing regional partnerships and shared infrastructure.
- Addressing service gaps in rural areas where provider availability is limited.

It is important to note in the survey results that responses from Schoolcraft County came after information related to the possible use of a countywide millage to fund a recycling program was shared widely on social media. Some respondents used the survey as a way to communicate opposition to the millage which may have influenced response to other questions.

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Appendix H: Public Input During MMP Development

Total Responses

Respondent Type	Responses	Percent
General Public	486	80.46%
County/City/Township/Village	81	13.41%
Waste Management Businesses	10	1.66%
Recycling/Composting Organizations	8	1.32%
Other	19	3.15%
Total	**604**	

Geographic Distribution

County	Responses	Percent	Jurisdiction Highest Response
Alger	17	3.9%	Munising Township (6)
Delta	35	8.1%	City of Escanaba (13)
Dickinson	1	0.2%	Breitung Township (1)
Marquette	99	23.0%	Marquette Township (35)
Menominee	22	5.1%	City of Menominee (10)
Schoolcraft	256	59.5%	City of Manistique (84)

Do you have regular access to any of the following? (check all that apply)

Response	Responses	Percent
Curbside Solid Waste Pickup	371	88.5%
Curbside Recycling Pickup	210	50.1%
Drop-off solid waste areas	232	55.3%
Drop-off recycling areas	193	46.0%

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Appendix H: Public Input During MMP Development

What types of recycling or waste diversion do you regularly participate in? (check all that apply)

Response	Responses	Percent
Household recycling	286	75.8%
Glass recycling	127	33.6%
Plastic grocery bags or film	162	42.9%
Batteries	141	37.4%
Electronics	102	27.0%
Household Hazardous Waste	99	26.2%
Medications	121	32.1%
Tires	72	19.1%
Home composting	115	30.5%
Shared composting or subscription pickup	24	6.3%
Other	65	17.2%

A majority of the “other” responses conflated household recycling with specific types of materials (cardboard, metals).

What types of recycling or waste diversion activities are missing from your area? (short answer)

293 respondents provided an open response to this question. Common themes included:

- Lack of curbside recycling available in their area.
- Limited glass recycling opportunities.
- Lack of electronics recycling.
- More household hazardous waste collection events.
- Food waste collection and composting programs.
- Better access to specialty recycling streams.

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Appendix H: Public Input During MMP Development

What is your biggest barrier to participating in recycling collection activities? (check all that apply)

Response	Responses General Public	Percent	Responses Local Governments	Percent
Cost	82	22.4%	13	40.0%
Lack of service providers in my area	164	44.8%	6	18.7%
Distance to drop-off sites	109	29.7%	6	18.7%
I don't know enough about what can/can't be recycled	49	13.3%	0	-
I don't have a cart or bin to store material until pickup	39	10.6%	3	7.3%
I don't have enough things to recycle	38	10.3%	0	-
It takes too much time/effort	34	9.2%	0	-
I don't believe recycling works	31	8.4%	1	2.4%
Other	71	19.4%	12	37.5%

A majority of the "other" responses cited lack of education and access to recycling services, or identified that they currently did not have a barrier to recycling participation. Local government responses to "other" indicated that they did not have a barrier to recycling participation.

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Appendix H: Public Input During MMP Development

What is your biggest barrier to participating in food waste diversion/composting activities? (check all that apply)

Response	Responses General Public	Percent	Responses Local Government	Percent
I don't know where the food I don't need could be donated	67	19.5%	5	16.6%
I don't know what kinds of food could be donated	66	19.2%	3	10.0%
I don't know if there is a location or service provider in my area	112	32.6%	0	-
I don't have a way to store food waste before collection/drop-off	68	19.8%	6	20.0%
I don't have room for a compost bin in my yard	38	11.0%	2	6.7%
I don't know the rules for composting where I live	56	16.3%	2	6.7%
I don't want to create smells/attract animals	106	30.9%	9	30.0%
I don't have enough food waste to justify the effort	79	23.0%	7	23.3%
I don't have enough information to compost on my own	55	16.0%	5	16.6%
I don't have a garden or place where I could use finished compost	54	15.7%	2	6.7%
Other	77	22.4%	10	33.3%

A majority of the “other” responses identified they currently compost or did not have a barrier to composting participation.

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Appendix H: Public Input During MMP Development

Would you be willing to pay for increased access or a higher level of service for each of the following? (check all that apply)

Response	Responses	Percent
I would pay more for increased access to recycling services	145	35.8%
I would pay more for increased access to organics services	54	13.3%
I would pay more for increased access to household hazardous waste services	94	23.2%
I would pay more for increased access to mattress, furniture, and appliance recycling services	89	21.9%
I would pay more for increased access to electronic waste recycling	89	21.9%
I would pay more for increased access to scrap tire recycling	53	13.0%
I would not pay more for increased services	206	50.8%

Which method would you find the most effective for providing recycling and waste diversion information? (choose one preferred method)

Response	Responses	Percent
Mailed material	178	42.2%
Posted on my city/township/county website	47	11.1%
In the newspaper or on local television	40	9.5%
Posted on social media	115	27.3%
Shared at local meetings or events	18	4.2%
Other	23	5.4%

A majority of the “other” responses mentioned other types of digital media or all of the above.

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Appendix H: Public Input During MMP Development

Municipal Representative Survey

While 84 respondents indicated that they represented a municipal government in answering the first question of the survey, only 38 respondents (45%) completed any of the following questions.

Geographic Distribution

County	Responses	Jurisdiction Highest Response
Alger	1	City of Munising (1)
Delta	3	N/A
Dickinson	1	City of Iron Mountain (1)
Marquette	19	Marquette County (4)
Menominee	2	City of Menominee (2)
Schoolcraft	12	Schoolcraft County (8)

Does your municipality have an ordinance regulating solid waste collection and/or recycling activities?

Response	Responses	Percent
Yes	13	34.1%
No	14	36.8%
I don't know	11	28.9%

How important, if at all, would you say that issues related to waste collection, recycling, waste diversion, and composting are to your community? (choose one option from each type)

Response (indicated "very important")	Responses	Percent
Waste collection	25	67.5%
Recycling collection	22	59.4%
Waste diversion	16	43.2%
Composting	7	18.9%

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Appendix H: Public Input During MMP Development

How are the following types of materials management services or programs currently provided in your jurisdiction? (choose one option from each type)

Service Type	Majority Response	Percent
Curbside solid waste collection for residents	Tie (jurisdiction or resident contracts with a private hauler)	41.6%
Curbside recycling collection for residents	Jurisdiction contracts with a private hauler	42.4%
Access to a drop-off site for solid waste collection	Offered by another organization	24.3%
Access to a drop-off site for recycling collection	Offered by another organization	27.7%
Household hazardous waste collection	Offered by another organization	40.0%
Community clean up days	Run by our jurisdiction	33.3%
Electronic equipment collection	Offered by another organization	54.2%
Collection or drop-off of yard waste for composting	Offered by another organization	32.3%
Collection or drop-off of food waste for composting	Don’t know	57.5%

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Appendix H: Public Input During MMP Development

If your municipality provides any funding support for local services, which of the following approaches are used? (check all that apply)

Response	Responses	Percent
General fund contributions	9	25.0%
Special assessments	3	8.3%
User fees	14	38.8%
Dedicated millages	4	11.1%
I don't know	10	27.7%
Other	7	19.4%

A majority of the "other" responses indicated that there was no dedicated funding source used in their jurisdiction.

If the following resources were available, would your jurisdiction's government be more likely to expand or improve recycling services, or would it not make a difference? (choose one option from each type)

Option	Majority Response	Percent
Additional support for local funding options	Tie (may improve service or unlikely to improve service)	27.2%
Availability of local and/or regional partnerships to share resources	May improve or expand service	48.4%
Technical assistance to advise us on options	May improve or expand service	48.4%
Outreach and education	May improve or expand service	41.8%
Grants and/or outside funding support	Likely to expand service	44.1%
State-funded outreach, education, or program funding	May improve or expand service	41.1%

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Appendix H: Public Input During MMP Development

How supportive would you be of a regional recycling authority designed to provide hauling service from a drop-off site or transfer station in your community?

Response	Responses	Percent
Very supportive	12	34.2%
Somewhat supportive	16	45.7%
Not supportive	7	20.0%

Overall conclusions from survey results

The dominant barrier is lack of service availability. Expanding curbside collection, drop-off opportunities, and regional transfer infrastructure would address the most frequently cited concern. Public education regarding what types of materials can be recycled and where they can be taken is important for recycling programs; opportunities to increase education for food donation and rescue, and individual composting practices and benefits. Municipal representatives prioritized cooperative approaches that reduce costs and leverage shared infrastructure; these representatives are generally better educated than the general public, but still have gaps in service provisions available to them. Grants, state support programs, and collaborative funding arrangements appear critical to expanding services while minimizing impacts on residents and local governments.

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Appendix I: Intergovernmental Agreement

INTERLOCAL AGREEMENT TO CREATE A MULTICOUNTY MATERIALS MANAGEMENT PLAN, DESIGNATE A PLANNING AGENCY, AND ESTABLISH A MATERIALS MANAGEMENT PLANNING COMMITTEE

Pursuant to Subpart 11 of Part 115 of the Natural Resources and Environmental Protection Act, MCL 324.11571 *et seq.* ("Subpart 11"), the Counties of Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft (collectively "Counties") and the Central Upper Peninsula Planning and Development Regional Commission ("CUPPAD") enter into this Interlocal Agreement to Create a Multicounty Materials Management Plan, Designate a Planning Agency, and Establish a Materials Management Planning Committee ("Agreement"). The Counties and CUPPAD are individually a "Party" and collectively the "Parties."

BACKGROUND

The Michigan Constitution of 1963, Article 7, Section 28 permits a political subdivision to exercise jointly with any other political subdivision any power, privilege, or authority which such political subdivisions share in common with each other and which each might exercise separately.

The Urban Cooperation Act of 1967, MCL 124.501 *et seq*., and the Intergovernmental Transfer of Functions and Responsibilities Act of 1967, MCL 124.531 *et seq*., give effect to the Constitutional provision by providing that public agencies may enter into interlocal agreements to carry out their respective functions, powers, and authority.

Subpart 11 requires each county to have an approved Materials Management Plan ("MMP") to regulate the disposition of solid waste and waste diversion activities within its county.

Each county board of commissioners, acting as County Approval Agency, may submit to the Department of Environment, Great Lakes, and Energy ("Department") a Notice of Intent to prepare the MMP or be subject to an MMP developed by the Department.

Subpart 11 expressly authorizes counties to prepare a multicounty MMP pursuant to the Urban Cooperation Act of 1967, MCL 124.501 to 124.512.

Counties that elect to prepare a multicounty MMP must submit a notice of intent that includes a copy of any interlocal agreement identifying the process for creating a multicounty MMP.

Among other things, counties that prepare a multicounty MMP must also select a Designated Planning Agency and establish a Materials Management Planning Committee.

Based on the foregoing, the Parties agree as follows:

I. PURPOSE

The purpose of this Agreement is to enable the Counties to create and implement a multicounty MMP that meets the requirements of Subpart 11 of Part 115 of Public Act 451 of 1994 (MCL 324.11571 *et seq.*). The Designated Planning Area for the multicounty MMP will encompass all of the municipalities within the Counties.

Appendix I: Intergovernmental Agreement

II. JOINT EXERCISE OF POWERS AND DUTIES

To effectuate the purpose of this Agreement, the Counties agree to the joint exercise of powers and performance of the duties imposed on county boards of commissioners, acting as County Approval Agencies, under Subpart 11 of Part 115 of the of P.A. 451 of 1994, MCL 324.11571 *et seq.*

III. DESIGNATED PLANNING AGENCY

The Counties designate CUPPAD to serve as their Designated Planning Agency ("DPA") under MCL 324.11571(10)(a) and CUPPAD accepts such designation.

A. Responsibilities. Acting as the DPA on behalf of the Counties, CUPPAD will perform the following responsibilities, separated into Ongoing Activities and Planning Year(s) Activities:

1. Ongoing Activities
   - Administration of a Materials Management Planning Committee (MMPC), encompassing representation from the planning area and consisting of membership outlined in MCL 324.15572. Administration activities may include:
     - Coordinating meeting times and venues
     - Noticing meetings
     - Tracking membership and soliciting appointments for vacancies
     - Retention of records, meeting minutes, and other documents
   - Creation of a work program for the development of a Materials Management Plan, to be approved by the MMPC and EGLE.
   - Serve as the primary government resource regarding materials management within the planning area, including outreach and education.
   - Collection of reportable information including developing a base recycling rate, a utilization rate, and regular updates to the MMPC and EGLE.
   - Reporting to EGLE on plan implementation every two years.
   - Reviewing the Materials Management Plan with the MMPC at least every five years.
   - Identifying enforcement actions relevant to the provisions of the Materials Management Plan and reporting to authorities identified by the Plan.

2. Planning Year(s) Activities:
   - Preparation of the Materials Management Plan for the planning area under the requirements of MCL 324.11578.
     - Inventory of existing disposal areas and materials utilization facilities.
     - Data collection of associated tonnage produced, how much is processed, and potential capacity for landfill and diversion.

- Municipality-based gap analysis of current availability, geographic coverage, transportation infrastructure, zoning, and other ordinances.
- Goals for increasing managed material utilization and the recycling rate.
- County-by-county implementation strategy for actions to meet established goals.
- Strategic planning for education and outreach.
- Document and communication retention and incorporation into plan.
- Presentations, plan development, plan drafting, plan review with MMPC.

- Facilitation of the municipal and public approval process, including required notices, public hearings, public comment periods, county approval, municipality approval, and EGLE approval.

B. Compensation. In consideration of the scope of work, timeline, and goals established by MCL 324.115 *et seq.* and EGLE, for the initial Term of the Agreement, CUPPAD shall be compensated as follows based on a three year-plan development and approval process and ongoing activities spanning the duration of the Term.

	Total due CUPPAD	Per County with 6 Counties
Ongoing Activities	$48,000/year	$8,000/county/year
Planning Year(s) Activities	$30,000/year for 3 years (Plan costs $90,000)	$5,000/county/year for 3 years (Plan costs $15,000 per County)
Additional Activities	Hourly rate	Hourly rate
Total Cost First Three Years	**$78,000 / year + additional activities**	**$13,000/county/year + additional activities**

CUPPAD shall be entitled to additional compensation at its hourly rate for work not outlined in the compensation structure (e.g., facilitation of plan amendment activities in a non-planning year). CUPPAD's compensation shall be subject to negotiation for additional terms (beyond the first 5 years). In the event the Parties cannot reach agreement, CUPPAD's rates shall increase by 2% annually.

C. Invoicing. CUPPAD will invoice each county on a bi-annual basis beginning June 1, 2024, and payment is required within 45 days. A rate of 7% interest (calculated on an Annual Percentage Rate or APR) will accrue and compound monthly for balances unpaid beyond 45 days.

D. Effect of Withdrawal. In the event a county withdraws from this Agreement under Article VII (Withdrawal and Termination), Sections A or B, the total amount due to CUPPAD will be divided evenly among the remaining counties for future bi-annual payments.

Appendix I: Intergovernmental Agreement

IV. MATERIALS MANAGEMENT PLANNING COMMITTEE

Consistent with Subpart 11, the Counties establish the Central Upper Peninsula Materials Management Planning Committee ("MMPC"). This MMPC is a permanent public body subject to Public Act 267 of 1976, the "Open Meetings Act" (MCL 15.261 *et seq*.).

A. Membership. The MMPC shall consist of the following members, as required by MCL 324.11572(4):

1. A representative of a solid waste disposal facility operator that provides service in the planning area.
2. A representative of a hauler that provides service in the planning area.
3. A representative of a materials recovery facility operator that provides service in the planning area.
4. A representative of a composting facility or anaerobic digester operator that provides service in the planning area.
5. A representative of a waste diversion, reuse, or reduction facility operator that provides service in the planning area.
6. A representative of an environmental interest group that has members residing in the planning area.
7. An elected official of a county in the planning area.
8. An elected official of a township in the planning area.
9. An elected official of a city or village in the planning area.
10. A representative of a business that generates managed materials in the planning area.
11. A representative of the regional planning agency whose territory includes the planning area (CUPPAD).

In addition, each County to this Agreement may appoint an elected official of their county or a municipality in their county and a representative from a business that generates managed materials within their county. These appointments are optional but encouraged.

B. Appointments. Appointments to the MMPC are assigned among the Counties based on their respective solid waste, recycling, and organic activity as reflected in **Exhibit A** (Assigned and Optional Appointments). With the exception of the appointment of elected officials and optional members, appointments by the respective county board of commissioners will be based on nomination(s) from the DPA. If there is not a suitable nomination within the boundary of the appointing County, the DPA may nominate any representative within the Designated Planning Area. To the extent possible, the DPA will ensure that nominations continue to match the geographic distribution of appointments set forth in Exhibit A.

C. Terms. Initial appointments to the Planning Committee will consist of five-year terms. Their immediate successors shall be appointed for 2-, 3-, 4-, or 5-year terms such that, as nearly as possible, the same number are appointed for each term length. Subsequently, members shall be appointed for terms of 5 years. Members may be reappointed.

D. Vacancies. When a vacancy on the Planning Committee occurs, the DPA will notify the appropriate County of the vacancy, and, if applicable, nominate one or more representatives that meets the requirements of the vacancy.

E. Removal. Planning Committee members may only be removed for incompetence, dereliction of duty, or malfeasance, misfeasance, or nonfeasance in office.

F. Mileage and Per Diem. Members shall serve without compensation other than mileage and per diem at the standard rates established and paid by the appointing CAA for attending Planning Committee meetings, other authorized meetings, and travel to represent the Planning Committee when requested by the appointing CAA or a municipality within its jurisdiction.

G. Initial Meeting. Within 60 days of appointment of all committee members, the DPA shall call the first meeting of the MMPC. At its first meeting, the MMPC shall elect a chair and other officers as necessary or appropriate.

H. Quorum. A majority of the members of the MMPC constitute a quorum for the transaction of business at a meeting of the MMPC. For purposes of establishing a quorum, the number of members of the planning committee is the number as established under Article IV, Section A, excluding any unfilled vacancies created in the past 90 days and any optional appointments that a County elects not to fill.

I. Rules of Procedure. The MMPC shall make and adopt procedures for the conduct of its business, including the election of officers and the length of subsequent appointments, as outlined above.

J. Responsibilities. Consistent with MCL 324.11573, the MMPC will:

1. Direct the DPA in the preparation of the MMP.
2. Review and approve the DPA's work program under Section 11587(4).
3. Identify relevant local materials management policies and priorities.
4. Ensure coordination in the preparation of the MMP.
5. Advise counties and municipalities with respect to the MMP.
6. Ensure that the DPA is fulfilling the requirements of Part 115 as to both the content of the MMP and public participation.

K. Authority. The MMPC's authority is limited to the responsibilities set forth in Subpart 11. The MMPC shall have no authority to enter into contracts, acquire real or personal property, borrow or commit funds, or bind the Counties to any specific course of action.

V. INDIVIDUAL COUNTY RESPONSIBILITIES

A. As the County Approval Agency for its county, each county board of commissioners shall:

1. File a joint Notice of Intent with the Department of Environment, Great Lakes, and Energy with coordination from CUPPAD.
2. Within 60 days of filing the Notice of Intent
   a. Make all assigned and optional appointments to the MMPC.
   b. Supply the DPA with copies of any applicable policies, procedures, or ordinances necessary for creating or implementing the MMP.
3. Provide, within a reasonable time, all approvals or denials, communications, and documentation required by Subpart 11 of Part 115 of the Act.
4. Facilitate the DPA's solicitation of approvals of the legislative bodies of the municipalities within the planning area.

B. Additionally, each County shall:

1. Timely make all payments due to the DPA.
2. Timely reimburse appointed MMPC Members for mileage and per diem.

VI. MATERIALS MANAGEMENT PLAN

A. Initial Plan. The Counties, acting in their capacity as County Approval Agencies, may approve or deny the MMP. If approved, each county will submit its written approval or minutes of the meeting where a motion was passed to the MMPC, the DPA, and the other counties. If rejected, a county will communicate in writing its objection and any suggestions for changes to the MMPC, the DPA, and the other counties.

B. Amendments. The Counties may initiate one or more amendments to the MMP based on a recommendation from the MMPC and submission of a Notice of Intent to the Department of Environment Great Lakes, and Energy. The DPA shall facilitate the amendment process and approvals.

Appendix I: Intergovernmental Agreement

VII. TERM

Unless earlier terminated as provided herein, the term of this Agreement will be five (5) years beginning June 1, 2024. This Agreement will automatically extend for four (4) additional periods of five (5) years each for a total of 25 years unless a majority of the participating Counties or the DPA gives notice to the other parties in writing at least six months prior to expiration of the current 5-year term that it does not wish to continue the Agreement.

VIII. WITHDRAWAL & TERMINATION

A. Any county may withdraw from this Agreement by providing six (6) months written notice to the other Parties. In the event of withdrawal:

1. The withdrawing county assumes responsibility for the requirements contained in MCL 324.15571 *et seq.* to include creation of a MMP, designation of a Planning Agency, and appointment of a Planning Committee.
2. The DPA shall be entitled to receive compensation from the withdrawing county for its full bi-annual payment, even if the county elects to withdraw mid-cycle.
3. The DPA is not obligated to function as the Designated Planning Agency for any county withdrawing from this Agreement.
4. The DPA will reallocate appointments to the MMPC and make appropriate nominations.

B. In its sole discretion, the DPA may treat failure to pay a bi-annual invoice within 120 days as a voluntary withdrawal from this Agreement. Should the DPA elect to do so, it will promptly notify all Parties and the withdrawal will go into effect immediately prior to the next billing cycle. Such treatment will not relieve the withdrawing county of its obligation to pay but will allow the DPA to reallocate its fees among the remaining counties for the next billing cycle.

C. This Agreement will automatically terminate when only one county remains. On termination, the remaining county may contract with the DPA or another agency to fulfill its obligations under MCL 324.15571 *et seq.* and will receive a proportionate refund for any amounts already paid based on the number of remaining months in the billing cycle.

D. The payment obligations contained in this Article VIII survive termination of this Agreement.

IX. ASSIGNMENT

CUPPAD may assign its obligations as DPA with consent of the other Parties. Such consent shall not unreasonably be withheld.

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X. GENERAL

A. Notices. All notices required under Subpart 11 and this Agreement shall be delivered by first-class mail or by hand-delivery to the following:

If to the County of Alger:

County Clerk/Register of Deeds* and
101 Court Street
Munising, MI 49862

If to the County of Delta:

County Administrator/Controller* and
310 Ludington Street
Escanaba, MI 49829

If to the County of Dickinson:

County Controller/Administrator* and
PO Box 609
Iron Mountain, MI 49801

If to the County of Marquette:

County Administrator* and
234 West Baraga Avenue
Marquette, MI 49855

If to the County of Menominee:

County Administrator* and
839 10th Ave
Menominee, MI 49858

If to the County of Schoolcraft:

County Clerk* and
310 Walnut Street
Manistique, MI 49854

Appendix I: Intergovernmental Agreement

If to CUPPAD:

Dotty LaJoye CUPPAD 2950 College Avenue Escanaba, MI 49892 (906) 786-9234 ext. 1376 dlajoye@cuppad.org	and	Ryan Carrig* CUPPAD 2950 College Avenue Escanaba, MI 49892 (906) 280-5134 rcarrig@cuppad.org

Or to other individuals as designated in writing by the Party from time to time. Individuals with an asterisk following their name are also the primary point of contact for the Party for purposes of Subpart 11 and day-to-day correspondence.

B. Amendment. This Agreement may only be amended by a written document signed by all Parties.

C. Severability. Each provision of this Agreement must be interpreted in a way that is valid under applicable law. If any provision is held invalid, the rest of the Agreement will remain in full effect.

D. Entire Agreement. This Agreement, together with Exhibit A, contains the entire understanding between the Parties.

E. Headings. Headings preceding paragraphs in this Agreement are for reference purposes only and may not be used to interpret this Agreement.

F. Jurisdiction/Venue. This Agreement is governed by the laws of the State of Michigan. All disputes involving multiple counties shall be brought in a court of competent jurisdiction in the County of Marquette, Michigan. Disputes involving one county shall be brought in a court of competent jurisdiction in that county.

G. Counterparts. This Agreement may be executed in separate counterparts, each of which is deemed to be an original and all of which taken together constitute one and the same Agreement. The execution of this Agreement by any Party hereto, and the delivery of a copy thereof bearing an electronically scanned or facsimile signature shall be valid and enforceable and shall, for all purposes, be treated as an original signature.

IN WITNESS WHEREOF, this Agreement is entered into on this 1st day of June 2024 and is effective on execution by the CEO of CUPPAD and the Chair of the Board of Commissioners of each County.

(SIGNATURES ON NEXT PAGE)

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CENTRAL UPPER PENINSULA PLANNING AND DEVELOPMENT REGIONAL COMMISSION:

Dotty LaJoye

Dotty LaJoye, Executive Director

COUNTY OF ALGER:

Dean Seaberg, Chair County Board of Commissioners

COUNTY OF DELTA:

John Malnar, Chair County Board of Commissioners

COUNTY OF DICKINSON:

Henry Wender, Chair County Board of Commissioners

COUNTY OF MARQUETTE:

Joseph Derocha, Chair County Board of Commissioners

COUNTY OF MENOMINEE:

Larry Phelps, Chair County Board of Commissioners

COUNTY OF SCHOOLCRAFT:

Paul Walker, Chair County Board of Commissioners

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COUNTY OF DELTA:

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John Malnar, Chair County Board of Commissioners

COUNTY OF DICKINSON:

Henry Wender

Henry Wender, Chair County Board of Commissioners

COUNTY OF MARQUETTE:

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COUNTY OF MENOMINEE:

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Larry Phelps, Chair County Board of Commissioners

COUNTY OF SCHOOLCRAFT:

_____

Paul Walker, Chair County Board of Commissioners

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CENTRAL UPPER PENINSULA PLANNING AND DEVELOPMENT REGIONAL COMMISSION:

_____
Dotty LaJoye, Executive Director

COUNTY OF ALGER:

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Dean Seaberg, Chair County Board of Commissioners

COUNTY OF DELTA:

_____
David Moyle, Chair County Board of Commissioners

COUNTY OF DICKINSON:

_____
Henry Wender, Chair County Board of Commissioners

COUNTY OF MARQUETTE:

_____
Joseph Derocha, Chair County Board of Commissioners

COUNTY OF MENOMINEE:

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Larry Phelps, Chair County Board of Commissioners

COUNTY OF SCHOOLCRAFT:

_____
Paul Walker, Chair County Board of Commissioners

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EXHIBIT A
ASSIGNED AND OPTIONAL APPOINTMENTS

Alger County shall appoint one mandatory member and may appoint two optional members:
Mandatory – An elected official of a city or village in the planning area.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

Delta County shall appoint two mandatory members and may appoint two optional members:
Mandatory - A representative of a solid waste disposal facility operator that provides service in the planning area.
Mandatory - A representative of a hauler that provides service in the planning area.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

Dickinson County shall appoint two mandatory members and may appoint two optional members:
Mandatory - A representative of a waste diversion, reuse, or reduction facility operator that provides service in the planning area.
Mandatory - A representative of an environmental interest group that has members residing in the planning area.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

Marquette County shall appoint four mandatory members and may appoint two optional members:
Mandatory - A representative of a materials recovery facility operator that provides service in the planning area.
Mandatory - A representative of a composting facility or anaerobic digester operator that provides service in the planning area.
Mandatory - An elected official of a township in the planning area.
Mandatory – The representative of the Regional Planning Agency (CUPPAD), who currently resides in Marquette County.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

Menominee County shall appoint one mandatory and may appoint two optional members:
Mandatory - A representative from a business that generates managed materials within the planning area.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

Schoolcraft County may appoint two optional members:
Mandatory - An elected official of the county.
Optional - An elected official of the county or a municipality in the planning area.
Optional - A representative from a business that generates managed materials within the planning area.

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