

Charlevoix County Materials Management Planning Committee

Date: July 24, 2025
Time: 10:00 a.m. – 12:00 p.m.
Location: Shirley Roloff Center
Committee Room
13513 Division Street
Charlevoix, MI 49720

PROPOSED AGENDA

- I. Call to Order, Pledge of Allegiance**
- II. Public Comment**
- III. Approval of Agenda**
- IV. Approval of May 29, 2025 Meeting Minutes**
- V. Materials Management Planning**
 - a. Survey Update**
 - b. Process Update**
 - c. County Demographics**
 - d. Previous Planning Efforts**
 - e. Community Engagement**
- VI. Committee Member Comments**
- VII. Public Comment**
- VIII. Adjourn**

Posted: _____

Signature: _____

Charlevoix County
Materials Management Planning Committee Minutes
May 29, 2025 at 10:00 AM
Charlevoix County Shirley Roloff Center
13513 Division Street Charlevoix, MI 49720

MMPC Member Attendance			
<i>Victor VanDeventer</i> <i>rep. of a solid waste disposal facility</i>	<i>P</i>	<i>Annemarie Conway</i> <i>elected official of the county</i>	<i>P</i>
<i>Kirk Miller</i> <i>rep. of a hauler</i>	<i>P</i>	<i>Robin Hissong-Berry</i> <i>elected official of a township</i>	<i>P</i>
<i>Andre Grobaski</i> <i>rep. of a materials recovery facility (MRF)</i>	<i>P</i>	<i>Tim Nemecek</i> <i>elected official of a city or village</i>	<i>A</i>
<i>Eliza Hensel</i> <i>rep. of a composting facility</i>	<i>E</i>	<i>Jonathan Scheel</i> <i>business rep. generating material</i>	<i>P</i>
<i>Mark Bevelhymer</i> <i>rep. of waste diversion, reuse, or reduction</i>	<i>E</i>	<i>Janie McNabb</i> <i>rep. of the regional planning area</i>	<i>P</i>
<i>Kyra Allen</i> <i>rep. of an environmental interest group</i>	<i>P</i>	<i>Josh Chamberlain</i> <i>additional member per part 115</i>	<i>P</i>
		<i>Attendance Key:</i> <i>A – Absent</i>	<i>P – Present</i> <i>E - Excused Absence</i>
Staff in Attendance: Lora Roberts (Charlevoix County), Kiersten Stark (Charlevoix County), Josh Cline (Charlevoix County), Mathew Cooke (DPA Representative)			

1. Call to Order, Pledge of Allegiance

Jonathan Scheel, Chair, called the meeting to order at 10:05 a.m with the Pledge of Allegiance recited.

2. Public Comment

None.

3. Review Proposed Agenda

Motion by Josh Chamberlain, supported by Annemarie Conway, to approve the May 29, 2025 MMPC agenda as presented. Motion carried unanimously.

4. Approval of April 24, 2025 Meeting Minutes

It was noted that Julia Drost, Charlevoix County Clerk, name was misspelled, Robin Hisson-Berry's name was incorrect, and a misspelling of they as theft in the at the April 24 MMPC meeting.

Motion by Victor Vandeventer, supported by Kirk Miller, to approve the April 24, 2025 MMPC Meeting Minutes as amended. Motion carried unanimously.

5. Materials Management Planning

Survey

The MMPC reviewed the draft surveys including the following comments:

Resident Survey

- Move Q15 and Q16 to top of survey
- Add: Are you aware of the Charlevoix County Recycling Millage?
- Add: Would you pay for specialized recycling services?
 - Mattresses, furniture, etc.
- Add: What do you struggle with recycling?

Local Units of Government Survey

- Make it known that all LUG officials can respond to the survey
- Reword Q12
- Add: If materials managed in the community are poor or terrible to Q6
- Add: Costs associated with programs and services in relation to Q13

Business Survey

- Add to Q5: Does your company separate recycling, use single stream, send to end market, etc.

6. Committee Member Comments

None.

7. Public Comment

None.

8. Adjourn

Jonathan Scheel adjourned the May 29, 2025 MMPC meeting at 11:00 a.m.

DRAFT

Charlevoix County
Materials Management Planning Committee Minutes
June 26, 2025 at 10:00 AM
Charlevoix County Shirley Roloff Center
13513 Division Street Charlevoix, MI 49720

MMPC Member Attendance			
Victor VanDeventer rep. of a solid waste disposal facility	E	Annemarie Conway elected official of the county	P
Kirk Miller rep. of a hauler	E	Robin Hissong-Berry elected official of a township	P
Andre Grobaski rep. of a materials recovery facility (MRF)	P	Tim Nemecek elected official of a city or village	P
Vacancy rep. of a composting facility	-	Jonathan Scheel business rep. generating material	E
Mark Bevelhymer rep. of waste diversion, reuse, or reduction	E	Janie McNabb rep. of the regional planning area	P
Kyra Allen rep. of an environmental interest group	P	Josh Chamberlain additional member per part 115	P
		Attendance Key: P – Present A – Absent E - Excused Absence	
Staff in Attendance: Lora Roberts (Charlevoix County), Kiersten Stark (Charlevoix County), Josh Cline (Charlevoix County)			

1. Call to Order, Pledge of Allegiance

Tim Nemecek, Vice-Chair, called the meeting to order at 10:00 a.m with the Pledge of Allegiance recited.

2. Public Comment

None.

3. Review Proposed Agenda

It was noted that DPA representative Mathew Cooke was unable to attend the meeting. Without his guidance and with many absent, Vice-Chair Nemecek forwent the regular agenda and opened up committee comments. The agenda items for the June 26 2025 meeting will be discussed during the July 24, 2025 MMPC meeting.

4. Committee Member Comments

Tim Nemecek made a comment regarding his intent to discuss at the July 24, 2025 meeting the matter of changing his attendance from absent to excused for the May 29th 2025 meeting.

Janie McNabb mentioned that the Surveys have been released and shared Mathew's intent to attend events and post on social media for community engagement for the survey. Janie mentioned Charlevoix's Venetian Festival to which Annmarie Conway replied that Networks Northwest could promote the survey from the Merchandise tent, which Annmarie runs during the festival. A general comment was also made suggesting that the surveys be posted in the Facebook groups for What's Happening in Charlevoix, Boyne City, and East Jordan.

Robin Hissong-Berry announced that she will not be present for the July MMPC meeting. Robin, also mentioned that she would like to discuss the fates of township transfer stations in the county. Robin brought up the fact that scrap metal recycling should be considered as well.

5. Public Comment

None.

6. Adjourn

Motion by Tim Nemecek, supported by Annemarie Conway, to adjourn the June 26, 2025 meeting at 10:13am. Motion carried unanimously.

Thursday, July 24, 2025

To: Materials Management Planning Committee
Fr: Mathew Cooke, Community Planner
Re: Materials Management Planning

Survey

The Resident, Business, and Local Unit of Government MMP Surveys have been released and are receiving responses. They are included for your review, please let me know if you have any questions. We will continue to push all three surveys through various means over the next couple of months such as the community engagement events, business cards, word of mouth, social media, press release, and local organizations. Please let me know if you would like to have some business cards or flyers to help distribute!

Resident	246
<i>Charlevoix</i>	32
Business	7
Local Units of Government	26

Community Engagement

As previously mentioned, we will be utilizing a tri-fold poster board while attending community events. We have come up with 3 questions and one activity for this. The activity will have three bins – trash, recycling, and organics – and will have various (clean) materials for sorting. The questions planned will be:

1. "What types of materials do you find challenging to properly dispose of or recycle in our community?"
2. "What ideas do you have for reducing waste and increasing reuse in our community?"
3. "What resources or information would help you make more sustainable choices about the materials you use?"

The event schedule has had a change and is as follows:

<i>Charlevoix County</i>		
August 2025	Boyne City Farmers Market	Yes, confirm date
July 25th	Venetian Festival	Yes, courtesy of Annmarie
August 2nd	EJ - Portside Art Fair	Followed up
September 2025	Charlevoix - HHW Event	
	Local MTA Meeting - August/September	

FY 26 Work Program

We will present the draft Fiscal Year 2026 Work Program for your review and consideration at the August 2025 MMPC meeting.

RPA Representation

Isha Pithwa (Community Planner at Networks Northwest) will be applying to take over the Regional Planning Agency representative role on the MMPC for Janie McNabb. Isha has been transitioning to her new role as a Community Planner and will be assisting with MMP so we believe this will be a beneficial change for all. Janie will continue to be a valuable resource as the process continues to move forward.

Thursday, June 26, 2025

To: Charlevoix County Materials Management Planning Committee
Fr: Mathew Cooke, Community Planner
Re: Materials Management Planning

Materials Management Planning
Survey Update

Attached you will find the surveys that will be sent out on Monday, June 23rd. Revisions made include:

- **MMP Resident Survey**
 - Added a back button on the survey
 - Ensured question numbers are present
 - Ensured “Select all that apply” options are correct
 - Ensured text entry options are present for Other – Please list responses
 - Question 7: Clarified property taxes, PA 69 taxes in responses
 - Question 19: Corrected responses from interesting to interested
 - Question 24: Reduced income bracket responses, added ‘prefer not to answer’ option
- **MMP Local Units of Government Survey**
 - Added a back button on the survey
 - Ensured question numbers are present
 - Question 16: Added to ask for estimates on expenditures related to materials management
- **MMP Business Survey**
 - Added a back button on the survey
 - Ensured question numbers are present
 - Question 5: Clarified single stream recycling

We will send out the resident survey through a press release and social media posting. Local units of government will be contacted by their Clerk and Supervisor, and the business will be targeted by existing business contact lists, economic development organizations, and Northwest Michigan Works!. Follow up communications will be sent out to targeted organizations within the multi-County area for all applicable surveys. Please let me know if you have any organizations that come to mind that we should contact to help spread the survey awareness.

Process Update

As we engage with getting survey results from the community and engaging with communities at community events over the summer, other tasks such as calculating the municipal solid waste rates and other data collection will take place. On Friday, June 27th we will be meeting with staff from RRS to plot out the path to achieve these tasks with their technical assistance and support.

Attached you will find the County profile utilizing data from the Census Bureau and other noted sources. As you review these, please let us know if there are any other data points that would be beneficial to the process.

Lastly, I have attached several previous planning documents for your review as we start to engage in some discussions on goals and objectives. The first planning document is the individual County and Region Materials Management County Engagement report. This report will give some information on what services exist in the County and considerations to gaps and needs. The next documents are from the State of Michigan with County Profiles related to Materials Management, again providing some existing information on access and locations. Lastly, the goals and objectives from the existing solid waste plan are included but I have linked the full plan below.

	Charlevoix County
MMCE Report	Link
EGLE County Profile	Link
Solid Waste Plan	Link

Community Engagement Thoughts

At the meeting, we intend to provide a follow up memo with a calendar of events in the community for our attendance. We are still working on the scheduling of these with staff calendars. At these events, we will look to have a few activities for response to push the community MMP survey and awareness of the process and materials management in general.

MMP Resident Survey

Start of Block: Demographics

INTRO Michigan is updating its Materials Management Plans (formerly Solid Waste Plans) by July 2027 to prioritize sustainable practices like recycling and composting, as required by updated state law. This survey will assist the respective Materials Management Planning Committees with updating the plans to ensure proper management of all non-hazardous materials, establish guidelines for facility locations, document existing and future infrastructure needs, and define community goals for a more sustainable approach to materials management; more information is available at nwm.org/mmp. Responses to the 25 question MMP Resident Survey are confidential and anonymous, and should take about 8 to 10 minutes to complete. If you leave your email to be entered to win 1 of 5 \$50 Gift Cards, it will only be used for that purpose. If there are any questions, you would like a paper copy of the survey, or need any additional assistance, please contact Mathew Cooke, Community Planner at Networks Northwest by email at mathew.cooke@networksnorthwest.org or phone at (231) 929-5056.

Q1 Are you a permanent resident, seasonal resident, or visitor in the Northwest Lower Michigan region? This includes Antrim County, Benzie County, Charlevoix County, Emmet County, Grand Traverse County, Kalkaska County, Leelanau County, Manistee County, Missaukee County, and Wexford County

- ☐ Permanent Resident (1)
 - ☐ Seasonal Resident (2)
 - ☐ Visitor (3)
-

Display this question:

If Q1 = Permanent Resident

And Q1 = Seasonal Resident

Q2 What is your County of residence, permanent or seasonal?

- ☐ Antrim County (7)
- ☐ Benzie County (8)
- ☐ Charlevoix County (9)
- ☐ Emmet County (10)
- ☐ Grand Traverse County (11)
- ☐ Kalkaska County (12)
- ☐ Leelanau County (13)
- ☐ Manistee County (14)
- ☐ Missaukee County (15)
- ☐ Wexford County (16)
- ☐ Other - please list (17) _____

Display this question:

If Q1 = Visitor

Q3 Which counties do you visit most often for business, recreation, or otherwise? Select all that apply.

- ☐ Antrim County (7)
- ☐ Benzie County (8)
- ☐ Charlevoix County (9)
- ☐ Emmet County (10)
- ☐ Grand Traverse County (11)
- ☐ Kalkaska County (12)
- ☐ Leelanau County (13)
- ☐ Manistee County (14)
- ☐ Missaukee County (15)
- ☐ Wexford County (16)
- ☐ Other - please list (17) _____

Display this question:

If Q2 = Antrim County

Q2A Which Antrim County municipality (Township, City, or Village) do you reside in?

▼ Banks Township (1) ... Unsure (21)

Display this question:

If Q2 = Charlevoix County

Q2B What Charlevoix County municipality (Township, City, or Village) do you reside in?

▼ Bay Township (1) ... Unsure (20)

Display this question:

If Q2 = Manistee County

Q2C What Manistee County municipality (Township, City, or Village) do you reside in?

▼ Arcadia Township (1) ... Unsure (21)

Display this question:

If Q2 = Missaukee County

Q2D What Missaukee County municipality (Township, City, or Village) do you reside in?

▼ Aetna Township (1) ... Unsure (18)

Display this question:

If Q2 = Wexford County

Q2E What Wexford County municipality (Township, City, or Village) do you reside in?

▼ Antioch Township (1) ... Unsure (22)

Q4 How long have you lived at your primary residence?

- ☐ Less than 1 year (1)
 - ☐ 1 to 3 years (2)
 - ☐ 3 to 5 years (3)
 - ☐ 5 to 10 years (4)
 - ☐ 10 plus years (5)
-

Q5 How important do you believe recycling is for our communities, environment, and natural resources?

- ☐ Not at all important (1)
 - ☐ Slightly important (2)
 - ☐ Moderately important (3)
 - ☐ Very important (4)
 - ☐ Extremely important (5)
-

Q6 How important is it for our community to reduce the amount of waste going into landfills?

- ☐ Not at all important (1)
- ☐ Slightly important (2)
- ☐ Moderately important (3)
- ☐ Very important (4)
- ☐ Extremely important (5)

End of Block: Demographics

Start of Block: Block 1

Q7 How do you pay for material management (Trash, Recycling, Organics, etc.) services?
Select all that apply.

- ☐ County Millage (1)
- ☐ Public Act 69 (Taxes) (2)
- ☐ Property Taxes (7)
- ☐ Private Hauler (3)
- ☐ Subscription Service (4)
- ☐ Other - Please list (5) _____
- ☐ I am not sure (6)

Display this question:

If Q2 = Charlevoix County

Q7A Are you aware of the Charlevoix County Recycling Millage?

- ☐ Yes (1)
- ☐ No (2)

Q8 Does your household currently participate in recycling?

- ☐ Yes (1)
- ☐ No (2)

Skip To: Q9 If Q8 = No

Display this question:

If Q8 = Yes

Q8A If yes, what types of materials do you typically recycle at home? Select all that apply.

- ☐ Paper (1)
- ☐ Cardboard (2)
- ☐ Plastic Bottles & Jugs (3)
- ☐ Plastic Tubs & Containers (4)
- ☐ Glass Bottles & Jars (5)
- ☐ Metal cans (6)
- ☐ Food Scraps (7)
- ☐ Yard Waste (8)
- ☐ Textiles (9)
- ☐ Electronic Waste (10)
- ☐ White Goods (such as appliances) (11)
- ☐ Bulk Waste (such as furniture, mattresses) (12)
- ☐ Other - Please list (13) _____

Display this question:

If Q8 = Yes

Q8B How is your recycling collected? Select all that apply.

- ☐ Curbside pick-up (1)
- ☐ Drop-off Center (2)
- ☐ Private Service (3)
- ☐ Subscription Service (4)
- ☐ Other (please list) (5) _____

Display this question:

If Q8 = Yes

Q8C What are your main reasons for recycling? Select all that apply.

- ☐ Environmental Responsibility (1)
- ☐ Reducing Pollution (2)
- ☐ Cost Savings (3)
- ☐ Promote Sustainability (4)
- ☐ Other (please specify) (5) _____

Q9 If you don't recycle, would you be interested in increased recycling availability?

- ☐ Yes (1)
 - ☐ Maybe (2)
 - ☐ No (3)
-

Q10 Are there barriers that prevent you from recycling? Select all that apply.

- ☐ Costs (1)
 - ☐ Lack of curbside recycling (2)
 - ☐ Location of drop-off sites (3)
 - ☐ Don't believe there is value (4)
 - ☐ Too difficult (5)
 - ☐ Other - please list (6) _____
-

Q11 What information or resources about recycling and waste reduction would you find helpful? Select all that apply.

- ☐ Clearer Guidelines (1)
 - ☐ Online Resources (2)
 - ☐ Workshops (3)
 - ☐ Community Recycling Events (4)
 - ☐ Other - please list (5) _____
-

Q12 How does your household typically dispose of trash (i.e. non-recyclable waste)? Select all that apply.

☐ Private hauler curbside pickup (1)

☐ Tax paid curbside pickup (2)

☐ Drop-off site (3)

☐ Private - Pay to throw (4)

☐ Other - Please list (5) _____

Page Break

Q13 Do you participate in composting?

☐ Yes (1)

☐ No (2)

Display this question:

If Q13 = Yes

Q13A How do you compost? Select all that apply.

☐ Compost at home (1)

☐ Community compost program (2)

☐ Local farm compost (3)

☐ Compost Subscription Service (4)

☐ Other - Please list (5) _____

Display this question:

If Q13 = No

Q13B If you do not utilize compost programs, what would encourage you to participate in composting? Select all that apply.

- ☐ Affordability (1)
 - ☐ Access (2)
 - ☐ Educational Programs (3)
 - ☐ Increased Information (4)
 - ☐ Access to composting equipment (5)
 - ☐ Other - Please list (6) _____
-

Q14 Are the rules and guidelines clear for recycling in your community clear?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ I am unsure of my community's guidelines (3)
-

Q15 Do you know what recycling items are not accepted by your local program?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ Unsure (3)
-

Q16 Are there any specific types of waste or materials that you find particularly difficult to recycle or dispose of properly? Please list all.

Q17 What ways could our communities be doing a better job of managing waste and resources? Select all that apply.

- ☐ Reducing waste (1)
- ☐ Reusing items (2)
- ☐ Composting more (3)
- ☐ Other - Please list (4) _____

Q18 What services would you like to see offered in your community? Select all that apply.

- ☐ Subscription Compost Program (1)
- ☐ Increased recycling access (2)
- ☐ Bulk Waste Pick-up (3)
- ☐ Green Waste Pick-up (4)
- ☐ Electornic Waste Drop-Off (5)
- ☐ More Household Hazardous Waste Collection (6)
- ☐ Other - Please list (7) _____

Q19 How interested are you in learning more about waste reduction and management, recycling, and organics in your community?

- ☐ Not interested at all (1)
 - ☐ Slightly interested (2)
 - ☐ Moderately interested (3)
 - ☐ Very interested (4)
 - ☐ Extremely interested (5)
-

Q20 Are you willing to pay for increased service and access? Select all that apply.

- ☐ I would pay more to increase access to recycling services (1)
 - ☐ I would pay more to increase access to organic services (2)
 - ☐ I would pay more to increase access to household hazardous waste services (3)
 - ☐ I would pay more to increase access to mattress, furniture, appliance recycling (4)
 - ☐ I would not pay for increased services (5)
-

Q21 Are there any other considerations in regards to materials management (trash, recycling, organics, etc.) planning that should be considered or examined by the respective Materials Management Planning Committees?

Page Break

Q22 What age range do you fall into?

- ☐ Under 18 (1)
 - ☐ 18 - 24 (2)
 - ☐ 25 - 34 (3)
 - ☐ 35 - 44 (4)
 - ☐ 45 - 54 (5)
 - ☐ 55 - 64 (6)
 - ☐ 65 - 74 (7)
 - ☐ 75 - 84 (8)
 - ☐ 85 or older (9)
 - ☐ Prefer not to say (10)
-

Q23 Which of the following describes the number of people, including yourself, living in your household?

- ☐ 1 (1)
 - ☐ 2 (2)
 - ☐ 3 (3)
 - ☐ 4 (4)
 - ☐ 5 (5)
 - ☐ 6 or more (6)
-

Q24 Which of the following best describes your total annual household income?

- ☐ Under \$30,000 (1)
- ☐ \$30,000 to \$49,999 (2)
- ☐ \$50,000 to \$69,999 (3)
- ☐ \$70,000 to \$89,999 (4)
- ☐ \$90,000 to \$109,999 (5)
- ☐ \$110,000 to \$129,999 (6)
- ☐ \$130,000 to \$149,999 (7)
- ☐ \$150,000 and over (8)
- ☐ Prefer not to answer (12)

Q25 Please leave your email if you would like to be entered to win 1 of 5 \$50 Gift Cards.

End of Block: Block 1

MMP LUGs Survey

Start of Block: Default Question Block

Intro Michigan is updating its Materials Management Plans (formerly Solid Waste Plans) by July 2027 to prioritize sustainable practices like recycling and composting, as required by updated state law. This survey will assist the respective Materials Management Planning Committees with updating the plans to ensure proper management of all non-hazardous materials, establish guidelines for facility locations, document existing and future infrastructure needs, and define our community's goals for a more sustainable approach to materials management; more information is available at nwm.org/mmp Responses to the MMP Local Units of Government Survey are confidential and anonymous, and should take about 8 to 10 minutes to complete. If you supply an email, it will only be used for the purpose of the response. If there are any questions, you would like a paper copy of the survey, or need any additional assistance, please contact Mathew Cooke, Community Planner at Networks Northwest by email at mathew.cooke@networksnorthwest.org or phone at (231) 929-5056.

End of Block: Default Question Block

Start of Block: Block 1

Q1 What County is your municipality (Township, City, Village, or County itself) located in?

- ☐ Antrim County (11)
- ☐ Benzie County (12)
- ☐ Charlevoix County (13)
- ☐ Emmet County (14)
- ☐ Grand Traverse County (15)
- ☐ Kalkaska County (16)
- ☐ Leelanau County (17)
- ☐ Manistee County (18)
- ☐ Missaukee County (19)
- ☐ Wexford County (20)
- ☐ Other - Please list (21) _____

Display this question:

If Q1 = Antrim County

Q1A Which Antrim municipality do you represent?

▼ Banks Township (1) ... Antrim County (21)

Display this question:

If Q1 = Charlevoix County

Q1B Which Charlevoix municipality do you represent?

▼ Bay Township (1) ... Charlevoix County (20)

Display this question:

If Q1 = Manistee County

Q1C Which Manistee municipality do you represent?

▼ Arcadia Township (1) ... Manistee County (21)

Display this question:

If Q1 = Missaukee County

Q1D Which Missaukee municipality do you represent?

▼ Aetna Township (1) ... Missaukee County (18)

Display this question:

If Q1 = Wexford County

Q1E Which Wexford municipality do you represent?

▼ Antioch Township (1) ... Wexford County (22)

Q2 What best describes your role with your community?

- ☐ Supervisor (1)
- ☐ Mayor (2)
- ☐ Clerk (3)
- ☐ Other Elected Official (4)
- ☐ Administrator (5)
- ☐ Resource Recovery/Recycling Director, or the like (8)
- ☐ Other - Please list (7) _____

Q3 What types of materials management programs or services are currently implemented or supported by your community? Select all that apply.

- ☐ Curbside recycling (1)
- ☐ Recycling drop-off center (2)
- ☐ Composting (3)
- ☐ Household Hazardous Waste (HHW) Collection (4)
- ☐ Public education events (5)
- ☐ Other - Please list (6) _____

Display this question:

If Q3 != Curbside recycling

And Q3 = Recycling drop-off center

And Q3 = Composting

And Q3 = Household Hazardous Waste (HHW) Collection

Q3A If you do not offer recycling, household hazardous waste, or composting, why? Select all that apply.

- ☐ Costs (1)
- ☐ Funding (2)
- ☐ Access (3)
- ☐ No Community Interest (4)
- ☐ County offers services (5)
- ☐ Private services are available (6)
- ☐ Other - Please list (7) _____

Q4 How would you rate the effectiveness of the current materials management infrastructure and services within your community?

- ☐ Extremely effective (1)
 - ☐ Very effective (2)
 - ☐ Moderately effective (3)
 - ☐ Slightly effective (4)
 - ☐ Not effective at all (5)
-

Q5 What do you believe are the biggest materials management challenges facing your community? Select all that apply.

- ☐ Infrastructure (1)
 - ☐ Limited landfill capacities (2)
 - ☐ Recycling contamination (3)
 - ☐ Educational awareness (4)
 - ☐ Public participation (5)
 - ☐ Lack of end markets (6)
 - ☐ State and local regulations (7)
 - ☐ Other - Please list (8) _____
-

Q6 How well are different types of materials currently managed within your county?

	Excellent (1)	Good (2)	Average (3)	Poor (4)	Terrible (5)	Non- Existent (6)
Paper (1)	☐	☐	☐	☐	☐	☐
Plastics (2)	☐	☐	☐	☐	☐	☐
Glass (3)	☐	☐	☐	☐	☐	☐
Metals (4)	☐	☐	☐	☐	☐	☐
Construction Debris (5)	☐	☐	☐	☐	☐	☐
Electronic Waste (6)	☐	☐	☐	☐	☐	☐
Matresses (7)	☐	☐	☐	☐	☐	☐
Tires (8)	☐	☐	☐	☐	☐	☐
Household Hazardous Waste (9)	☐	☐	☐	☐	☐	☐
White Goods (appliances) (11)	☐	☐	☐	☐	☐	☐
Bulky Waste (furniture, mattresses) (12)	☐	☐	☐	☐	☐	☐
Yard Waste (13)	☐	☐	☐	☐	☐	☐
Prescription Drugs (10)	☐	☐	☐	☐	☐	☐

Display this question:

If Q6 = Terrible

And Q6 = Poor

And Q6 = Non-Existent

Q6A If you answered poor, terrible, or non-existent, please briefly explain why? Feel free to offer ideas to increase how materials can be managed better.

Q7 What should be the primary focus of the updated County Materials Management Plan from your community's perspective? An example could be increased recycling participation and access within the community or launching a compost option in the community.



Q8 Which of the following areas should receive the most attention in the updated County plan to best support your community's materials management efforts? Select your top three.

- ☐ Funding for infrastructure development in your county (1)
 - ☐ State-level public education and outreach resources (2)
 - ☐ Clearer State policies and regulations (3)
 - ☐ Market development initiatives for recycled materials relevant to your county (4)
 - ☐ Guidance and resources for prevention and waste reduction programs (5)
 - ☐ Support for reducing contamination in recycling in your county (6)
 - ☐ Other - Please list (7) _____
-

Q9 What types of infrastructure investments are most needed in your county to improve materials management? Select all that apply.

- ☐ Funding for local recycling facilities (1)
 - ☐ Click to write Choice 7 (2)
 - ☐ Composting sites (3)
 - ☐ Collection equipment (4)
 - ☐ Transfer stations (5)
 - ☐ Landfill (6)
 - ☐ Other - Please list (7) _____
-

Q10 Do you see value in pursuing the opportunity for region-wide collection of household hazardous waste year round, waste authority, or a single regional contract for collection events? Select all that apply.

- ☐ Both year round collection and single contract (1)
 - ☐ Year round collection (2)
 - ☐ Quarterly collection (3)
 - ☐ Collection multiple times per year (4)
 - ☐ Regional HHW Contract (5)
 - ☐ Multi-County HHW Contract (6)
 - ☐ Both year round collection and single contract (7)
 - ☐ Waste Authority (10)
 - ☐ None of the above (8)
 - ☐ Other - Please list (9) _____
-

Q11 What are the most effective ways to educate the public within your county about proper recycling and waste reduction practices? Select all that apply.

- ☐ Providing standardized materials (1)
 - ☐ Funding local campaigns (2)
 - ☐ Increased community recycling events (3)
 - ☐ Other - Please list (4) _____
-

Q12 What are the biggest barriers to increasing recycling rates for materials in your community?

- ☐ Funding (1)
 - ☐ Access (2)
 - ☐ Education (3)
 - ☐ Other - Please list (4) _____
-

Q13 After your communities recycling is collected, do you know where it goes to?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ Unsure (3)
-

Display this question:

If Q13 = Yes

Q13A If yes, could you please list where they end up? (such as a recycling end-market organization or Emmet County Materials Recovery Facility (MRF))

Q14 How does your community currently pay for recycling? Select all that apply.

- ☐ Recycling Millage (1)
 - ☐ PA 69 Funding (2)
 - ☐ Property Taxes (3)
 - ☐ County Funding (4)
 - ☐ Other - please list (5) _____
-

Q15 What costs are associated with your communities recycling programs and services funding? Select all that apply.

- ☐ Recycling drop-off site host (1)
 - ☐ HHW collection (2)
 - ☐ Composting (3)
 - ☐ Trash pick-up (4)
 - ☐ Education (5)
 - ☐ Other - Please list (6) _____
-

Q16 Could you provide an estimate of how much your community expends on material management services and programs? Please use a \$XXX,XXX format.

Q17 Is there anything else you would like us to know about materials management and your community?

End of Block: Block 1

MMP Business Survey

Start of Block: Default Question Block

INTRO Michigan is updating its Materials Management Plans (formerly Solid Waste Plans) by July 2027 to prioritize sustainable practices like recycling and composting, as required by updated state law. This business survey will assist the respective Materials Management Planning Committees with updating the plans to ensure proper management of all non-hazardous materials, establish guidelines for facility locations, document existing and future infrastructure needs, and define our community's goals for a more sustainable approach to materials management; more information is available at nwm.org/mmp Responses to the MMP Business Survey are confidential and anonymous, and should take about 8 to 10 minutes to complete. If there are any questions, you would like a paper copy of the survey, or need any additional assistance, please contact Mathew Cooke, Community Planner at Networks Northwest by email at mathew.cooke@networksnorthwest.org or phone at (231) 929-5056.

Q1 What County does your business primarily operate in?

- ☐ Antrim County (1)
- ☐ Benzie County (2)
- ☐ Charlevoix County (3)
- ☐ Emmet County (4)
- ☐ Grand Traverse County (5)
- ☐ Kalkaska County (6)
- ☐ Leelanau County (7)
- ☐ Manistee County (8)
- ☐ Missaukee County (9)
- ☐ Wexford County (10)
- ☐ Other - Please list (11) _____

Q2 What sector best describes your primary business activity?

- ☐ Retail (1)
- ☐ Manufacturing (2)
- ☐ Service Industry (e.g., hospitality, healthcare, professional services) (3)
- ☐ Food Service (4)
- ☐ Construction (5)
- ☐ Agriculture (6)
- ☐ Education (7)
- ☐ Other - Please list (8) _____
-

Q3 Approximately how much total non-hazardous waste (trash, recycling, etc.) does your business generate on average per week?

- ☐ Less than 50 lbs (1)
- ☐ 50 - 200 lbs (2)
- ☐ 201 - 500 lbs (3)
- ☐ 501 - 1000 lbs (4)
- ☐ More than 1000 lbs (5)
- ☐ Unsure (6)
-

Q4 Could you estimate your business recycling to waste rate? (i.e. 50% recycling to 50% trash)

0 100

Estimated Recycling to Waste Rate ()



Q5 How does your business recycle?

- ☐ Single stream recycling (all of your recycling goes into one container) (1)
- ☐ We separate recycling (2)
- ☐ Send recycling to end market (3)
- ☐ We do not currently recycling (4)

Display this question:

If Q5 = We separate recycling

Q5A Which of the following materials does your business currently separate for recycling?
Select all that apply.

- ☐ Cardboard (1)
- ☐ Paper (mixed, office, newspaper) (2)
- ☐ Plastics (bottles, containers, film) (3)
- ☐ Glass (4)
- ☐ Metals (aluminum, steel) (5)
- ☐ Food Waste (6)
- ☐ Other - Please list (7) _____

Display this question:

If Q5 = Send recycling to end market

Q5B What materials are you sending to an end market? Please feel free to share what end market you work with.

Display this question:

If Q5 = We do not currently recycling

Q5C If you do not recycle, why?

Q6 Does your business currently participate in any composting or organic waste diversion programs?

- ☐ Yes (1)
- ☐ No (2)
- ☐ We are exploring or considering options (3)

Q7 How do you currently handle your food waste collection? Select all that apply.

- ☐ Private Service (1)
 - ☐ Local Farm (2)
 - ☐ Food Rescue (3)
 - ☐ Food Bank (4)
 - ☐ On Site Composting (7)
 - ☐ Not Applicable (5)
 - ☐ Other - Please list (6) _____
-

Q8 How is your business non-hazardous waste recycling picked up? Select all that apply.

- ☐ Collection by private hauler (1)
 - ☐ Paid services to business who manage recycled materials (2)
 - ☐ Drop-off at transfer station (3)
 - ☐ Household Hazardous Waste Collection Events (4)
 - ☐ We do not recycle Household Hazardous Waste (5)
-

Display this question:

If Q2 = Food Service

Q9 If your business offers take-away, what materials do you utilize for to-go orders? Select all that apply

- ☐ Styrofoam (1)
 - ☐ Plastic (2)
 - ☐ Compostable Materials (3)
 - ☐ Other - Please list (4) _____
-

Q10 What are the primary methods your business currently uses for the disposal of non-recyclable/non-compostable waste? Select all that apply.

- ☐ Collection by a private waste hauler (1)
 - ☐ Drop-off at a transfer station or landfill (2)
 - ☐ Other - Please list (3) _____
 - ☐ Unsure (4)
-

Q11 Does your business currently have any specific goals or initiatives related to reducing waste generation or increasing recycling/composting rates?

- ☐ Yes - Please list (1) _____
 - ☐ No (2)
 - ☐ We are considering setting goals in the future. (3)
-

Q12 What are the biggest challenges your business faces in implementing or expanding sustainable materials management practices (e.g., recycling, composting)? Select all that apply.

- ☐ Cost of implementation or service fees (1)
 - ☐ Lack of space for storage or sorting (2)
 - ☐ Insufficient information or resources (3)
 - ☐ Lack of employee engagement or training (4)
 - ☐ Logistical challenges with collection or processing (5)
 - ☐ Other - Please list (6) _____
 - ☐ We do not currently face significant challenges. (7)
-

Q13 Is your business interested in learning more about or participating in local programs or initiatives that support business recycling, composting, or waste reduction?

- ☐ Yes, very interested (1)
 - ☐ Yes, somewhat interested (2)
 - ☐ Not currently interested (3)
 - ☐ Unsure (4)
-

Q14 Does your business anticipate any significant changes in the types or volumes of materials it generates in the next 3-5 years?

- ☐ Yes (1)
 - ☐ No (2)
 - ☐ Unsure (3)
-

Display this question:

If Q14 = Yes

Q14A If yes, what types of waste do you expect to increase in the next 3-5 years?

Q15 Does your business produce a material (by-product or otherwise) that could be recycled, but you do not have an end-user or alternative use for?

☐ Yes (1)

☐ No (2)

Display this question:

If Q15 = Yes

Q15A If yes, what materials could be recycled but need an end user or alternative use for?

Q16 Does your business purchase recycled materials for use?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Unsure (3)
- ☐ We would if available (4)

Display this question:

If Q16 = Yes

Q16A If yes, what typed of recycled materials do you purchase? Select all that apply.

- ☐ Recycled Plastics (1)
- ☐ Recycled Metals (2)
- ☐ Recycled Paper & Cardboard (3)
- ☐ Recycled Glass (4)
- ☐ Recycled Textiles (5)
- ☐ Recycled Rubber (6)
- ☐ Recycled Wood (7)
- ☐ Recycled Electronics (8)
- ☐ Recycled Concrete & Aggregates (9)
- ☐ Recycled Organics (Compost) (10)
- ☐ Recycled Oil (11)
- ☐ Other - Please list (12) _____

Display this question:

If Q16 = We would if available

Q16B What recycled materials could your business purchase to utilize if they were available?

Q17 How could businesses better engage with the circular economy through re-use of recycled materials? Select all that apply.

- ☐ Use recycled plastic in packaging (1)
- ☐ Design products that can be easily disassembled and their parts reused or recycled (2)
- ☐ Offer take-back programs for their products so the materials can be used again (3)
- ☐ Partner with companies that specialize in processing recycle materials for new applications (4)
- ☐ Incorporate recycled fabrics into clothing or textiles (5)
- ☐ Utilize crushed recycled glass in construction materials (6)
- ☐ Refurbish and resell returned or used products (7)
- ☐ Use recycled paper and cardboard for office supplies and packaging (8)
- ☐ Other - Please list (9) _____

Q18 Optional: Please provide the name of your business and a contact person/email if you are willing to be contacted for further information or discussion of materials management planning.

☐ Business Name (1) _____

☐ Contact Person (2) _____

☐ Contact Email (3) _____

End of Block: Default Question Block

POPULATION AND HOUSING



416.3 SQ. MILES
AREA



62.8 PEOPLE/SQ. MILES
POPULATION DENSITY



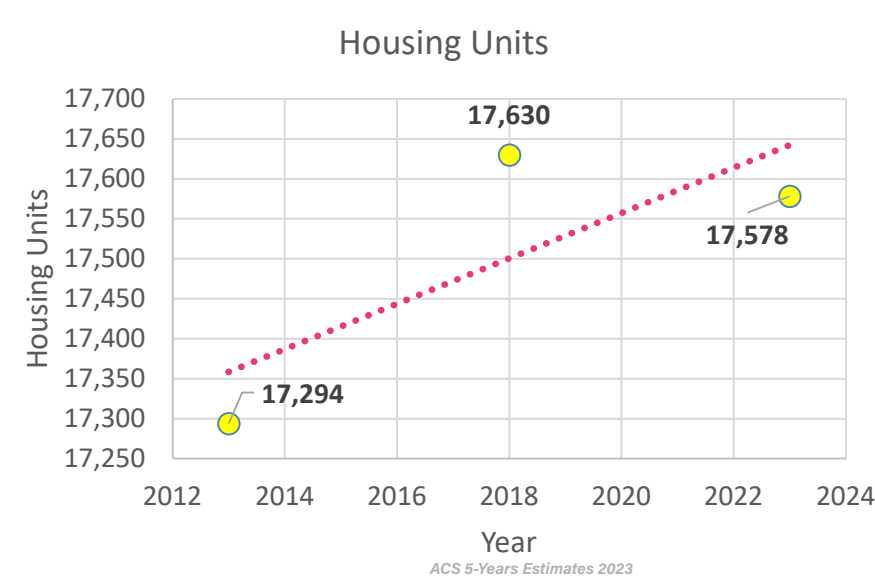
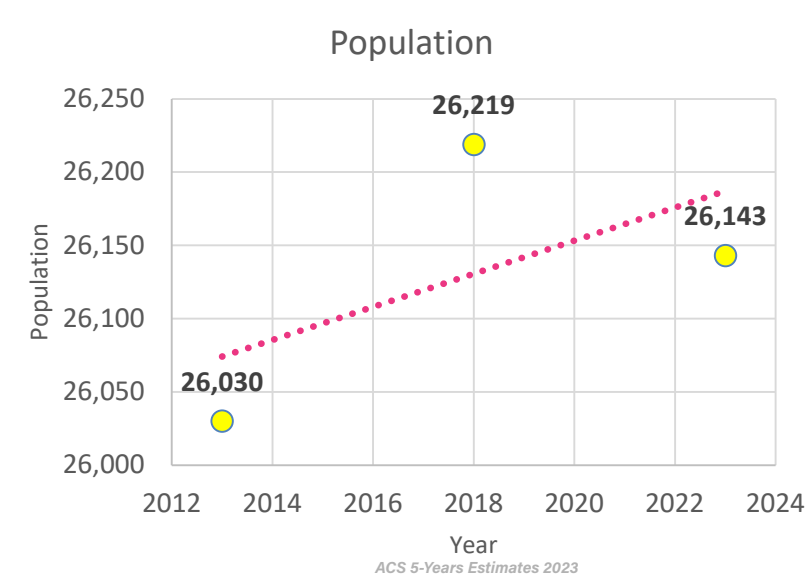
26,143
TOTAL POPULATION

ACS 5-Years Estimates 2023

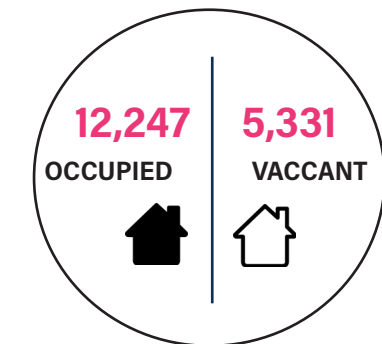


MI Labour
Market Information

AGE	2025
Total	26,248
0 To 4	1,067
5 To 9	1,175
10 To 14	1,246
15 To 19	1,310
20 To 24	1,211
25 To 29	1,282
30 To 34	1,373
35 To 39	1,419
40 To 44	1,467
45 To 49	1,323
50 To 54	1,378
55 To 59	1,791
60 To 64	2,288
65 To 69	2,462
70 To 74	2,098
75 To 79	1,600
80 To 84	981
85+	775



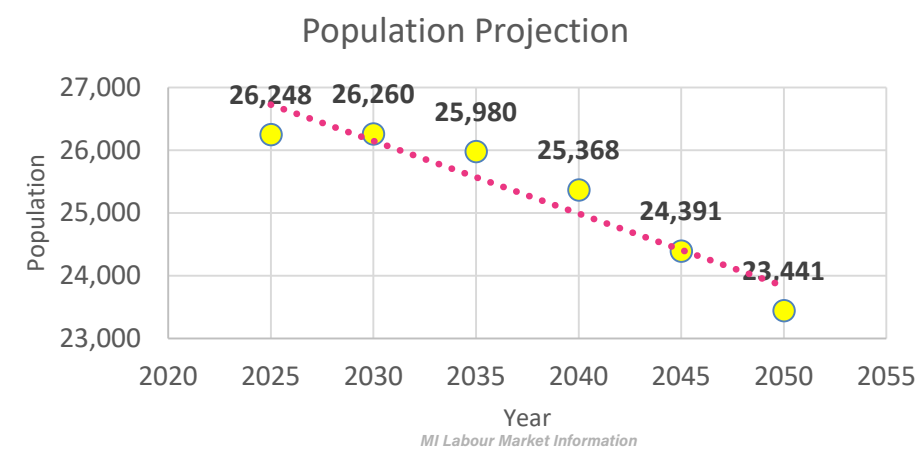
17,578
HOUSING UNITS



2.11
AVERAGE HH SIZE



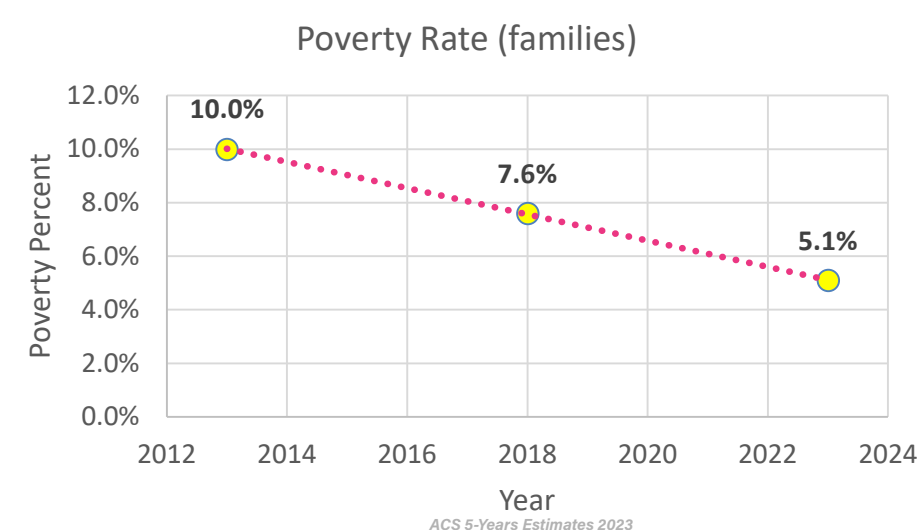
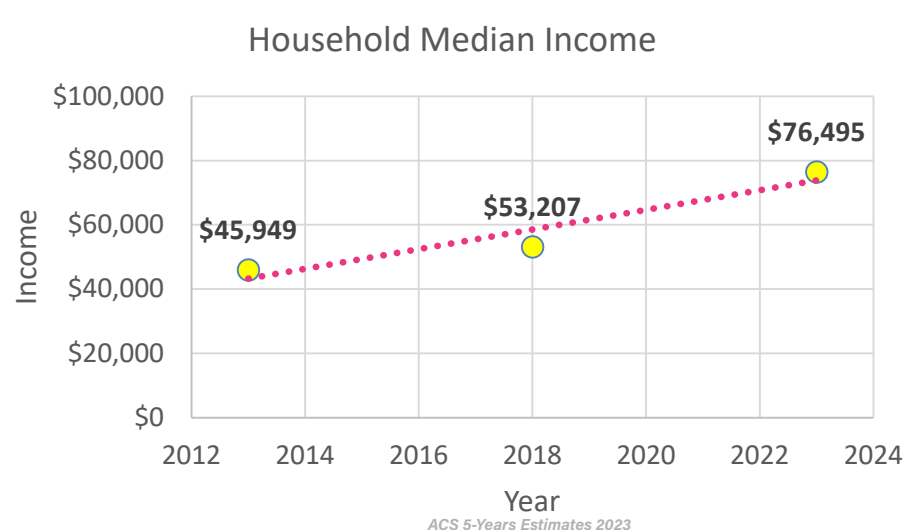
ESTIMATED POPULATION PROJECTION



MUNICIPALITY	2020 CENSUS POPULATION
Bay Township	1142
Boyne Valley Township	1425
Chandler Township	284
Charlevoix Township	1763
Evangeline Township	767
Eveline Township	1515
Hayes Township	2000
Hudson Township	671
Marion Township	1657
Melrose Township	1405

MUNICIPALITY	2020 CENSUS POPULATION
Norwood Township	700
Peaine Township	266
St. James Township	259
South Arm Township	1939
Wilson Township	1858
Village of Boyne Falls	358
City of Boyne City	3816
City of East Jordan	2239
City of Charlevoix	2348
Charlevoix County	26054

INCOME AND POVERTY



INDUSTRY AND EMPLOYMENT



TOTAL NUMBER OF ESTABLISHMENTS
903



TOTAL NUMBER OF JOBS
7,881



TOP 5 INDUSTRIES

- » Manufacturing
- » Accomodation and Food Services
- » Retail and Trade
- » Construction
- » Other services (except public administration)



Supplement: Charlevoix County Materials Management County Engagement

March 1, 2023

PREPARED BY:



COMMISSIONED BY:



EXECUTIVE SUMMARY

Working together with Networks Northwest and member communities, RRS completed a comprehensive set of tasks that fulfills the objectives of Michigan Department of Environment, Great Lakes, and Energy (EGLE) Materials Management Community Engagement (MMCE) grant and lays the groundwork for regional collaboration in materials management planning among member communities.

The MMCE grant process is intended to help counties in the transition to materials management and begin to identify partnership within regions and counties, understand current materials management deficiencies and opportunities, highlight future changes to the planning process, and outline steps that can occur now at the county and regional levels to assist with the development of future materials management programs and infrastructure.

Key improvements and recommendations for counties within Networks Northwest are found in the respective sections in the report. RRS identified forty (40) recommendations that are categorized into seven areas which form the basis for a robust materials management system:

- Community Access
- Facilities and Infrastructure
- Robust Markets, including Materials of Focus
- Public/Private Partnerships
- Supportive Policy
- Education and Outreach
- Regional Planning

Specific to Charlevoix County and as required by the EGLE grant, RRS identified the top five needs and the top three materials management projects that Charlevoix County should consider.

TOP FIVE NEEDS:

1. Curbside recycling in select areas
2. Consistent education and outreach
3. At least one Center for Hard to Recycle Materials (CHaRM) that includes household hazardous waste collection opportunities
4. Hub-and-spoke collections for key materials, particularly yard and food waste
5. Sustainable funding

TOP THREE MATERIALS MANAGEMENT PROJECTS:

Based on the top five needs above, RRS recommends Charlevoix County focus on three projects that could have significant impact on accessibility, awareness, and sustainable funding for programs and services.

1. Engage County and municipal leaders in conversations about materials management solutions in light of changes in state law.
2. Evaluate the funding and infrastructure needed to collect additional materials, including more frequent household hazardous waste events, mattresses, food waste, and other difficult to recycle items regularly or periodically.
3. Develop consistent recycling outreach materials in partnership with the hauler, the processor, the mills, and, as appropriate, the region.

STAKEHOLDERS

A stakeholder list was developed in collaboration with each county recycling contact to determine priority county, municipal, and other invested stakeholders. Perspectives were sought from either direct interview (in person or via phone) or through a set of questions distributed via email. Emails were sent at least twice seeking feedback.

First	Last	Organization	Primary stakeholder Type	Contact Type
Terry	Amick	Charlevoix County	Recycling coordinator	call
Robert	Jess	Charlevoix County	county official	email
Chris	Christensen	Charlevoix County	county official	email
Ronald	Reinhardt	Charlevoix County	county official	email
Robert	Draves	Charlevoix County	county official	email
Scott	Hankins	Charlevoix County	county official	email
Shirley	Roloff	Charlevoix County	county official	email
Kevin	Shepard	Charlevoix County	county official	email
Larry	Moeschke	Bay Township	municipal official	email
Sue	Hobbs	Boyne Valley Township	municipal official	email
Dennis	Howard	Chandler Township	municipal official	email
James	Howell	Evangeline Township	municipal official	email
John	Vrondran	Eveline Township	municipal official	email
Ronald	VanZee	Hayes Township	municipal official	email
Terrence	Erber	Hudson Township	municipal official	email
John	Martin	Marion Township	municipal official	email
Vern	Goodwin	Melrose Township	municipal official	email
Benjamin	Freds	Norwood Township	municipal official	email
Doug	Tilly	Peaine Township	municipal official	email
Kathleen	McNamara	St. James Township	municipal official	email
Robert	Christensen	South Arm Township	municipal official	email
Todd	Sorenson	Wilson Township	municipal official	email
Charles	Tate	Village of Boyne Falls	municipal official	email
Tom	Cannon	City of East Jordan	municipal official	email
Michael	Cain	City of Boyne City	municipal official	email
Mark	Heydlauff	City of Charlevoix	county official	email
Alison	Adams	Charlevoix Conservation District	community organization	email
Julia	Drost	Charlevoix County	county official	email
Becky	King	Charlevoix County	county official	email
Denise	Cunningham	Charlevoix County	county official	email
Sarna	Salzman	SEEDS	community organization	in-person



Ann	Rogers	Northern Michigan Environmental Action Council	community organization	email
Mark	Bevelhimer	GFL/American Waste	hauler	in-person
Jill	Reynolds	Waste Management	hauler	email
Todd	Harland	Republic Services	hauler	email

CHARLEVOIX COUNTY - GAPS



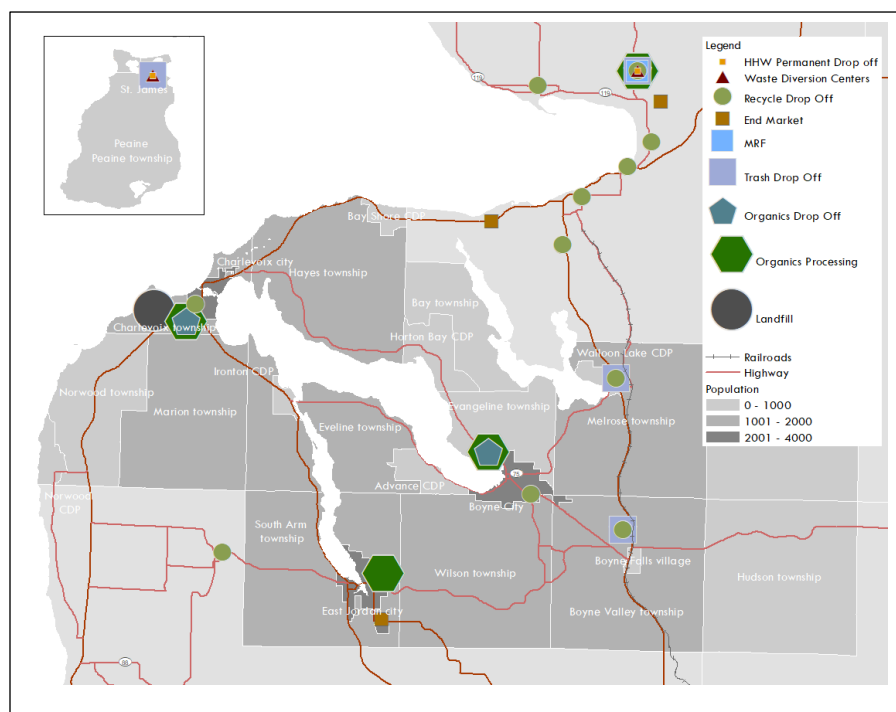
Population:	26,054
Square Miles of Land Area:	416.3
Households:	11,725
Employer Establishments:	802
Countywide Curbside Trash:	NO
Countywide Curbside Recycling:	NO
Countywide Curbside Organics:	NO
Countywide Drop-off Trash:	NO
Countywide Drop-off Recycling:	YES
Countywide Drop-off Organics:	NO
Countywide Drop-off HHW:	YES

Community Access: Every household and business in a community needs convenient access to effective programs. This access can be through curbside collection, drop-off site locations, or a combination of the two. Material diversion and recovery needs to be as convenient as waste disposal as a first step sustainable materials management.

- Charlevoix County offers six (6) access points for drop-off of recyclables, averaging one for every 69 square miles (1:69).
- Charlevoix County residents are not offered curbside recycling.
- HHW days are offered one (1) time per year.
- There is no countywide organic waste collection program for either yard waste or food waste.

Processing Facilities: The material collected at the home and business needs to be processed before reaching the end market. It is crucial for the County to own or have access to processing facilities conveniently located, technologically advanced, and with enough capacity to handle the population's current and future material streams. These facilities act as the "middleman" between the local government and the end market.

- Charlevoix County does not own or operate any processing facilities but does contract with a MRF for processing.





Robust Markets: The success of end markets that receive the recyclables that are collected leads to success in growing a sustainable circular economy that ultimately allows material to be diverted from landfills over the long term. By increasing demand, Networks Northwest creates a ‘pull’ for additional materials that in turn, drives supply.

- Charlevoix County has one end market, East Jordan Plastics.

Public/Private Partnerships: The business community and Networks Northwest will need to work closely together to find success. These partnerships can be found through funding opportunities with private companies, shared owner/operator agreements for MRFs and composting facilities, marketing and educational campaigns, and everything in between. Many retailers and packaging companies are realizing that local governments are responsible for the end of life for their products, thus leading to the sustainability of their product. Therefore, the benefits of public/private partnerships are becoming more apparent and accessible.

- There are no identified partnerships.

Supportive Policy: To reach high landfill diversion goals, policy will need to be crafted to ensure responsible recovery of material is the standard practice throughout the community, not just the best practice. A variety of policy approaches can be explored for Networks Northwest that have found success in other parts of the country and the globe.

- Charlevoix County relies on a millage to fund recycling programs.

Education and Outreach: Once a strong infrastructure is in place, all citizens and businesses will need to know how to handle material in their home and at work. Recycling systems continue to evolve as material composition changes and technologies change. Thus, information needs to be put in front of the citizens of your community on a regular basis in many different ways to feed MRFs and end markets with good quality material, while continuing to decrease the material buried in landfills.

- There does not appear to be a consistent message about recycling locations and materials across the county.

SURVEY

Over 1,650 individuals across the Networks Northwest region took the survey that included questions about current participation in recycling-related activities as well as future needs and demographic information to inform trends. 471 people from Charlevoix County participated in the survey.

This survey was not intended to meet statistical minimums. Rather, it was intended to be a snapshot to inform the current usage and future needs of the region. The set of questions that were asked was purposefully restricted to reduce the chance of survey fatigue, wherein participants close the survey prior to completing it.

The survey was intended to take no more than 10 minutes to complete, with participants being told in the introduction that it should take no more than 5-8 minutes. The survey was distributed by community recycling coordinators and Networks Northwest via social media and press release. Survey logic was built into the flow of questions to ensure that the appropriate type of question was asked based on previous responses. As such, participation rates in each question varied. The majority of survey respondents are current recyclers and is the result of the way the survey was distributed. Further studies to understand reasons for non-participation may be needed.

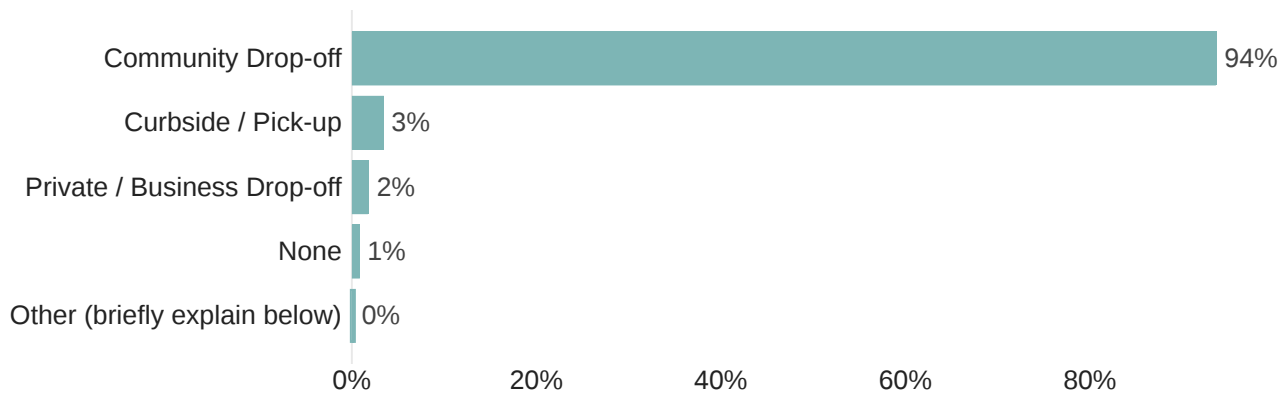
The full survey results for Charlevoix County are on the following pages.

MMCE Networks Northwest Survey Results Summary (Charlevoix County)

Q1 - What recycling services are available in your area? (select all that apply)

SUMMARY - Community Drop-off is the predominate recycling service type offered in Charlevoix County. Only 3% state having accessing to Curbside Pick-up recycling services.

471 Responses



Q1 - "Other" text responses

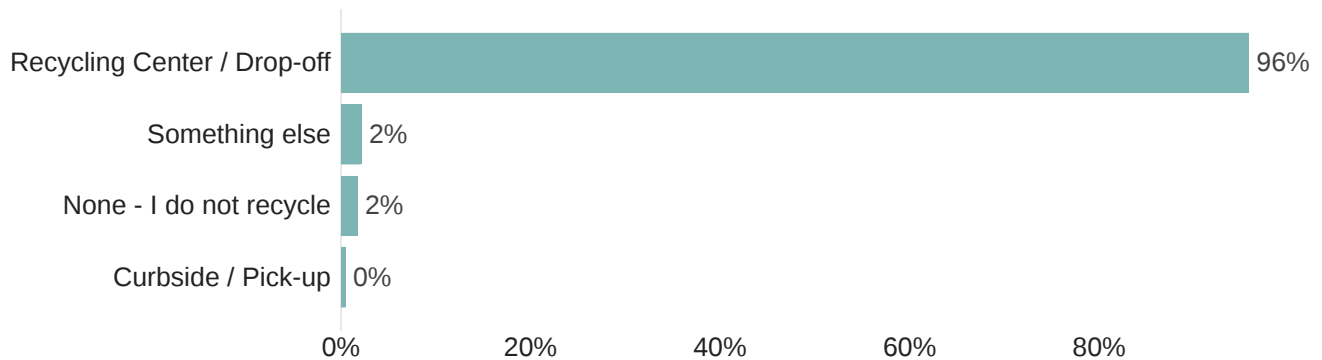
1 Responses

city
center
place

Q2 - What type of recycling services do you most often use, not including bottle returns?

SUMMARY - Given the stated availability of recycling services, it is unsurprising that Drop-off services are most often used. There is an additional 1% of respondents beyond those without access to recycling who say that they do not recycle at all.

471 Responses



Q2 - What type of recycling services do you most often use, not including bottle returns? Text responses

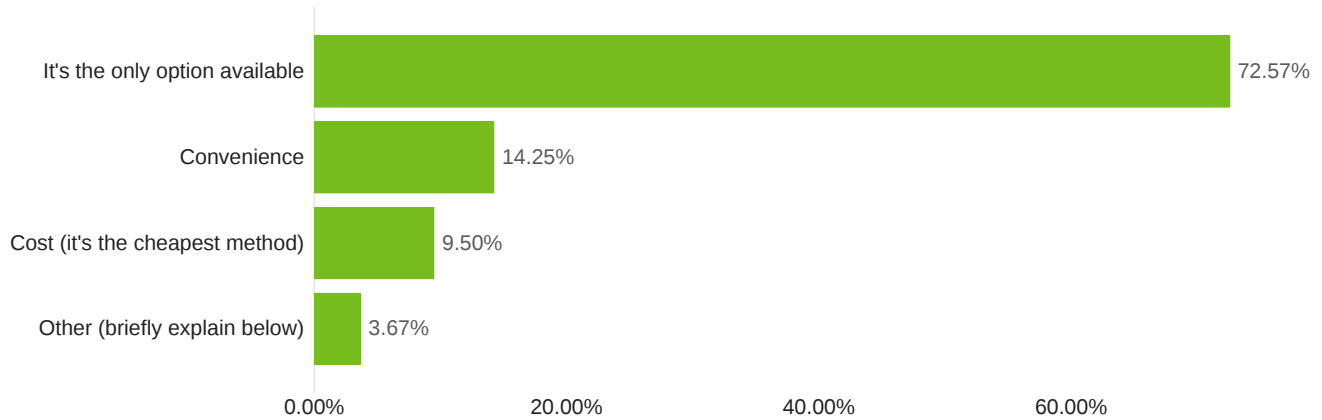
8 Responses



Q3 - What is the most important reason you choose to recycle this way?

SUMMARY - When offered, residents prefer Curbside Pick-up services for convenience and as the cheapest method of recycling. However, most only have the option to recycle via Drop-off.

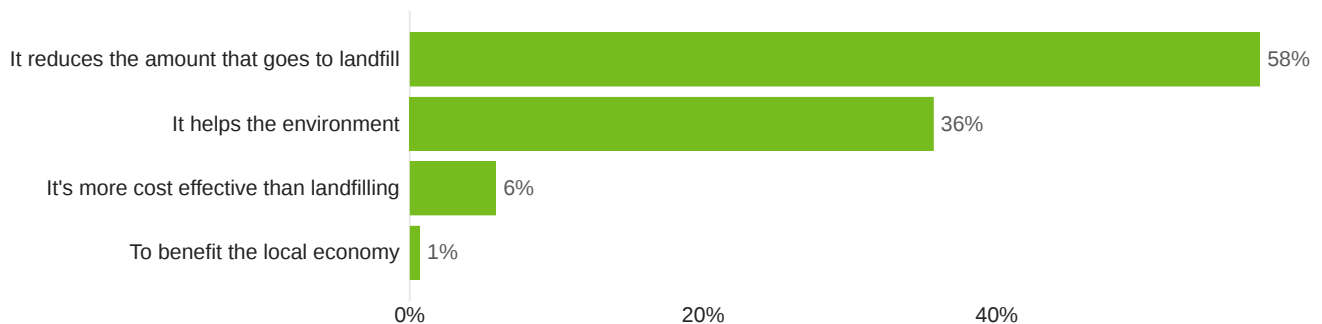
463 Responses



Q4 - Why do you recycle?

SUMMARY - Yet, very few recycle for economic reasons. Instead, they associate recycling as reducing the amount of waste headed to landfills or as an environmentally sound decision.

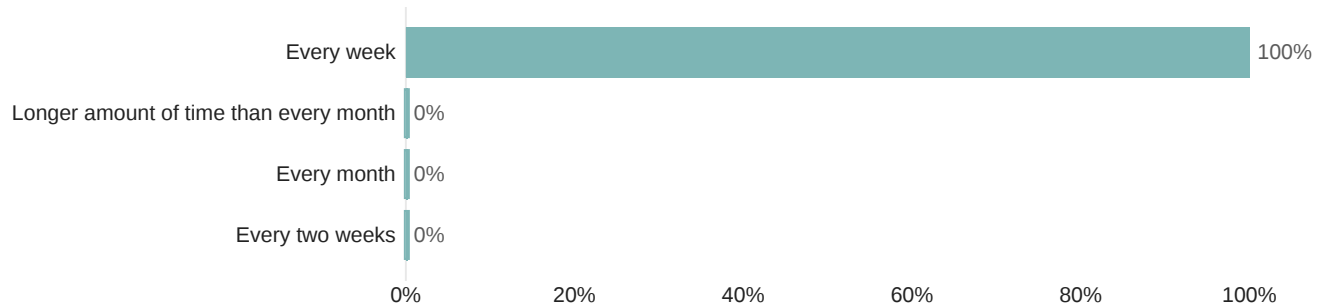
463 Responses



Q5 - How often do you recycle using curbside / pick-up?

SUMMARY - Of those who are offered Curbside Pick-up services, 100% use the service every week.

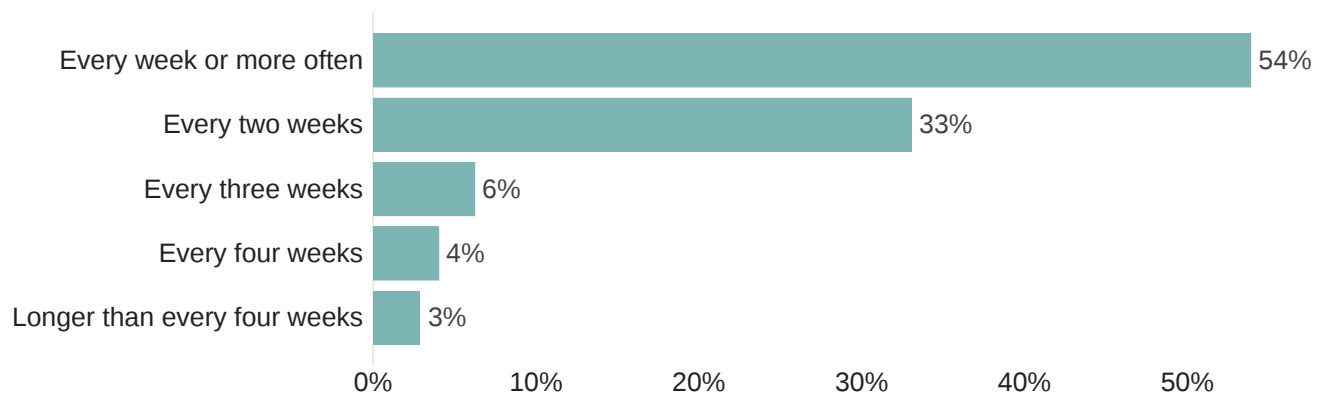
2 Responses



Q6 - How often do you recycle using a Recycling Center or drop-off?

SUMMARY - Those with access only to Drop-off recycling services are most likely to use the service weekly. Otherwise, residents with other recycling services available use Drop-off recycling services less frequently, though every two weeks is not uncommon.

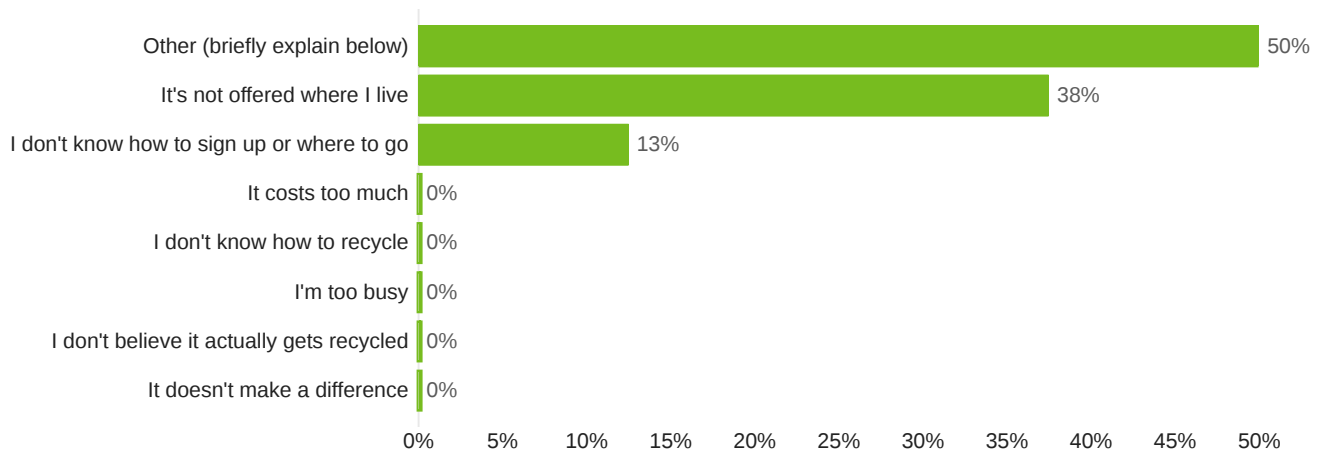
451 Responses



Q7 - What is the most significant reason you do not recycle?

SUMMARY - Of the two individuals who do not recycle, most feel that it is inconvenient and not available near where they live, especially for senior citizens. At the recycling drop-off sites, the recycling bins are always full.

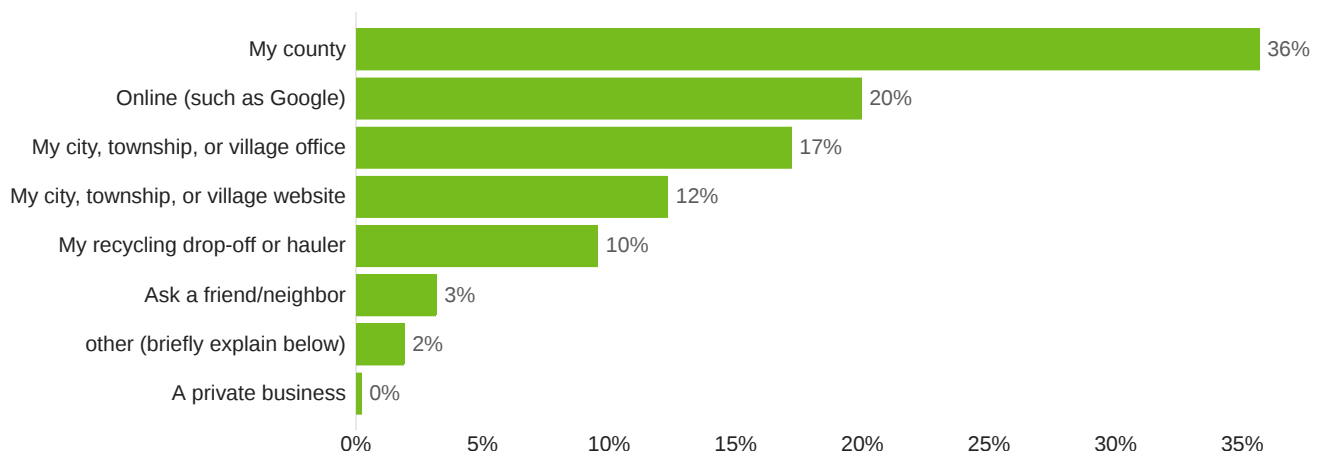
8 Responses



Q8 - If you had questions about recycling, where would you first seek out information?

SUMMARY - 75% first look towards their municipality and recycling providers to answer questions about recycling. While the other third seeks information from Google and friends.

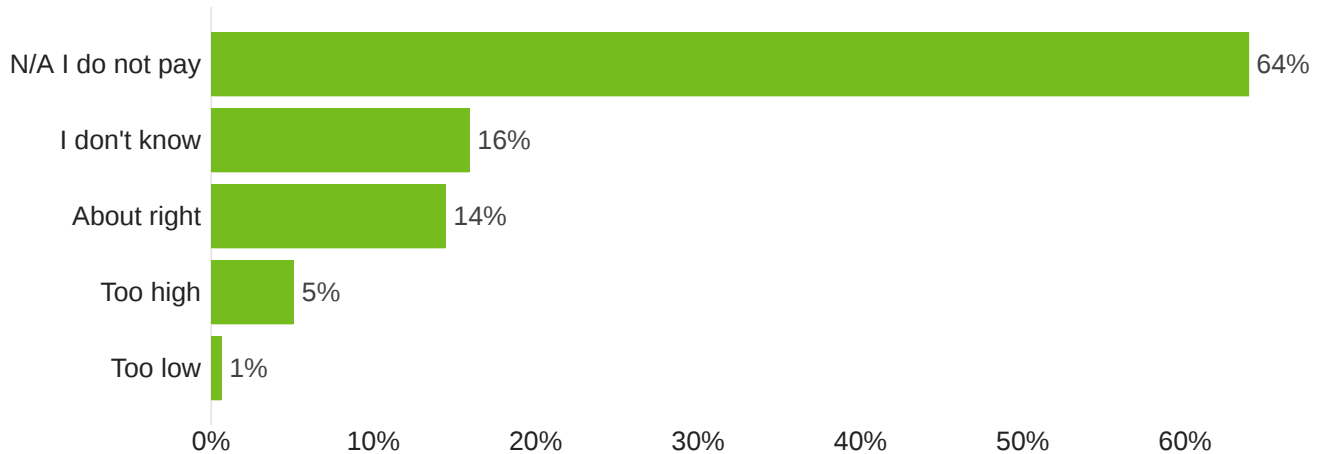
471 Responses



Q9 - Do you think the cost of recycling is too high, about right or too low?
Please respond even if you do not recycle.

SUMMARY - 64% do not pay for recycling. While 16% feel that they don't know how much recycling should cost.
NOTE: One potential problem with this question, is that the survey did not capture whether the respondent knows if the cost of recycling is bundled into the cost of their trash pickup.

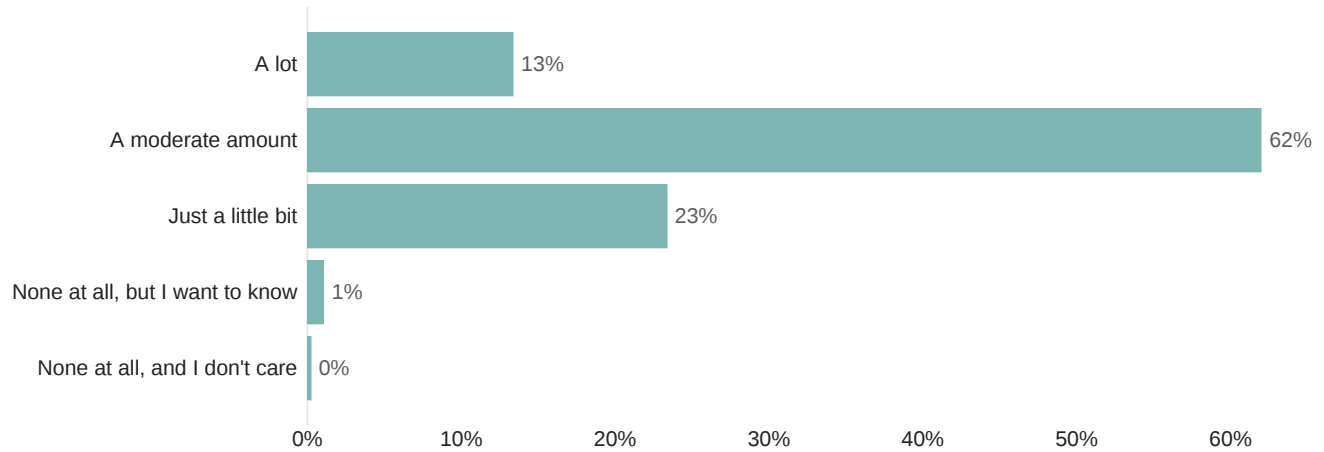
471 Responses



Q10 - How much do you know about recycling, generally speaking?

SUMMARY - A majority feels they know a moderate amount about recycling. Whereas only 13% feels that they know a lot.

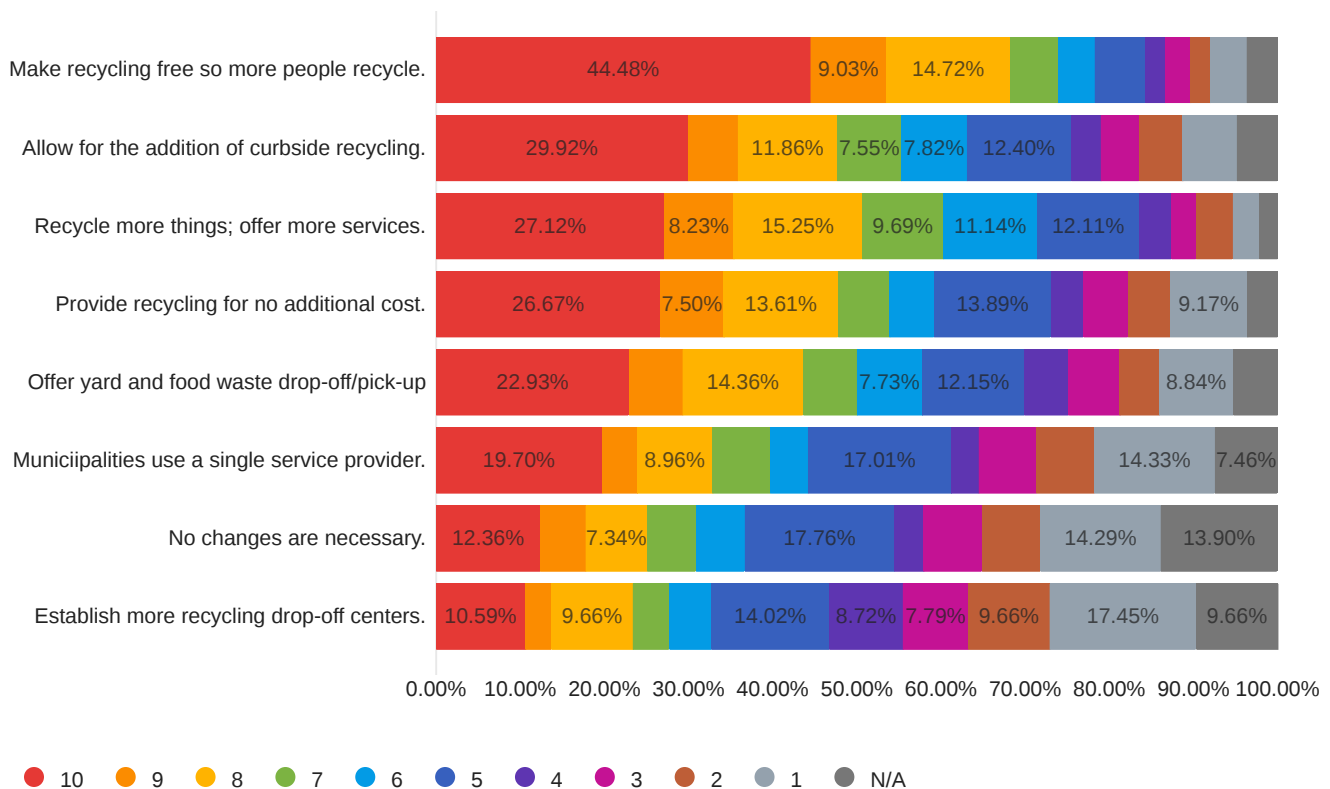
471 Responses



Q11 - Leaders in Northwest Michigan are exploring ways to improve recycling and other waste management services offered to residents and businesses. On a scale of 1-10, with 10 being VERY IMPORTANT and 0 being NOT AT ALL IMPORTANT, how important are each of the following potential improvements to you? If you already have access to an option, select 'not applicable'

SUMMARY - Although residents who currently recycle feel that recycling costs little to nothing, they express the need for recycling to be completely free to allow for greater accessibility and participation from more people. As well, residents would like Curbside Pick-up recycling services.

456 Responses

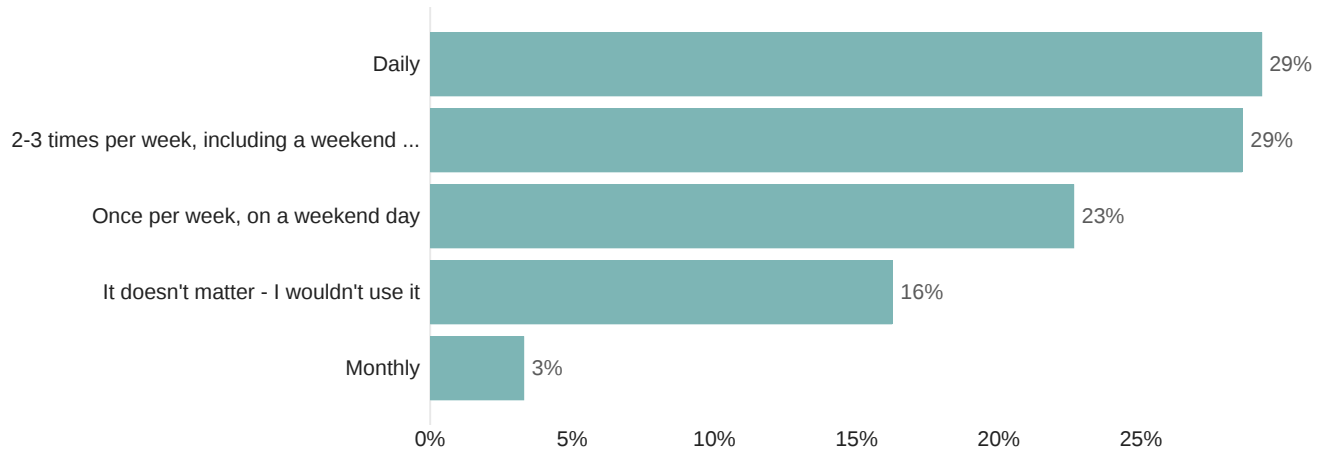


Select a field

Q12 - If a convenient recycling or food waste drop-off site were available close to where you live, how often would you want it open?

SUMMARY - 52% of people would like a Drop-off site open at least once per week on the weekend day. Over a quarter would like Drop-off sites open daily.

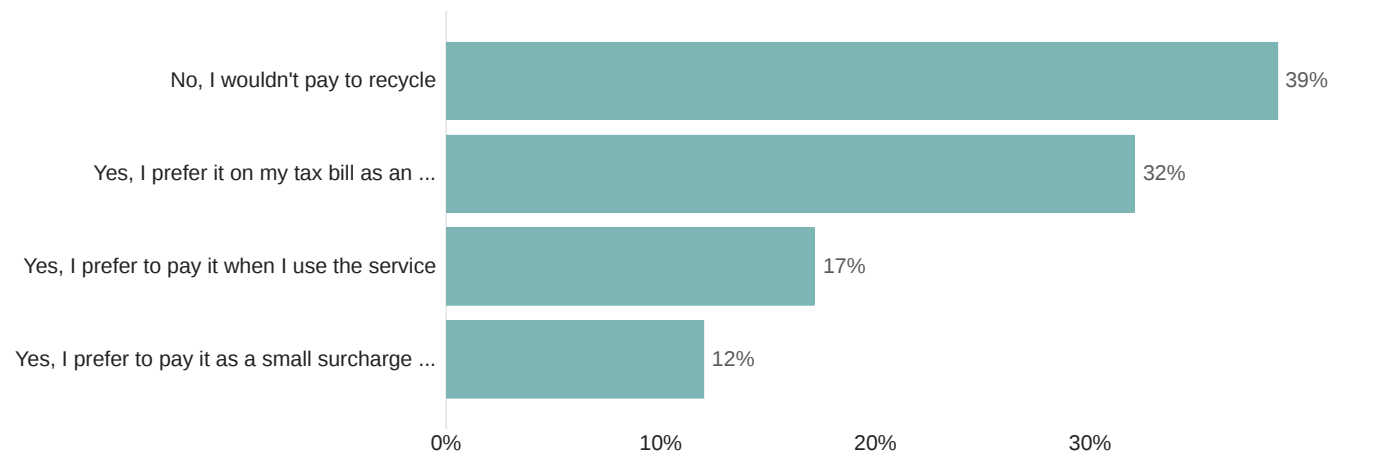
455 Responses



Q13 - Would you be willing to pay a small fee to have convenient access to recycling or food waste collection?

SUMMARY - There is a near equal split between those who would prefer to pay for recycling or food waste collection through an assessment or fee on their tax bill and those who do not want to pay anything for recycling or food waste collection services.

471 Responses

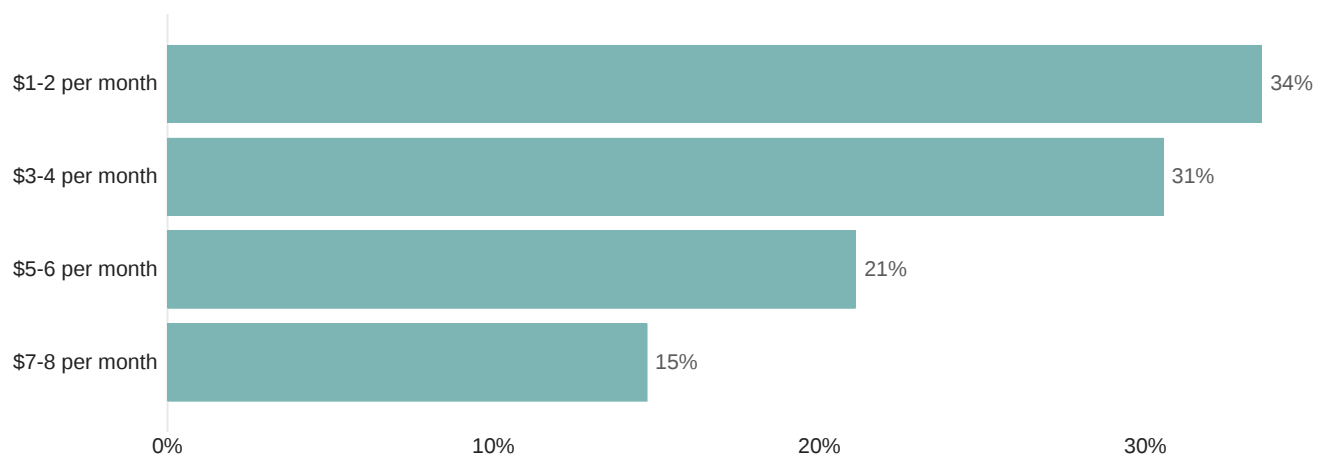


Q14 - What would you be willing to spend to get convenient access to recycling or food waste collection?

SUMMARY - A sizeable fraction of respondents (39%) would not pay anything for convenient access to recycling or food waste collection. Of those willing to pay for recycling or food waste collection, 86% want to pay \$6 or less a month for recycling or food waste collection; \$1-2 per month is most preferred.

Note: 39% of respondents would not pay anything.

265 Responses



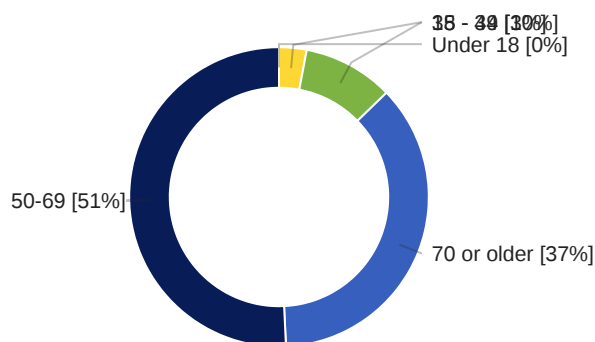
Demographics and Background of Respondents

SUMMARY:

- Respondents are primarily 50 years of age or older.
- Respondents are predominately female.
- 90% have some college education or higher.
- 96% of respondents own the home that they live in.
- 81% live in Charlevoix County year around.
- Unsurprisingly, because of the higher age range of our respondents, 89% do not have children living at home who are school age or younger.
- 93% of respondents are white with little representation of other racial or ethnic groups.
- Median yearly household income falls around \$75,000 - \$100,000 per year.
- Of those who rent or lease their home, a majority does not have on-site recycling available to them, but would like to have the option. One quarter have access to and use on-site recycling services.

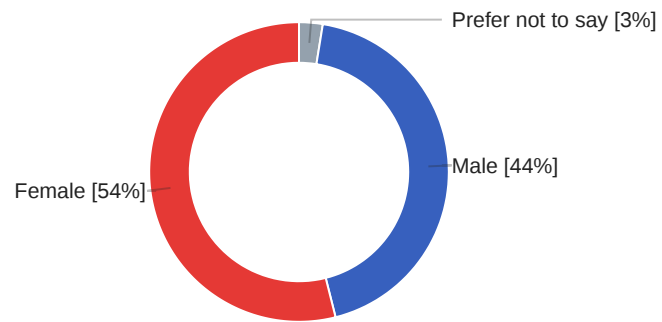
Q16 - Which of these best fits your age?

471 Responses



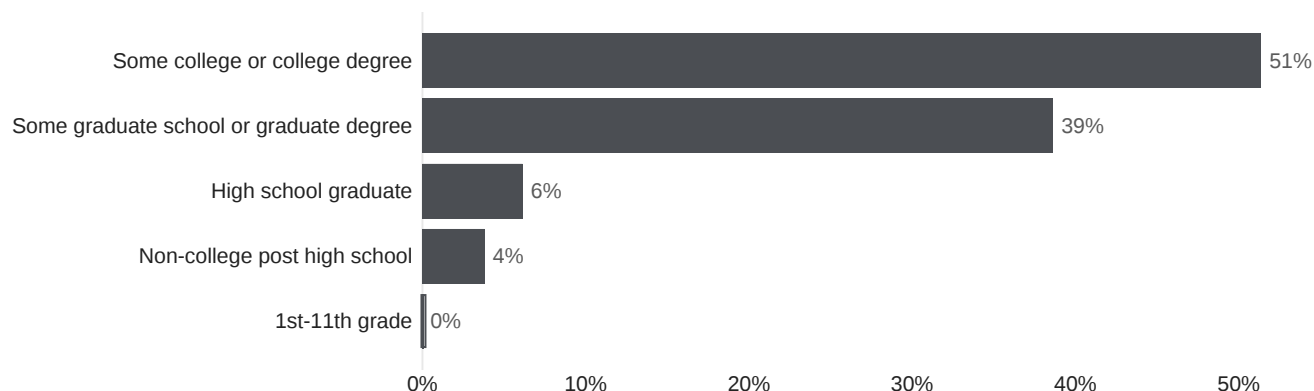
Q17 - What is your gender?

471 Responses



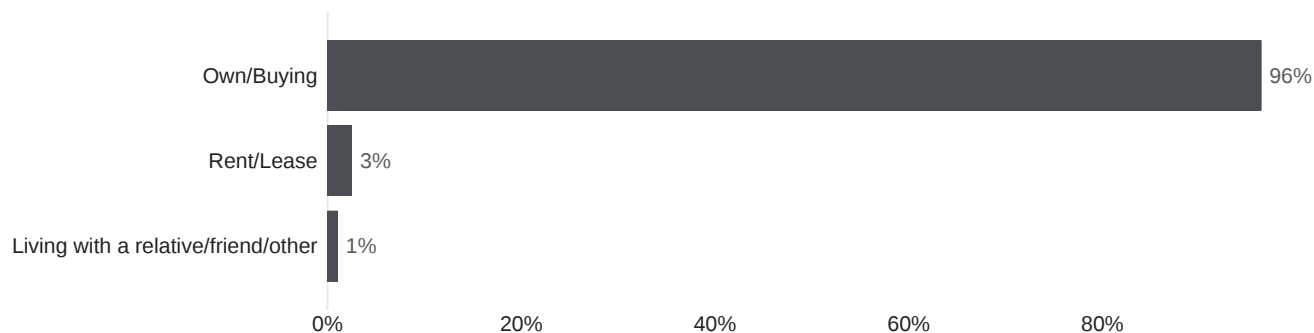
Q18 - What is the last grade or level of schooling you completed?

471 Responses



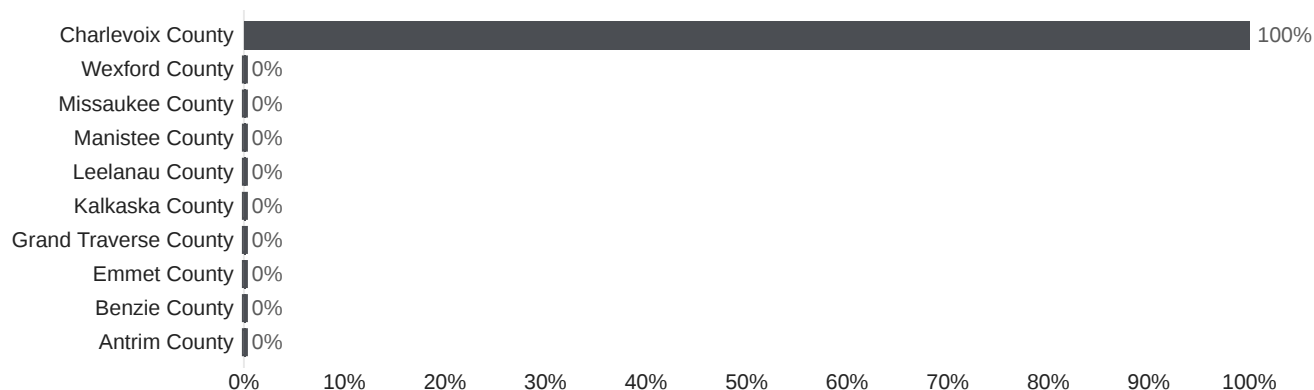
Q19 - Do you own your own home, are you buying a home, or do you lease or rent where you live?

471 Responses



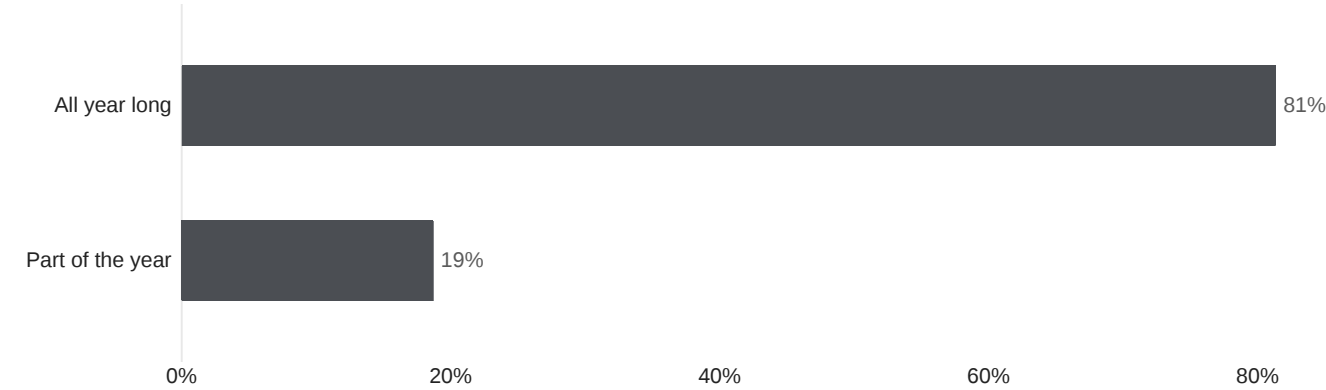
Q20 - County

471 Responses



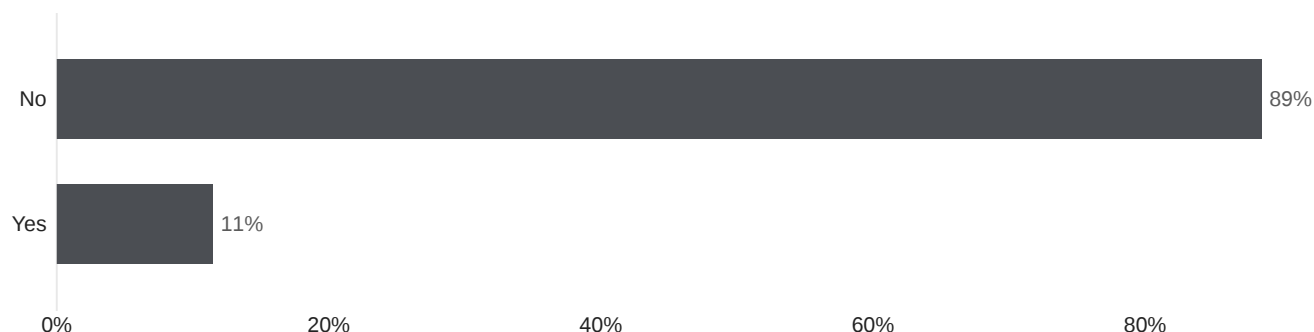
Q21 - How much of the year do you live in this county?

471 Responses



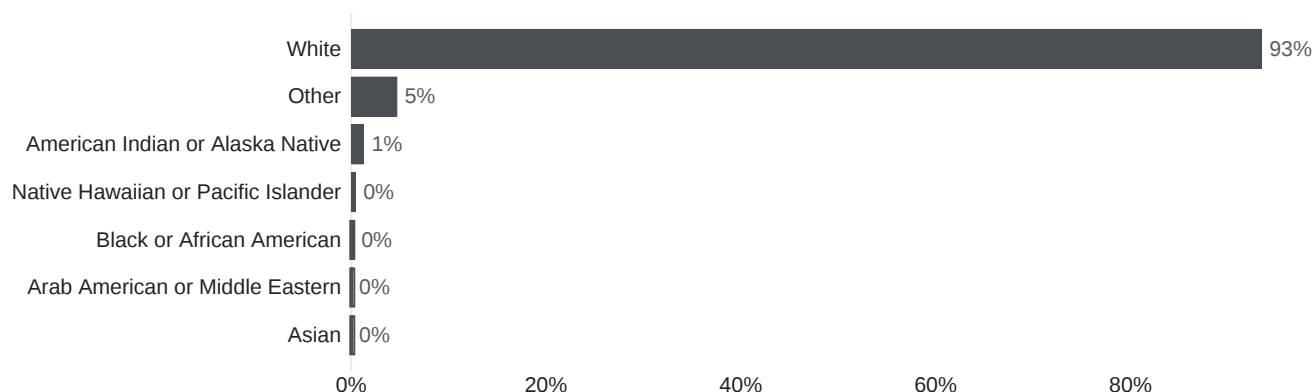
Q22 - Do you have children living in your home who are school age or younger?

471 Responses



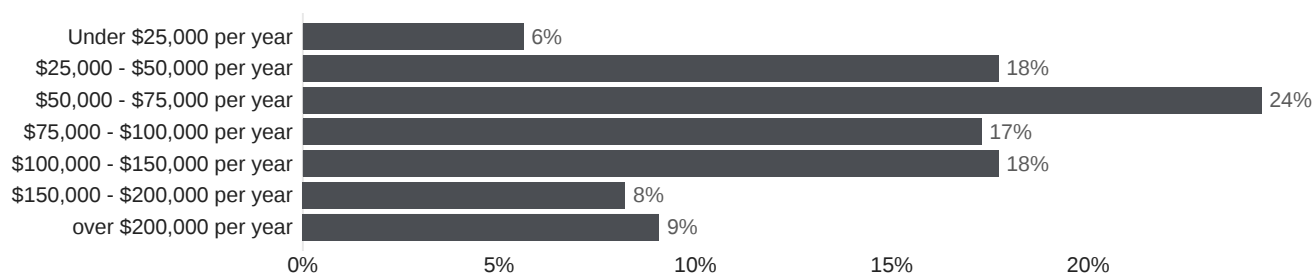
Q23 - Which racial or ethnic group best describes you?

471 Responses



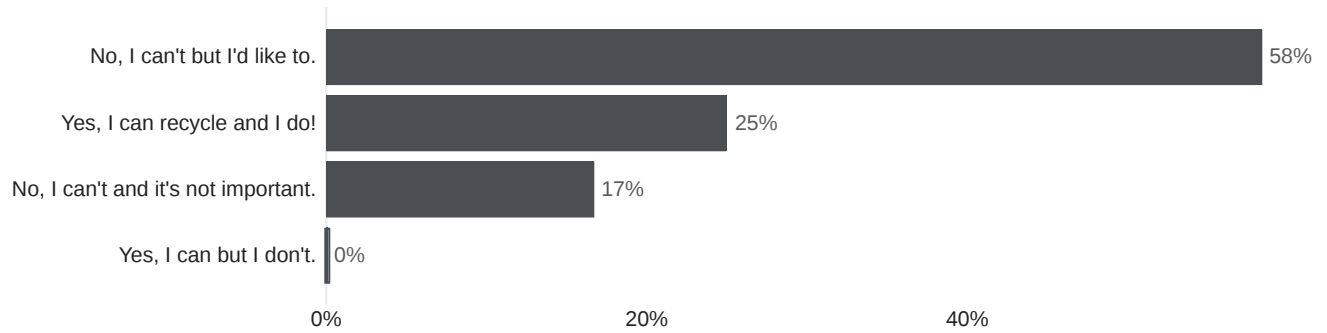
Q24 - In which of the following categories does your total yearly household income fall, including everyone in the household? If retired, please select an income category based on retirement income.

463 Responses



Q27 - As a renter/lessee, do you have recycling available on the property where you live?

12 Responses



CHARLEVOIX COUNTY

PROFILE | FEBRUARY 2023



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

OVERVIEW

Michigan Department of Environment, Great Lakes, and Energy (EGLE) has shifted their focus from disposal as the primary effort towards a circular economy where all waste materials find their highest and best use. Michigan took its first steps towards materials management a few years ago by securing funding to support an economy that reuses and recycles resources. An important component of that funding is for Solid Waste Management Planning – also referred to as Materials Management Planning. Materials management plans form the foundation of the changes the state is preparing to make.

To support this new era of materials management and future planning activities, EGLE initiated a massive data collection project to document and inventory the current state of materials management systems in all municipalities within Michigan's 83 counties. The primary objective of the Michigan Materials Management Infrastructure and Program project, also known as Mega Data, is to provide the baseline of data necessary for counties to develop future materials management plans and provide a roadmap for materials management moving forward. The data collected through the project would also be applied to the Benchmark Recycling Standard analysis developed by EGLE to help understand access to recycling services in the state, where gaps exist, and where EGLE may focus their support to improve access and infrastructure in the state.

EGLE contracted with Resource Recycling Systems (RRS) to support this large undertaking to gather, compile and analyze information from across the state.

PURPOSE OF THE COUNTY PROFILE

The County Profile was developed for two purposes. First, the profiles provided the opportunity to summarize all the information collected for all 83 counties and their municipalities to date as a project milestone. Second, despite the extensive research and information collection, RRS acknowledges that the information presented here may be incomplete. The County Profiles offered the opportunity for each county to review, edit and add to their county's profile information before finalizing as a deliverable for the Mega Data project. Later in the process, EGLE added the review of the County Profile as a requirement of the Materials Management County Engagement Grants (MMCE).

COUNTY PROFILE DEVELOPMENT

The County Profiles contain information that reflects research and outreach to understand programs and services available at the county and municipal levels. The information summarized here corresponds to information required in the state's Solid Waste Management Plan format and will assist counties and designated planning agencies with plan development. This profile focuses on residential programs and services. The information for the Profiles was collected from the following sources:

- Approved Solid Waste Management Plans
- EGLE's Waste Data System (WDS)
- EGLE's Recycle Search tool
- EGLE's Recycling Specialist staff
- Interviews with County program coordinators and designated planning agents
- County Run Measurement Program Survey via ReTRAC
- Municipal Measurement Program Survey via ReTRAC
- Information obtained through Freedom of Information Act requests
- Direct outreach through phone calls, emails, and letters to all target audiences and related groups or organizations with access to target audiences

- Web research
- Participation by Counties in the MMCE Grant Program

DISCLAIMER

This information presented here was gathered and compiled over several years by RRS on behalf of EGLE for the Mega Data project. The profile was originally developed as a tool to summarize information collected and engage counties in review of the information for finalization. The profile is not intended for use as a reference guide for residents or purposes other than to provide counties with information to support future materials management planning. Information, programs, and services can change frequently and therefore information presented here may be out of date. If information has been omitted or requires update, please contact RRS at alynott@recycle.com.

ACCESS AND COLLECTION

COUNTY PROGRAM OVERVIEW

Charlevoix County offers residential drop-off recycling sites throughout the county. The county also provides household hazardous waste (HHW) drop-off events for residents twice annually, which usually take place in the fall and spring.

MUNICIPAL PROGRAM AND SERVICES OVERVIEW

Programs and services offered or provided by municipalities for their residents are summarized by material type and then in two tables. One table features curbside services, and the other table features drop-off services.

TRASH

Charlevoix County's population has access to curbside trash collection through subscription haulers. About 32% of the county can drop off residential trash at municipally owned and operated transfer stations.

RECYCLING

There is currently no curbside recycling service available in Charlevoix County. However, the county offers six drop-off locations throughout the county for residents to recycle paper, glass, mixed plastics, and metals.

YARD WASTE

In the county, 35% of the population has access to curbside collection of common yard waste materials through municipal haulers. Several communities, covering 27% of the population, also host yard waste drop-off locations for their residents.

HOUSEHOLD HAZARDOUS WASTE

Charlevoix County provides its population with access to household hazardous waste (HHW) drop-off collection events twice per year. These events collect automotive fluids, motor oil, anti-freeze, mercury, batteries, paint, lawn chemicals, household cleaners, electronics, tube TVs, pharmaceuticals, fluorescent bulbs, and aerosol cans.

OTHER

No information obtained about Other programs.

LIST OF ACTIVE HAULERS

- GFL/American Waste
- Little Traverse Disposal
- Waste Management

CURBSIDE SERVICES BY COMMUNITY

MUNICIPALITY NAME	TRASH COLLECTOR	RECYCLING COLLECTOR	YARD WASTE COLLECTOR	OTHER CURBSIDE SERVICES
Advance CDP				
Bay Shore CDP				
Boyne City city	Subscription		City of Boyne City	
Boyne Falls village				
Chandler township				
Charlevoix city	Subscription		City of Charlevoix	
Charlevoix township				
East Jordan city			City of East Jordan	
Evangeline township				
Horton Bay CDP				
Hudson township				
Ironton CDP				
Marion township				
Norwood CDP				
Peaine township				
Bay township				
Boyne Valley township				
Eveline township				
Hayes township				
Melrose township				
Norwood township				

St. James township				
South Arm township				
St. James CDP				
Walloon Lake CDP				
Wilson township				

DROP-OFF SERVICES BY COMMUNITY

MUNICIPALITY NAME	TRASH DROP-OFF SERVICES (PERMANENT)	RECYCLING DROP-OFF SERVICES (PERMANENT)	YARD WASTE OR OTHER ORGANICS DROP-OFF (PERMANENT)	OTHER PERMANENT DROP-OFF SERVICES	TEMPORARY DROP-OFF SERVICES
Advance CDP		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Bay Shore CDP		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Boyne City city		Charlevoix County Recycling	Boyne City Composting Site		Charlevoix County Hazardous Waste Events
Boyne Falls village		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Chandler township	Melrose Township Transfer Station	Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Charlevoix city		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events

Charlevoix township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
East Jordan city		Charlevoix County Recycling	Bartlett Street Recycling Site		Charlevoix County Hazardous Waste Events
Evangeline township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Horton Bay CDP		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Hudson township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Ironton CDP		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Marion township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Norwood CDP		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Peaine township	Beaver Island Transfer Station	Charlevoix County Recycling	Beaver Island Transfer Station		Charlevoix County Hazardous Waste Events
Bay township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Boyne Valley township	Boyne Valley Township Transfer Station	Charlevoix County Recycling			Charlevoix County Hazardous Waste Events

Eveline township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Hayes township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Melrose township	Melrose Township Transfer Station	Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Norwood township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
St. James township	Beaver Island Transfer Station	Charlevoix County Recycling	Beaver Island Transfer Station		Charlevoix County Hazardous Waste Events
South Arm township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
St. James CDP	Beaver Island Transfer Station	Charlevoix County Recycling	Beaver Island Transfer Station		Charlevoix County Hazardous Waste Events
Walloon Lake CDP	Melrose Township Transfer Station	Charlevoix County Recycling			Charlevoix County Hazardous Waste Events
Wilson township		Charlevoix County Recycling			Charlevoix County Hazardous Waste Events

FACILITIES

MATERIALS MANAGEMENT FACILITIES IN COUNTY

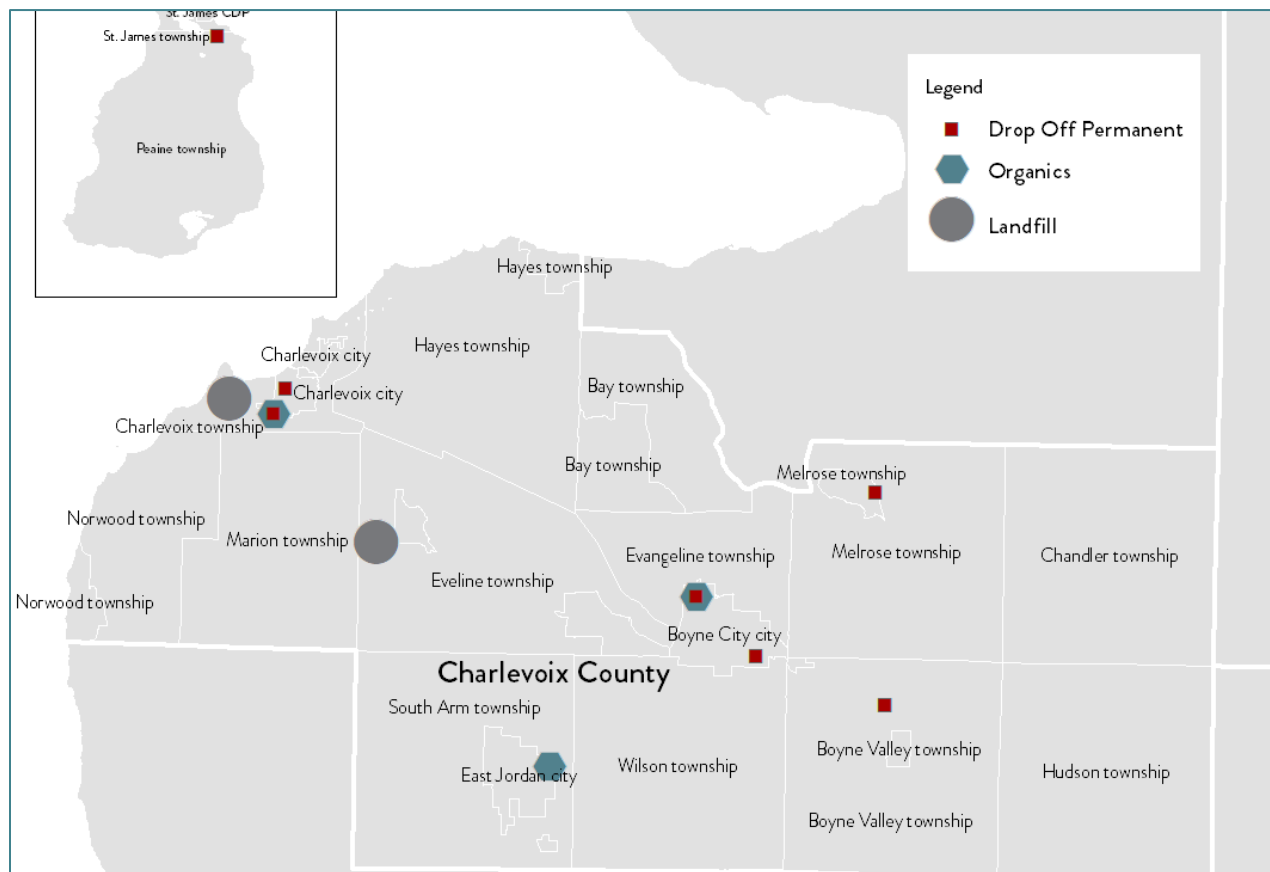
FACILITY SUMMARY TABLE

FACILITY TYPE	FACILITY NAME	FACILITY ADDRESS	CITY	PERMANENT OR TEMPORARY
Compost (Yard Waste)	Boyne City- North Boyne Yard	1321 ROBINSON ST	Boyne City	
Compost (Yard Waste)	City of Charlevoix Stump-Composting Area	6894 S US HIGHWAY 31	Charlevoix	
Compost	City of East Jordan Transfer Station East	700 Nichols Street	East Jordan	
Drop-off (B, T, O, NT, C&D, WDC)	Beaver Island Transfer Station and Recycling Center	36770 East Side Drive	Beaver Island	Permanent Drop-off
Drop-off (O)	Boyne City - North Boyne Yard	1321 ROBINSON ST	Boyne	Permanent Drop-off
Drop-off (B)	Boyne Valley Township Transfer Station	1408 S. Addis Rd	Boyne Falls	Permanent Drop-off
Drop-off (T, NT)	Charlevoix County Recycling - Boyne City	1251 Boyne Avenue	Boyne City	Permanent Drop-off
Drop-off (T, NT)	Charlevoix County Recycling - Boyne Valley Township	1408 South Addis Road	Boyne Falls	Permanent Drop-off
Drop-off (T, NT)	Charlevoix County Recycling - Charlevoix City	1030 Grant Street	Charlevoix	Permanent Drop-off
Drop-off (O)	City of Charlevoix Stump-Composting Area	6894 S US HIGHWAY 31	Charlevoix	Permanent Drop-off

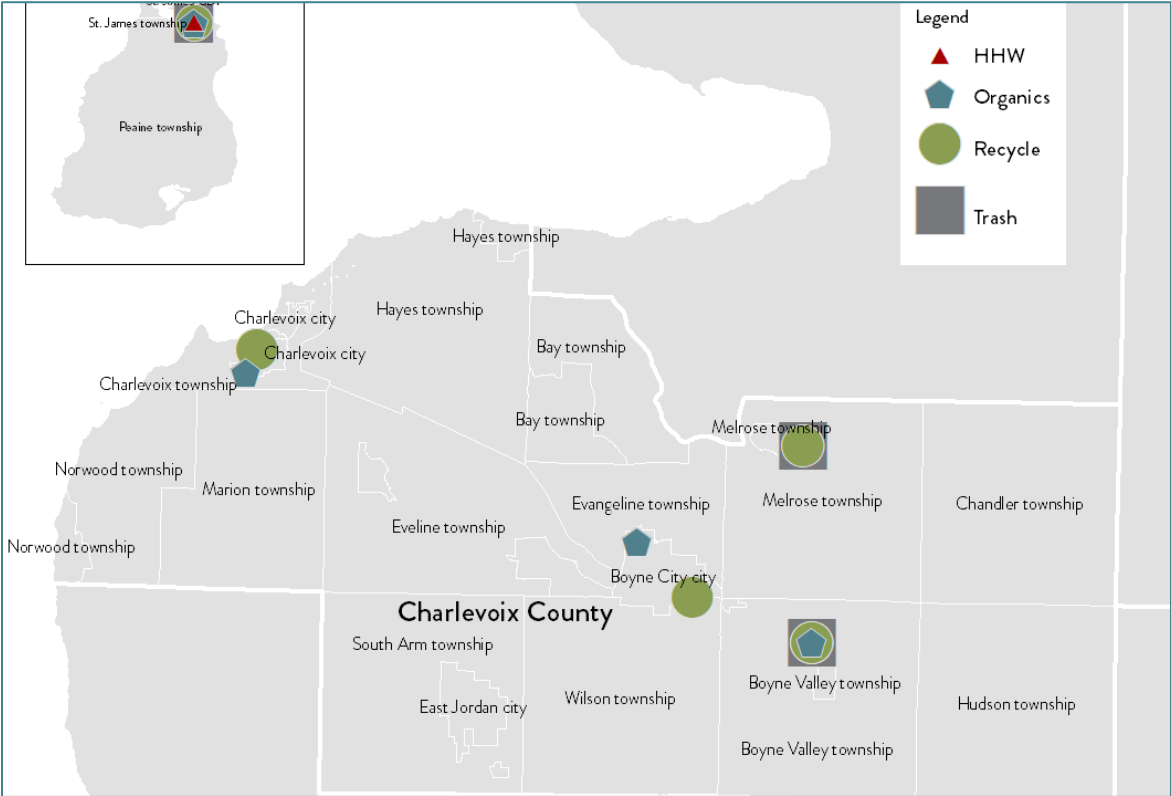
Drop-off (B, NT)	Melrose Township Transfer Station	4449 State St	Boyne Falls	Permanent Drop-off
Landfill	Cedar Ridge Recycling & Disposal Facility	11633 Saunders Rd	East Jordan	
Landfill	St Marys Cement US Llc	16000 Bells Bay Rd	Charlevoix	
End Market	East Jordan Plastics - East Jordan	6400 M-32 Highway	East Jordan	

Drop-off Facility Types: B = Transfer Station Type B; C&D = Construction & Demolition; NT = Source-Separated Recycling Drop-off Non-Traditional; T = Source-Separated Recycling Traditional; O = Organics; WDC = Waste Diversion Center

FACILITY SUMMARY MAP



FACILITY BY MATERIAL TYPE



POLICY

MUNICIPAL ORDINANCES

Municipality	Policy type	Requirement
East Jordan city	Ordinance	Mandated Collection of Refuse

FUNDING MECHANISMS

No funding mechanisms obtained.

COUNTY ORDINANCES

No county ordinances obtained.

COUNTY FUNDING MECHANISM

County	Type	Additional Information
Charlevoix County	Millage	.15 mills placed on property taxes

DATA

REPORTED DATA

Charlevoix County tracks data from the recycling drop-off sites.

RESIDENTIAL WASTE PROJECTIONS

Municipality	Population	Total Waste Generation (Tons) ¹	Total Recyclable Diversion (Tons)	Total Organics Diversion (Tons)	Total Requiring Disposal (Tons)
Advance CDP	372	169	12	14	142
Bay Shore CDP	524	237	17	20	201
Bay township	586	266	19	22	224
Boyne City city	3,721	1,686	121	142	1,424
Boyne Falls village	343	155	11	13	131
Boyne Valley township	1,013	459	33	39	388
Chandler township	255	116	8	10	98
Charlevoix city	2,467	1,118	80	94	944
Charlevoix township	1,780	807	58	68	681
East Jordan city	2,133	967	69	81	816
Evangeline township	776	352	25	30	297
Eveline township	1,074	487	35	41	411
Hayes township	1,260	571	41	48	482
Horton Bay CDP	450	204	15	17	172
Hudson township	730	331	24	28	279
Ironton CDP	114	52	4	4	44
Marion township	1,774	804	58	68	679
Melrose township	1,095	496	36	42	419
Norwood CDP	156	71	5	6	60
Norwood township	581	263	19	22	222
Peaine township	259	117	8	10	99
South Arm township	2,014	913	65	77	771
St. James CDP	211	96	7	8	81
St. James township	108	49	4	4	41
Walloon Lake CDP	310	140	10	12	119
Wilson township	2,091	948	68	80	800
TOTAL	26,197	11,873	850	999	10,024

¹ Due to rounding, total waste generation tonnages may not equal the sum of the total diversion and disposal tonnages.

COMMERCIAL WASTE PROJECTIONS

County	Approximate Number of Employees	Total Waste Generation (Tons)	Total Diversion (Tons)	Total Requiring Disposal (Tons)
Charlevoix	6,334	13,202	1,078	12,125

TOTAL WASTE GENERATED PROJECTIONS

County	Total Waste Generation (Tons) ¹	Total Diversion (Tons)	Total Requiring Disposal (Tons)
Charlevoix	25,075	2,927	22,149

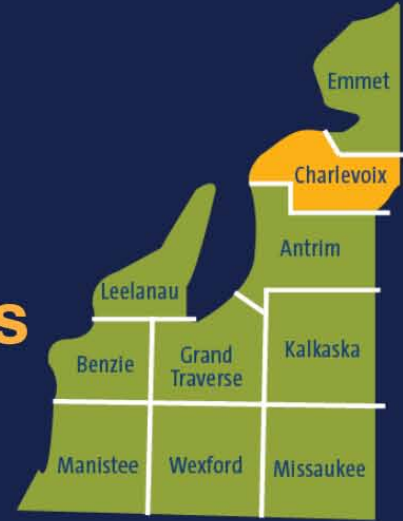


seeds
Ecology & Education Centers

CHARLEVOIX COUNTY

Organic waste diversion solutions

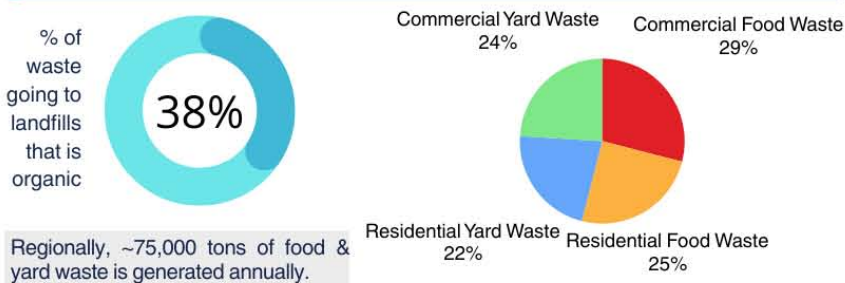
Our goal is to see one third of the organics currently going to landfills diverted into higher and better uses by 2030. That means diverting 26,000 more tons per year, mostly food scraps, across the 10-county region.



STRATEGIC GOALS FOR THE REGION

The goal of the 10-county Organic Waste Diversion Advisory Partnership, convened by SEEDS, is to reduce organic material going to landfills by over a third across northwest lower Michigan by 2030. Reducing and recycling organic waste streams can generate many benefits, including feeding hungry people, generating soil, supporting local farms, and supporting the local economy. In the U.S., residents spend ~\$2000/year on food that gets thrown away. The State of Michigan's recent mandate for counties to update their Materials Management Plans (MMPs) presents the perfect mechanism for embedding an effective and pragmatic plan for organic waste management into each county's strategic plan.

10-COUNTY REGIONAL TRENDS



OUR RECOMMENDATIONS

- Incentivize and allow on-site and backyard composting solutions.
- Enhance food donation opportunities by clearly communicating options, especially with institutions, schools and farms.
- Develop selective food waste collections within portions of the county and coordinate with Emmet County on the development of food waste collection and hauling strategies.

WHAT CAN YOU DO? Use the MMP planning process to develop and right-size strategies and incentives that work for Charlevoix County residents and institutions.

CHARLEVOIX COUNTY STATISTICS

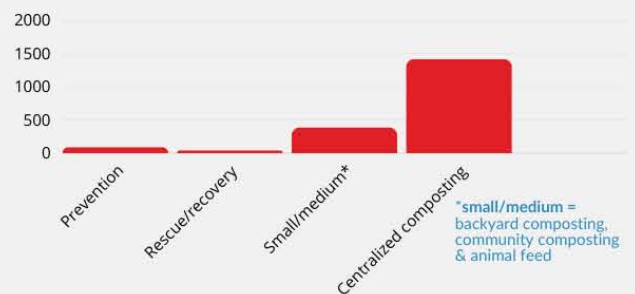
ORGANIC WASTE IN TONS/YEAR

WASTE GENERATED	CURRENTLY DIVERTED	TARGET DIVERSION
6,687	1,286	1,939

GENERATION OF FOOD WASTE IN TONS/YEAR

RESTAURANTS	FOOD STORES	OTHER
87	855	381

2030 DIVERSION TARGETS IN TONS/YEAR



HOW CHARLEVOIX COUNTY COMPARES IN THE REGION

Of the 10 counties in northwest Michigan, Charlevoix County is 1 of:

- 4 with at least 1 municipality that has an ordinance affecting organic waste diversion.
- 7 whose Solid Waste Management Plan states that they will develop a yard waste drop-off for county-wide use.
- 7 who have not yet developed a county-wide yard waste drop off location.



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INTRODUCTION

GOALS, OBJECTIVES, AND STRATEGIES

The Goal, Objectives, and Strategies we have chosen provide us with a framework for the development of this Plan, and our future solid waste collection, transportation and disposal system. We use the following definitions for our goal, objectives, and strategies, so individuals using this plan will have a better understanding of our policy statements outlined below.

A GOAL is a general and idealistic description of the ideal end state toward which we are striving. Its purpose is to give us consistent direction.

An OBJECTIVE is an achievable point in the general direction of the goal. Its attainment marks our progress toward the Goal. An objective should have dates and other numbers whenever possible, for it is essential to know when it has been reached.

A STRATEGY is a procedure or course of action selected to help us reach our objective.

Using the above definitions, many hours of thought and discussion have been put into the development of the following statements.

GOAL: A solid waste management system that ensures for Charlevoix County (its geographic area and inhabitants), the following in descending order of importance:

- protection of our health,
- protection of our environment, conservation of our natural resources,
- economical, both short and long term, and
- convenient.

OBJECTIVE I. A locally approved solid waste management plan by JULY 1, 2000.

STRATEGY 1.1 Develop a data base that includes an inventory of facilities, identification of problems, demographics, land use patterns, and environmental conditions.

STRATEGY 1.2 Explore alternative systems that include all waste management options such as, resource conservation, resource recovery, co-generation, energy recovery, composting, collection, transportation and disposal of waste, including institutional arrangements and management alternatives.

STRATEGY 1.3 Selection of a specified system of managing solid waste and designate operators of the system (government and/or private enterprise).

STRATEGY 1.4 Develop a public participation program that informs the public about the true costs of solid waste, the progress of the plan, material that is available, and how they can assist in developing and implementing the plan.

STRATEGY 1.5 Develop and include a siting criteria for use in identifying potential sites for Type III Landfills.

STRATEGY 1.6 Develop siting criteria that allows for transfer stations in those communities that so desire an alternative to collection and to allow waste hauling companies to combine loads from smaller trucks to allow for economical methods of moving waste in addition to reducing truck traffic.

- OBJECTIVE II. Encourage and promote a system of resource conservation and waste reduction through resource recovery and recycling whenever possible in order to reduce the amount of solid waste generated by 20%, compost 20% of the waste that is generated, recycle 30% of the waste that is generated, and reduce the amount of waste by recovering energy from it thereby reducing an additional 10% of the waste with a maximum of 15% of the waste that is generated being landfilled by the year 2002.
- STRATEGY 2.1 Develop a series of recycling centers & drop off locations, and encourage the public to increase levels of recycling of all materials including, but not limited to, paper, metals, glass, oil and plastics.
- STRATEGY 2.2 Encourage the composting of yard wastes by individuals, communities and private companies.
- STRATEGY 2.3 Encourage the purchase of durable goods that have an increased expected lifespan.
- STRATEGY 2.4 Encourage a reduction in the use of disposable items such as paper plates, plastic tableware, etc.
- STRATEGY 2.5 Encourage individuals and businesses to donate or sell items in useable condition, rather than discarding them.
- STRATEGY 2.6 Discourage the concept of planned obsolescence among individuals purchasing goods and businesses producing them.
- OBJECTIVE III. The protection of the environment, the quality of life for residents and the enhancement of our aesthetics.
- STRATEGY 3.1 Prohibit the disposal of hazardous waste in Type II Landfills, and hazardous or Type II waste in Type III Landfills.
- STRATEGY 3.2 Require that solid waste management practices are conducted in such a manner so as to comply at a minimum with state and nationally adopted air and water quality standards.
- STRATEGY 3.3 Promote the development and enforcement of laws, ordinances, and regulations at the state, county, city/village and township level, governing the location of, appearance, odor, noise, and other public health and aesthetic impacts resulting from the collection, storage, transportation, processing, and disposal of solid waste.
- STRATEGY 3.4 Require berm planting, fencing, or other methods of screening from view of, Transfer Stations, storage, processing and disposal facilities.
- STRATEGY 3.5 Require that landfills and dumps not meeting state standards be closed or brought into compliance.
- OBJECTIVE IV. A solid waste system that continues to be economically feasible, and environmentally sound, for the residents of Charlevoix County.
- STRATEGY 4.1 Develop a solid waste management system that is affordable to the residents and visitors to the county.
- STRATEGY 4.2 Encourage the development of solid waste processing and disposal alternatives that serve a multi-county or regional area, thus reducing the costs to people within the county.
- STRATEGY 4.3 Require processing and disposal facilities to be operated in such a manner as to eliminate costly cleanup measures in the future.

- STRATEGY 4.4 Locate transfer stations, storage, processing and disposal sites adjacent to "All Season Roads" to minimize the need for improving road beds and/or providing costly road repairs due to truck traffic, going to and from the facilities.
- STRATEGY 4.5 Promote the reuse of closed disposal facilities for transfer stations, recreation facilities, or to meet other needs identified in the county and township land use plans.
- STRATEGY 4.6 Endorse the reuse and recycling of items entering the waste stream.
- STRATEGY 4.7 Conserve the amount of land used for actual fill operations through the use of shredders, balers, and compactors, when shown to be effective.
- STRATEGY 4.8 Promote the use of the most environmentally safe and efficient solid waste collection, storage, transportation, processing, and disposal services regardless of ownership by the public or private sector.
- STRATEGY 4.9 Promote fair and equal competition in the private sector in providing solid waste services.