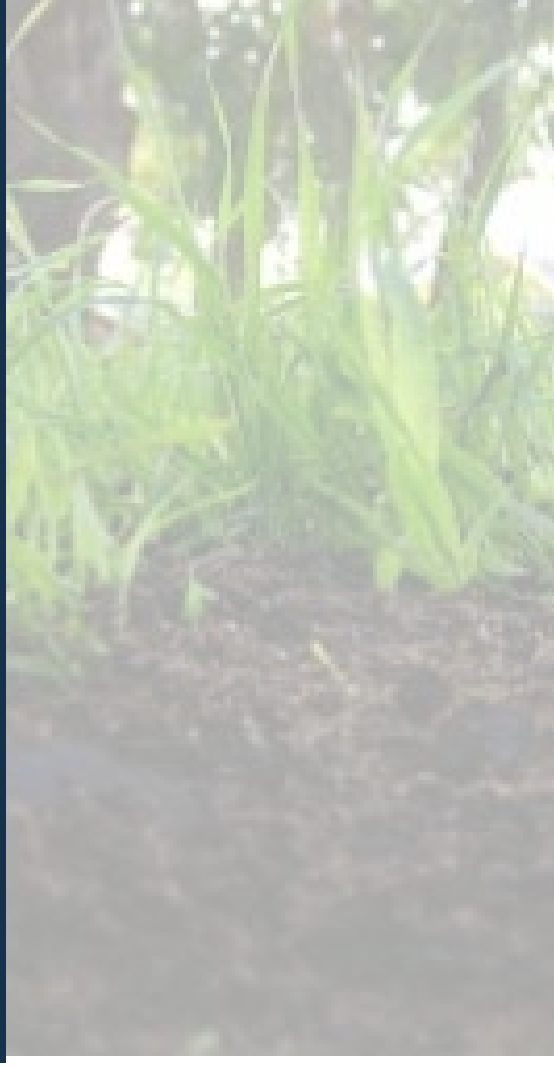


Genesee County

County Recycling Assessment & Strategies For Improvement

GENESEE COUNTY
METROPOLITAN PLANNING COMMISSION

Part 1: Genesee County Recycling Assessment

In 2005, Genesee County directed a study to determine the County's recycling rate and provide recommendations to further recycling options and participation among area residents. At the time of the study the amount of quality data available regarding area recycling programs was in short supply. This forced county staff and their consultants to use a minimum of local data mixed with national averages and accepted industry approximations to estimate the County's recycling rate. While this methodology and the results acquired proved valuable at the time, staff chose to ramp up our efforts and complete the 2011 study "in house" using actual recycling data from existing households in Genesee County. This study assesses how well Genesee County residents are recovering recyclables and offers recommendations to enhance our solid waste management systems here in the County.

By utilizing actual data, staff gained a genuine grasp on the recycling picture here in Genesee County. In fact, *actual weights* of municipal solid waste and recyclables were used in this review thus providing a much more accurate Genesee County residential recycling rate as well as rates for each particular local jurisdiction. To take it a step further, staff also studied residential participation in existing curbside programs throughout the county. From this data, recommendations for increased diversion and participation have been identified.

Study Methodology

With the goal of determining a Countywide Residential Recycling Rate in mind, staff designed a sampling methodology to collect and weigh municipal solid waste (MSW) in multiple communities to achieve an accurate rate. By obtaining partnerships with local waste haulers and recyclers, staff coordinated and facilitated random sampling of households in Genesee County in regards to the amount (weight) of material recycled versus the total amount of waste material generated. Through the use of the U.S. Environmental Protection Agency's standardized method for calculating recycling rates, we were able to determine the rate for each jurisdiction sampled while using those figures to calculate rates for jurisdictions with similar traits and number of households.

Genesee County Recycling Rate:

(Total MSW Recycled/Total MSW Generated) x 100

***Municipal Solid Waste consists of both trash and recyclables**

Since surveying every local unit of government would have proved too time-consuming, staff developed a system to survey local units in each of the following categories:

1. **City**
2. **Urban Township** (> 5,000 housing units)
3. **Rural Township** (< 5,000 housing units)

Through sampling of each category, an average weight recycled and average weight of waste generated per household was determined. This was then used to calculate the recycling rate for each of the other local jurisdictions, for which recycling data was not provided. We were able to calculate an estimated countywide recycling rate, as well as an estimated recycling rate by jurisdiction. An average weight recycled for the City of Flint was determined through weights accepted at Great Lakes Recycling as well as through recyclables accepted in City of Flint neighborhoods through their use of the Genesee County Recycling Trailer. The residential waste generation data was also provided by local waste haulers through a survey conducted by GCMPC staff. These weights were provided by haulers as an "annual waste generated" figure and was converted by staff to reflect the "weekly waste generated" for each local unit, and eventually the average amount of "waste land-filled" per household on a weekly basis.

People in the United States go through 25 billion plastic bottles annually and make enough plastic film each year to shrink-wrap the state of Texas.

- LiveStrong.com

In order to get a sample with a 95% confidence level with a 5% confidence interval, 350 or more households were surveyed in each local unit. There was no sorting of materials, just strictly weighing the material that comes in on the truck.

In relationship to the 2005 study, the new figures produce a different picture of the waste system in Genesee County. Specifically, in 2005, the "waste generated' figure was estimated using a rate of 3.7 lbs per person per day or 65.2 lbs per household per week. While at the time this rate seemed reliable, our current data of 40 lbs per household per week suggests it may have been skewed a

little high, which in turn lowered our overall recycling rate. The current data was compiled from local waste haulers, and then validated with data from surrounding communities. When compared to the communities that make up the Resource Recovery & Recycling Authority of Southwest Oakland County (RRRASOC) to the south of Genesee County, the recovery rates of lbs per household per week were nearly identical. However, the residential waste generated numbers show quite a difference, indicating that Genesee County may need to continue to improve efforts to increase recycling per household.

Waste Landfilled & Recycling Data (Residential Only)

Area	Recycling lbs/HH/wk	Waste Landfilled lbs/HH/wk
Genesee County	6.08	40.03
RRRASOC	6.31	31.57

RRRASOC members include Farmington, Farmington Hills, Novi, Southfield, South Lyon, Walled Lake, and Wixom

Genesee County Waste & Recycling Services

The vast majority of Genesee County communities are considerably ahead of the game in providing waste and recycling services for their residents as most have a negotiated a waste and recycling contract with a single waste hauler. Ultimately, this practice keeps service premiums to a minimum but this certainly is not the only benefit. With a single waste hauler, truck routing sends out the least amount of trucks needed, consequently doing less damage to our local roads and emitting less of their harmful emissions. It should also be noted that the figures in this report do not include multi-family housing, as data for these households is not readily available. Realistically, these residents are not included in curbside recycling services covered by the municipal contract as each development usually negotiates their own contract with a chosen waste hauler.

Curbside Recycling Accessibility Countywide

Year	Total Households	Households w/ Curbside Recycling	Percentage w/ Curbside
2005	169,825	68,331	40.24%
2010	170,739	112,337	65.79%

Since 2005, the recycling options have expanded significantly for area residents. Not only do more people have access to recycling than ever before, but the types of materials they are able to be recycled have also expanded. Many of the curbside programs have expanded to accept #3-#7 plastics as well as all types of paper and cardboard products.

Genesee County Annual Residential Waste Generated (exludes Multi-Family)	
Local Units of Government	**Waste Generated (tons)**
Argentine Township	2,694
Atlas Township	2,344
Clayton Township*	2,621
Davison Township	5,964
Fenton Township	7,082
Flint Township	15,002
Flushing Township	4,421
Forest Township*	1,455
Gaines Township*	2,442
Genesee Township	9,643
Grand Blanc Township	12,767
Montrose Township	3,082
Mt. Morris Township*	8,524
Mundy Township	6,028
Richfield Township	3,136
Thetford Township	2,640
Vienna Township*	2,824
City of Burton*	10,410
City of Clio	2,755
City of Davison	1,625
City of Fenton	3,746
City of Flint	32,839
City of Flushing*	4,344
City of Grand Blanc*	1,932
City of Linden*	1,506
City of Montrose*	605
City of Mt. Morris	1,354
City of Swartz Creek	1,926
Village of Gaines*	142
Village of Goodrich	757
Village of Lennon*	178
Village of Otisville	249
Village of Otter Lake*	156
Total	**157,196**

In terms of population, a large majority of Genesee County residents have access to curbside recycling. Of the 33 local units of government in the County, 32 of them offer curbside to their residents through the assistance of a local waste hauler. The City of Flint is the only municipality that does not currently have recycling at the curb. The City of Flint accounts for nearly 25% of the population of Genesee County and adding curbside service for their residents would make a very positive impact on the local waste system. Since 2005, the amount of households in the county with access to curbside recycling has increased by about 40%. Generally, the #1 barrier to recycling is accessibility and with increases in curbside programs we will most likely see an increase in recycling. While there will always be room for improvement on the education end, and with the expansion of acceptable items, Genesee County is in a prime position to greatly increase recycling rates with the current availability of recycling options.

Genesee County Residential Recycling Rate

In 2005, the Genesee County recycling diversion rate was 2.81%. This represents that just 6 short years ago; only 2.8% of all residential waste materials generated in Genesee County were recovered for recycling. In relationship to State and National averages, this is extremely low.

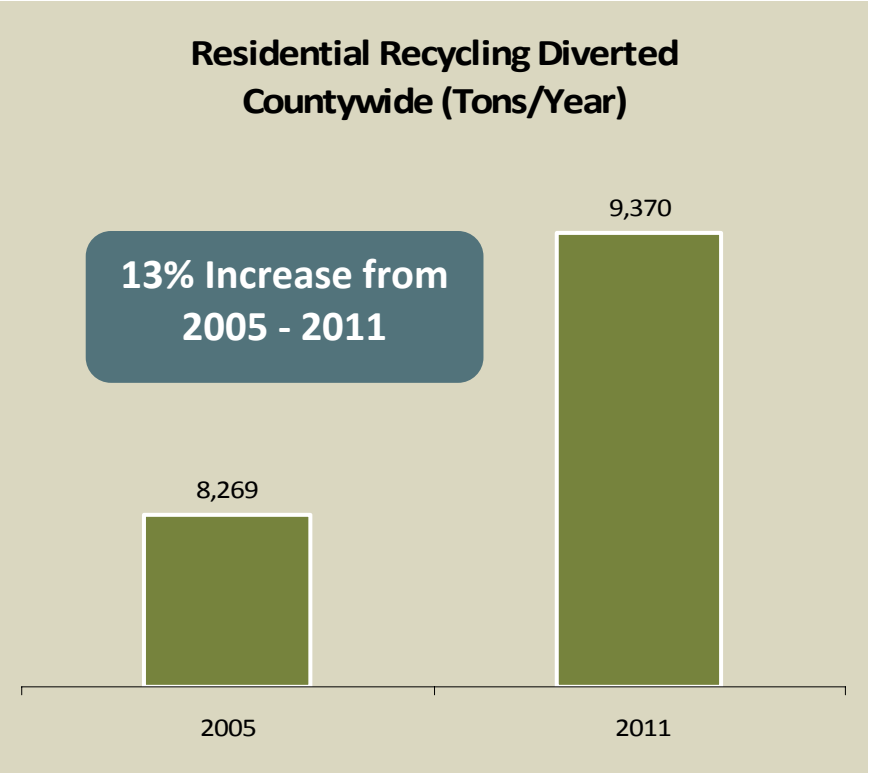
2011 Countywide Residential Recycling Rate: 6%

As of 2011, the Genesee County Residential Recycling Rate has climbed to 6%. Much of this growth has occurred in the more urban areas. The urban townships like Grand Blanc, Flint, Davison, Genesee and Mundy have seen considerable growth in their recycling program since 2005. Many of the County's larger cities like Swartz Creek, Grand Blanc, Fenton, and *(text to continue after the Residential Recycling Diverted charts)*

Genesee County Residential Recycling Rates

Local Units of Government	Total Recycled (lbs/wk)	Total Landfilled (lbs/wk)	Total Waste Generated (lbs/wk)	Recycling Rate
Argentine Township	1,628	102,000	103,628	1.6%
Atlas Township	2,157	88,000	90,157	2.4%
Clayton Township*	4,716	96,077	100,793	4.7%
Davison Township	19,503	209,885	229,388	8.5%
Fenton Township	14,695	257,692	272,387	5.4%
Flint Township	51,000	526,000	577,000	8.8%
Flushing Township	13,333	156,692	170,026	7.8%
Forest Township*	2,197	53,769	55,966	3.9%
Gaines Township*	3,602	90,308	93,909	3.8%
Genesee Township	25,297	345,577	370,874	6.8%
Grand Blanc Township	63,933	427,115	491,049	13.0%
Montrose Township	5,034	113,500	118,534	4.2%
Mt. Morris Township*	11,547	316,308	327,854	3.5%
Mundy Township	17,859	214,000	231,859	7.7%
Richfield Township	1,437	119,192	120,629	1.2%
Thetford Township	2,863	98,692	101,555	2.8%
Vienna Township*	6,619	102,000	108,619	6.1%
City of Burton*	36,588	363,808	400,395	9.1%
City of Clio	7,251	98,692	105,944	6.8%
City of Davison	2,742	59,769	62,512	4.4%
City of Fenton	15,776	128,308	144,084	10.9%
City of Flint	5,666	1,257,385	1,263,051	0.4%
City of Flushing*	10,370	156,692	167,062	6.2%
City of Grand Blanc*	10,704	63,615	74,319	14.4%
City of Linden*	4,235	53,692	57,927	7.3%
City of Montrose*	1,943	21,308	23,251	8.4%
City of Mt. Morris	403	51,692	52,095	0.8%
City of Swartz Creek	13,626	60,462	74,087	18.4%
Village of Gaines*	237	5,231	5,468	4.3%
Village of Goodrich	2,784	26,346	29,130	9.6%
Village of Lennon*	278	6,577	6,855	4.0%
Village of Otisville	54	9,538	9,592	0.6%
Village of Otter Lake*	322	5,692	6,014	5.4%
Total	**360,398**	**5,685,615**	**6,046,013**	**6.2%**

Residential Recycling Diverted 2005 vs. 2011		
Local Units of Government	2005 Recycling (tons/yr)	2011 Recycling (tons/yr)
Argentine Township	181	42
Atlas Township	168	56
Clayton Township*	86	123
Davison Township	529	507
Fenton Township	506	382
Flint Township	699	1,326
Flushing Township	176	347
Forest Township*	58	57
Gaines Township*	93	94
Genesee Township	323	658
Grand Blanc Township	995	1,662
Montrose Township	9	131
Mt. Morris Township*	331	300
Mundy Township	532	464
Richfield Township	273	37
Thetford Township	170	74
Vienna Township*	356	172
City of Burton*	730	951
City of Clio	55	189
City of Davison	177	71
City of Fenton	463	410
City of Flint	244	147
City of Flushing*	265	270
City of Grand Blanc*	315	278
City of Linden*	83	110
City of Montrose*	28	51
City of Mt. Morris	108	10
City of Swartz Creek	235	354
Village of Gaines*	10	6
Village of Goodrich	48	72
Village of Lennon*	7	7
Village of Otisville	19	1
Village of Otter Lake*	1	8
Total	**8,269**	**9,370**



Genesee County Recycling Participation			
Local Units of Government	Households Serviced (excludes multi-family)	Participation Rate	Participating Households
Argentine Township	2,552	20%	510
Atlas Township	2,200	38%	836
Clayton Township*	2,629	38%	1,003
Davison Township	5,320	47%	2,500
Fenton Township	5,837	53%	3,094
Flint Township	11,435	40%	4,574
Flushing Township	3,885	40%	1,554
Forest Township*	1,508	31%	467
Gaines Township*	2,472	31%	766
Genesee Township	7,445	42%	3,127
Grand Blanc Township	10,785	52%	5,608
Montrose Township	1,926	33%	636
Mt. Morris Township*	7,925	31%	2,457
Mundy Township	5,367	55%	2,952
Richfield Township	2,989	19%	568
Thetford Township	2,469	34%	839
Vienna Township*	4,543	31%	1,408
City of Burton*	10,938	50%	5,469
City of Clio	1,029	54%	556
City of Davison*	2,039	50%	1,020
City of Fenton*	4,358	50%	2,179
City of Flint*	n/a	5%	2,024
City of Flushing*	3,100	50%	1,550
City of Grand Blanc*	3,200	50%	1,600
City of Linden*	1,266	50%	633
City of Montrose*	581	50%	291
City of Mt. Morris	1,068	17%	182
City of Swartz Creek	2,196	56%	1,230
Village of Gaines*	128	31%	40
Village of Goodrich*	538	50%	269
Village of Lennon*	150	31%	47
Village of Otisville	285	12%	34
Village of Otter Lake*	174	31%	54
TOTAL	**112,337**	**39%**	**50,075**

* Calculated Estimated Rate

Burton have also seen considerable growth in their recycling programs. Overall, Genesee County has seen over a 13% increase in the amount of recyclables recovered in residential programs since 2005. The increase can be attributed to a number of different factors. The number one contributor to this growth is likely the increased accessibility to quality recycling programs. Local units of government are realizing the benefits of curbside recycling and have made it a priority to provide these services to their residents. In fact, some of the townships seeing above average growth are currently offering the 'Rewards 4 Recycling' affinity program to their residents in addition to normal curbside services. This may be a factor in their increased success. It is certainly reasonable to contribute some of this growth to GCMPC's extensive education & outreach programs. Since 2006, GCMPC launched a recycling awareness campaign, invested in the Borrow Our Bins program, purchased a County Recycling Trailer, and implemented a school recycling education campaign, not to mention the countless hours of outreach and promotion at area events. Lastly, something should be said about the public mindset. Since the last rate study was completed, the idea of "going green" and building sustainable communities has spread like wildfire, and we have certainly realized some of these benefits in Genesee County.

Also provided through partnerships with local waste haulers were the average participation rates for a number of local units throughout Genesee County. On a countywide average, 39% of the households in Genesee County participate in some form of residential recycling program.

Part 2: Strategies for Improvement

Why Boost Recycling in Genesee County?

> Incinerating 10,000 tons of waste creates one job; land filling 10,000 tons of waste creates six jobs; recycling 10,000 tons of waste creates 36 jobs.
>
> - Earth911.org

A 2006 study produced by Public Sector Consultants, and reinforced by the Michigan Recycling Coalition in 2011 shows that increasing the recycling rate in Michigan from the current level of 20% (2001 estimate) to the average of the other Great Lakes states (30%), would produce a total increase of 6,810 to 12,986 jobs, approximately $155 to $300 million in income, and approximately $1.8 to $3.9 billion in receipts (accounting for multiplier effects). This additional income would generate about $12 to $22 million in state tax revenue. The economic benefits of recycling are real, and we believe Genesee County should capitalize on them. Not only will increased recycling create jobs and foster economic growth, but it also preserves our valuable landfill space—something Genesee County is rapidly running out of. The PSC study goes on to state that "given Michigan's job prospects, unemployment rate, and economic outlook, capturing the economic benefits provided by increased recycling should be made a priority for the state," and we believe Genesee County should follow suit.

The 'State' of Recycling?

In 2011, the Michigan Recycling Coalition (MRC) commissioned a report on the status of recycling in our State and discussed possibilities on how to move us forward in that realm. The MRC reports that from 1994 to 2004, the recycling rate in Michigan decreased by a whopping 20%. And unfortunately from there, the per capita recycling rate has remained stagnant, sufficiently behind the rates of other mid-west states and the nation as a whole. Currently, the state is operating under a 2007 Statewide Solid Waste policy. The State Solid Waste Policy uses the three principles of sustainability –economic vitality, ecological integrity, and improved quality of life– to guide solid waste management decisions. This policy includes goals such as finding uses for 50% of Michigan's municipal solid waste by 2015 and ensuring that all Michigan citizens have convenient access to residential recycling programs by 2012. Currently, the MDEQ has been instructed by Governor Snyder to draft a new Statewide Solid Waste Policy updating these goals by July 2012. At a minimum this mandated state-level report is to "identify options for long-term funding for the solid waste management program. For each option, the report shall take into account the extent to which additional activities or materials, or both, such as recycling, composting, and beneficial

reuse would impact the long-term funding of the solid waste management program." Genesee County is excited about the possibility of future programs and funding geared toward reducing waste and increasing the recovery of valuable resources through recycling. Furthermore, we support the MRC's 2011 study, and agree that the State should make the necessary investments in the solid waste management system to support greater recovery rates and bring the economic development benefits associated with recycling to the residents of Michigan and Genesee County alike.

Increasing Genesee County Participation

In studying the participation rates of the local communities in Genesee County, we have discovered there are definite benefits and obvious shortfalls in resident participation in the local recycling programs. The principal shortfall in Genesee County is the absence of a residential recycling program in the City of Flint. The City of Flint makes up nearly a quarter of the population in Genesee County and is behind the times in by not offering recycling to its residents. Currently we estimate that roughly 5% of households in the City of Flint are participating in a residential recycling program. With the implementation of a recycling program, backed by a resident education program, the county participation average of 29% could easily be attainable. Due to the current absence of a program in Flint, we estimate there are an added 65 million pounds of waste per year going to area landfills that would otherwise be diverted. Simply adding curbside recycling in the City of Flint could realistically bring over 12,000 additional households into the recycling realm with the adoption of a pilot program that incorporates neighborhoods gradually.

Get Flint Recycling!

- Over *65 million* pounds of waste are generated per year by the City of Flint

Opportunity for:

- Over *40,000* additional households to have access to recycling
- Diversion of *14 million* pounds of waste from area landfills annually (assuming the average 6.69 pounds per households per week for cities)

The aluminum can is infinitely recyclable. A recycled can is able to be back on the shelf in as little as 60 days – using 95% less energy and 95% less greenhouse gas emissions than creating a can from new metal.

- Aluminum Association

Another serious shortfall is the lack of recycling options for multi-family residents in Genesee County. The 2010 U.S. Census American Community Survey estimates that multi-family units make up roughly 17% of the housing in our local communities, and virtually all of them do not offer recycling to their residents. There are a number of challenges surrounding the waste systems in place in multi-family housing. Each development contracts with a waste hauler of their choice, and recycling is generally not a part of that discussion. This is not only a void in our solid waste system, but a void all over the state and nation. However, some communities have made advances in multi-family recycling through local ordinances. Ann Arbor, MI currently has a municipal ordinance in place mandating that all property managers are required to offer their residents the opportunity to recycle. Communities are encouraged to explore the feasibility of extending recycling options to multi-family residences by local ordinance or any other method they choose. Extending these options to multi-family dwellers could equip an additional 27,000 households with the tools needed to greatly reduce their impact on local waste streams.

Incentive Programs

Incentive programs are not new to the public waste realm by any means, but can often help achieve favorable results for resource recovery efforts. Affinity programs and Pay-As-You-Throw waste collection can help communities boost recycling rates and decrease the amount of waste their residents contribute to Genesee County's three landfills.

Affinity Programs

To date, the best method for increasing residential recycling participation locally has been the addition of a recycling affinity program. These programs encourage residents to participate in their local curbside recycling program by offering them "rewards" for doing so. Rewards generally come in the form of discounts and deals to local and national merchants. These programs track a resident's participation in the local recycling program and reward them based on their level of participation. Currently, *Rewards for Recycling* is operating in several Genesee County communities and has shown that this program does increase recycling

participation among local residents. *Recyclebank* is a similar program operating in the State of Michigan and throughout the nation. Both programs should be researched to determine the best fit for a particular community.

Pay-As-You-Throw (PAYT) Programs

Currently, in most communities in Genesee County, waste disposal remains inexpensive and the complete economic benefits of recycling may not be fully accounted for. Most residents are receiving inexpensive, unlimited trash service. In an effort to moderate this unlimited waste generation and disposal model, communities are encouraged to explore the benefits of implementing a pay-as-you-throw collection system. Under a PAYT program residents are charged for waste collection services based on how much they are throwing away. This pay structure is similar to other public utilities like electricity, gas, and water. PAYT programs can be structured in a number of different ways but the most common method is volume-based. Residents are charged a fee for each cart or bag of trash they put out to the curb each week. Often communities require that residents purchase special trash bags or affix stickers to bags of refuse. Currently, the City of Fenton is the only community utilizing a PAYT program in Genesee County. The key to any first-rate program is education before implementation. Communities that deem this program a good fit for their residents are encouraged to provide thorough education on the benefits and guidelines of the program prior to its inception.

Pay-As-You-Throw
At a Glance

✓ Equitable

PAYT programs are fair programs. Residents are only charged for the waste they throw away

✓ Economical

Residents that reduce and recycle save money—and less waste helps municipalities cut costs too.

✓ Sustainable

Fewer natural resources are used and landfill space is saved, reducing the need to site new facilities.

Source: U.S. Environmental Protection Agency

Education, Education, Education

One of the biggest barriers to recycling is just a simple lack of knowledge. Residents are not always readily informed on where to recycle, and what types of materials are accepted—and it's really not their fault! Programs change, people move, and contracts expire. It is up to the trash haulers and local units of governments to keep the residents abreast of what services are offered when. Unfortunately, staff time and priority is not always given to this activity.

USDA Rural Solid Waste Grants

Every year, the United States Department of Agriculture accepts applications for solid waste management grants to "provide technical assistance and/or training to help communities reduce the solid waste stream." These grants are available to public bodies as well as private non-profit organizations. As the data shows, the rural areas in Genesee County are marked with some of the lower rates of recycling. This grant program offers an excellent opportunity for communities to ramp up their education efforts or design a new education program all together to encourage recycling among their residents. Pointed education directed specifically at the residents should be considered a priority. Direct mailings with tax bills, local contests, community outreach meetings are all viable options. These particular grants can range from $15,000 to $200,000 and do not seem to be highly sought after as there are many repeat grantees from year to year. This is a potential low-hanging fruit for Genesee County and its communities.

County Mini-Grants

Another potential source of education program stimulation could come from the Genesee County Solid Waste program. A mini-grant program, funded through County solid waste ordinance dollars and administered by county staff, could be offered to localities throughout Genesee County. County staff would have a yearly "request for proposals" in which they rate and eventually award the best suited programs. Eligibility would be extended to local governments and non-profits. Currently, a few mini-grants a year ranging from $5,000 to $10,000 could be supported by the County and could potentially fuel a recycling renaissance.