

Waste and Recycling Programs

in

Hancock and Houghton, Michigan

and

Michigan Technological University

Review and Recommendations



Sociology of the Environment Class
Graduate Program in Environmental and Energy Policy
Michigan Technological University

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Partnership with Copper Country Recycling Initiative

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Report available at:

<http://www.mtu.edu/social-sciences/research/reports/>

Avg waste per person per day in US

1960: 2.32 lbs

1984: 3.08 lbs

1995: 3.50 lbs

2014: 4.6 lbs

Approx 55% of the 220 million tons goes to landfills which are 2nd largest source of human-related methane emissions in us

Managing waste is **Expensive**- in \$s, time, and environmental costs

The Local Situation in a Nutshell

- Report focused on Houghton, Hancock & Michigan Tech
- The Players:
 - **Waste Management-** landfill, garbage pick-up, recycling drop off and transport
 - **Eagle Waste & Recycling-** recycling sorting and processing is main business. Also does garbage pickup and hauling
 - **Houghton County-** Transfer station and new cardboard recycling drop-off (free to households)

Houghton & Hancock

- Houghton and Hancock together generate 186.3 tons garbage that gets landfilled monthly- costs about \$40,000/month
- Cities recycle < 5% of household waste. US = 34%; MI= 15%
- Hancock has curbside pickup once/month- underutilized
- Houghton drop-off at \$4/vehicle
- All garbage in area goes to K&W Landfill
 - Leachate- 2 to 6 x 10,000 gallon trucks/day
 - Organics in landfill major cause
 - No interest in reducing waste- can expand- great site for landfill
- Houghton, Hancock, and MTU all currently have contracts with *Waste Management*
 - Houghton and Hancock contracts expire June 2016 & August 2016, respectively
 - Houghton recently put out RFP that includes curbside recycling

Cost Comparison for Garbage & Recycling in Houghton, Hancock, Ironwood (monthly)

MCD	Service Provider	Households	Garbage tonnage	Recycling tonnage	Costs per HH/month		
					Garbage	Recycling	Total
Hancock	City/Waste Management	1,830	94	5.0	\$15.00	\$0.62	\$16.00
Houghton	Waste Management	1,156	92	n/a	\$11.00	\$4.00	\$15.00
Ironwood	Eagle Waste	2,400	n/a	n/a	\$10.16	\$1.58	\$11.74

Michigan Tech

- Generates about 915 tons of landfilled garbage annually
- Recycles about 14% of waste (compared to state avg 15% and national avg 34%)
- Composts yard waste and some limited food waste (pre-consumer). We don't mix greens and browns now and so not very useful in gardens
- Gardener wants compost- purchases material now
- Food services has done a great deal to reduce waste- LEAN
- MTU contract with *Waste Management* until 2019

Michigan Tech- Cost of Waste Management (monthly)

MTU	Garbage	Recycling	Savings
Weighted Cost/ton	\$68.86	\$39.81	\$29.05
Avg. Tonnage	83.2	12.37	12.37
Totals	\$5,729.15	\$492.45	\$359.35

⌵ Based on 11 months, because there was no garbage pick-up in July 2014

Key Points

- Municipalities and MTU have economic incentive to reduce waste, compost, and recycle
- We are currently doing poorly
- Sustainability talk but lack of data or action

Major Gaps in Community & Campus

- Regular, easy, and promoted curbside pickup
 - Participation rate in MI drop off= 9%; regular curbside= 67%
- Attention to data- measuring progress & expenses
- Hazardous waste disposal- no real options locally
- Composting- could do so much more and this is cheap and makes a big difference!
- Planning- we have no waste management plan or goals
- Integrating major institutions- businesses, schools, etc.

What Can we (MTU) Do?

- MTU recycling rate is a bit embarrassing
- The university might see itself as a sustainability leader for broader community
- Make reducing waste/composting/recycling and generally setting a sustainability example a priority. This is part of our educational mission.
 - Policies integrated across departments/units
 - Data analysis
 - Plan for sustainability with clear goals, policies, and measures of progress
 - Remind us all the time this is important- currently not part of culture, so will take some work
 - First Year Orientation could integrate sustainability activities- how we do things on this campus to live sustainably