MADISON COUNTY
DEPARTMENT OF SOLID WASTE

SOLID WASTE
MANAGEMENT PLAN

2023 BIENNIAL UPDATE

FOR PLANNING PERIOD

2020-2022

30 Years of Recycling
RETHINK WASTE
IN MADISON COUNTY

Table of Contents

Appendices

Executive Summary

Madison County is an upstate rural county with an area of 655 square miles located approximately 20 miles from both Syracuse and Utica. As of the census of 2020, there were 68,016 people and 24,779 households residing in the county. The population density was 104/mi². Within Madison County there are 15 towns, 10 villages, and the City of Oneida. Madison County (herein referred to as "the County") is the local planning unit for all municipalities located within the county's border.

In the past, the County has prepared Solid Waste Management Plans (SWMPs) to evaluate and execute an environmentally sound and economically feasible plan for handling solid waste generated within Madison County, NY. In 2020, the County submitted a new SWMP to continue the safe and responsible management of all solid waste within the planning unit. The new SWMP was finalized and approved in 2021 and will span a ten-year planning period from 2021 to 2030. The purpose of this biennial compliance report is to provide an initial update of the status of those goals and their corresponding implementation schedule set forth in the new SWMP. In addition, the planning unit will be requesting an additional two years extension to the original 10 year planning period as allowable under 6NYCRR Part 366-5.2. Once the biennial update is approved, the new SWMP planning period will run from 2021 to 2032.

Madison County's solid waste management practices have not changed during the reporting period. The integrated solid waste management system continues to consist of the following: one central sanitary landfill in the Town of Lincoln, four transfer stations (located at the landfill site on Buyea Road and in the Towns of Hamilton, Cazenovia, and Sullivan), a central materials recovery facility (MRF) also located at the landfill site, and four yard waste and recyclables drop-off locations (located at each of the four transfer stations). These facilities are owned and operated by Madison County with the exception of the MRF, which is operated by The Arc of Madison Cortland. In addition, the County transfer stations include expanded recycling programs for special wastes such as antifreeze, vehicle tires, vehicle batteries, dry cell batteries, white goods, and other bulk metals. The County also utilizes nearby partnerships to handle the collection and processing of materials such as electronic and household hazardous waste.

The County's integrated solid waste management system is financially supported solely by a user fee system where waste generators pay based on the amount of non-recyclable materials delivered to the County's facilities. The County does not charge residents for recycling at this time and the planning unit does not receive funding from local taxes.

Although the County oversees the solid waste management planning for all local municipalities, there are other key players who play an important role in determining the current and future success of solid waste management. These key players include the towns, villages, City of

Oneida, private waste haulers, neighboring planning units and statewide organizations like the New York State Department of Environmental Conservation (NYSDEC).

This document will review the actual recycling and disposal data for the operating period 2020-2022 and will discuss updates on Madison County's outreach and education activities, challenges and status of conformance to the current LSWMP.

Biennial Compliance Report Components

In accordance with NYCRR Part 366-5.1, the LSWMP biennial update shall consist of a summary report, solid waste and recyclables data, any updates to sections of the LSWMP that reflect changes to the LSWMP, and a revised implementation schedule and associated projections incorporating any changes necessary to reflect the current program.

(1) The summary report must include:

(1) Any changes to the planning unit structure;
(2) Actual waste generation, recycling and disposal data and comparisons with and reasons for deviations from projections;
(3) A discussion of any changes to solid waste management practices;
(4) A summary of outreach and education activities;
(5) A description of efforts to ensure compliance with local recycling laws;
(6) Any obstacles preventing the planning unit from implementing tasks and/or achieving the goals of the LSWMP; and
(7) The status of conformance with the implementation schedule, including discussion of reasons for deviating from the implementation schedule.

(2) Solid waste and recyclables data must be submitted to the department and must contain:

(1) The names and locations of all known facilities that accepted waste or recyclables from the planning unit during the previous two years; and
(2) For each facility, the quantity and type of waste and recyclables sent to the facility. The type of waste must include all known MSW, C&D debris, industrial waste, and biosolids streams. Recyclables for recovery must include separate categories for the various paper components, glass, metal, plastics, textiles, organics etc.

(3) Updates to sections of the LSWMP must be submitted that reflect any significant changes to the LSWMP.

(4) The revised implementation schedule and waste projections must comply with the requirements of sections 366-2.6 and 366-2.7 of this Part.

This Biennial Compliance Report strives to include elements consistent with 6NYCRR Part 366-5.1. In addition, certain solid waste projections and the implementation schedule have been adjusted through 2032 to reflect the extension request of an additional two years to the planning period (2021 to 2032).

Section 1 – Summary Report

Section 1.1 Changes to the Structure of the Planning Unit

Madison County's planning unit consists of 15 towns, 10 villages and the City of Oneida. The overall structure of the planning unit has not changed; Madison County continues to provide solid waste disposal facilities for all towns and villages within Madison County, as well as the City of Oneida.

In addition, the materials recovery and program implementation has stayed relatively the same. All solid waste management facilities in the county have continued to operate and there are no new facilities for material collection or disposal.

While the overall structure of the planning unit has not changed, there is one anticipated change to the planning unit characteristics. Cazenovia College, one of the three colleges and universities within Madison County, is anticipated to close in the Spring of 2023. The college enrolled 746 students, employed 57 instructional staff members and 226 non-instructional staff members. With this anticipated change, the planning unit will no longer have that waste and recycling stream coming into its system after Spring 2023. The planning unit expects an initial spike in waste and recycling in April, May and June of 2023 as is expected when students wind down the academic year and prepare to leave campus. This timeframe may see additional tonnage as the school transitions to closing down and students move away from the campus. After the initial spike, the planning unit expects a slight decrease in the overall recycling and garbage generated as the college permanently closes its doors. Although these numbers will not be reflected under this reporting period, the planning unit felt it was important to note for projected wastes during 2023-2024.

1.2 Actual Waste Generation and Recycling Data

For the reporting period of 2020 – 2022, the actual recycling and disposal data for each year is outlined in the charts below. Most of the data is comprised of scale weights taken from the Madison County Landfill, with the exception of the yard waste tonnage, which are not always scaled in.

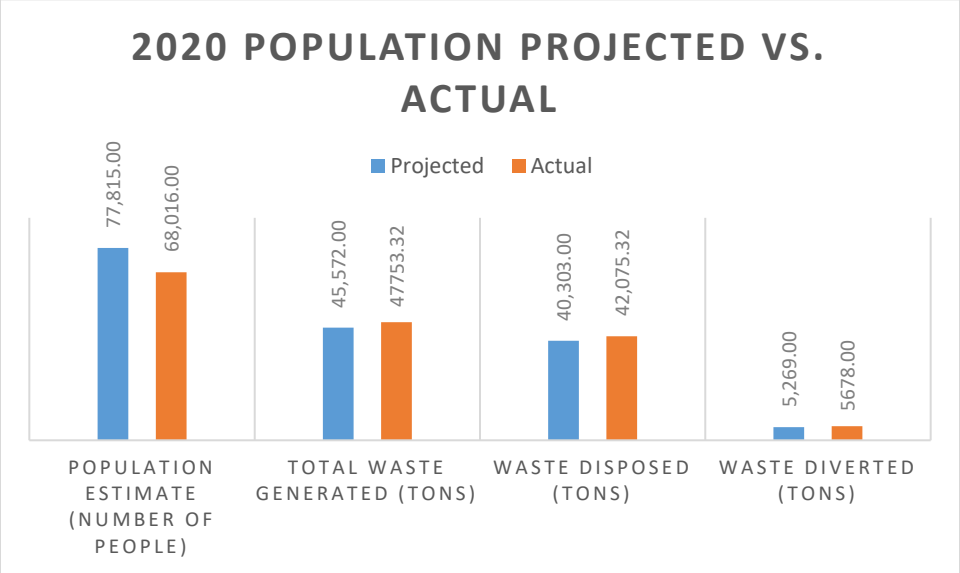
Data projections in the 2020 LSWMP were based on scale weights from 2019. To calculate waste generated and diverted, only municipal solid waste (MSW) tonnage was used. It is important to note that in addition to MSW, the Department also landfills biosolids along with

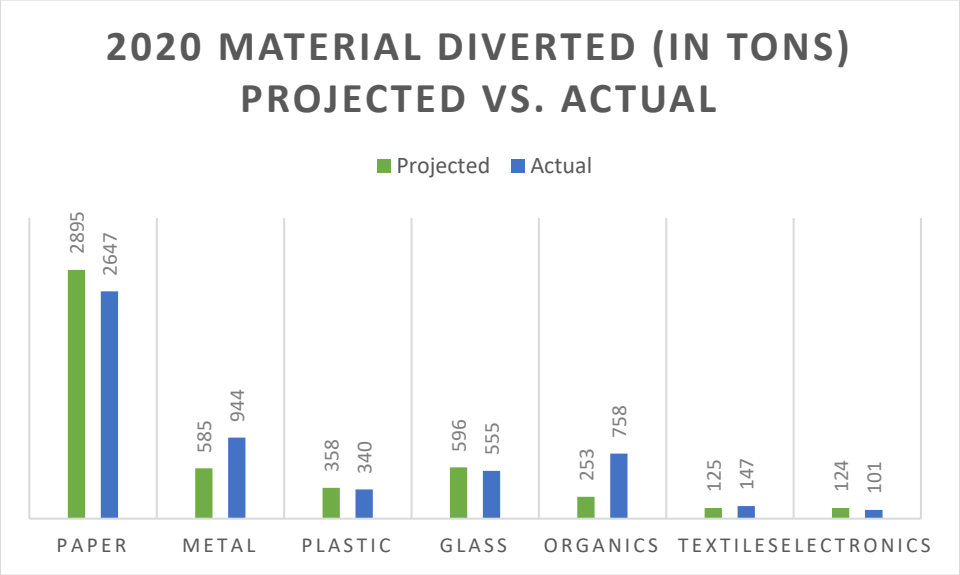
construction and demolition debris (C&D). Biosolids are brought in from Wastewater Treatment Plants within the county. The planning unit also accepted biosolids from the Oneonta Wastewater Treatment Plant in Otsego County but that was discontinued in 2023. C&D is also disposed of within the landfill as there is not a recycling program for those materials at this time.

Information regarding population came from the U.S. Census Bureau Website. As noted in the graphs below, Madison County saw a decrease in population. It is possible that the decrease may not be as large as the census reported. Since the census took place during the COVID-19 pandemic, it is believed that some people may not have been reached or accounted for during that time.

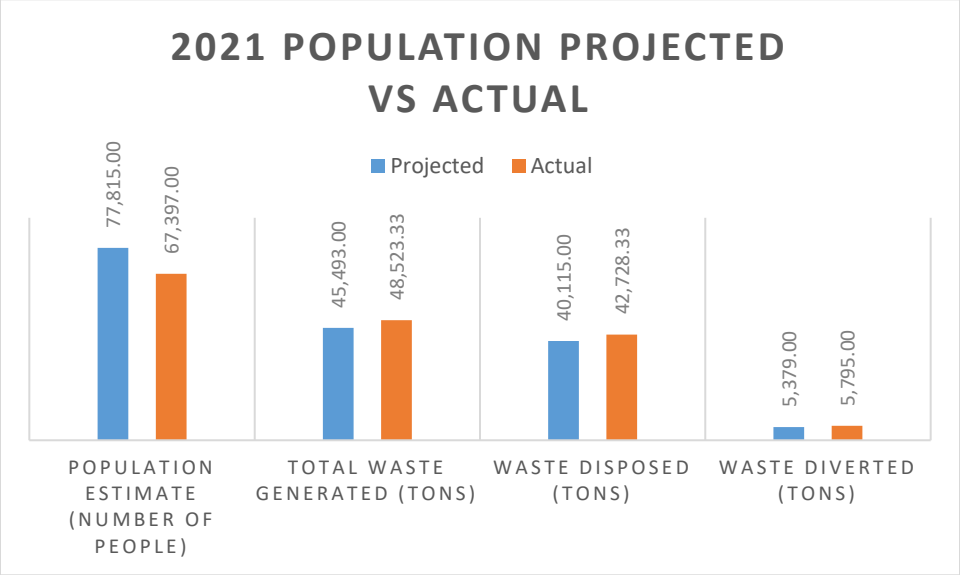
During the years 2020-2021, it can be noted that the waste generated was higher than originally projected. This may also be attributed to COVID-19. This time period found residents spending more time at home. Schools, businesses, and restaurants were either closed or open but with restrictions. This ultimately changed economic activity and consumer habits. While commercial waste most likely decreased, waste and recycling overall increased as people were working from home, the housing market was changing rapidly, and many took the time to do at-home renovation/construction projects. In addition, there was a larger push for using more disposable goods (masks, takeout containers, packages, etc…).

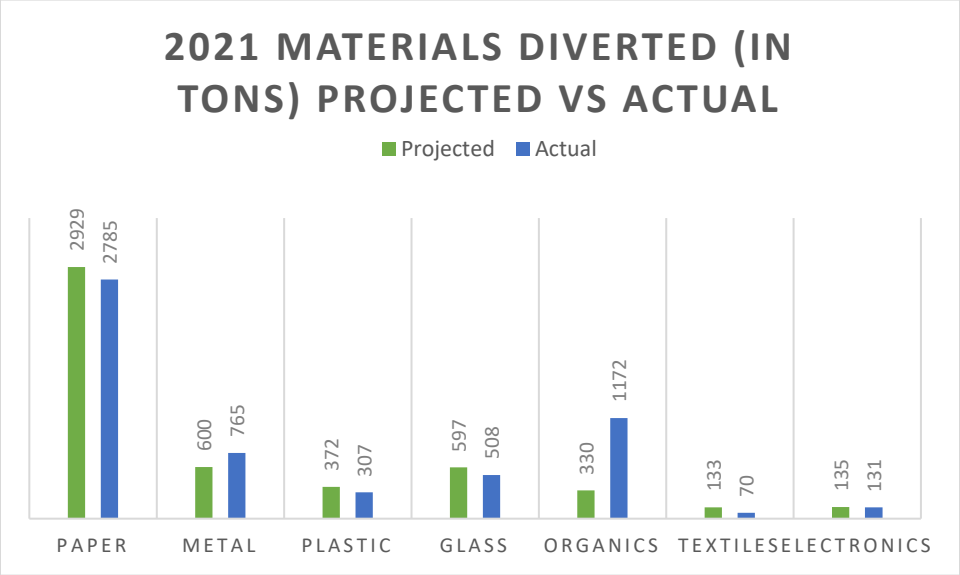
Based on the actual 2022 data, the shift back towards normal operations can be seen and assumed that waste generation will continue to trend downward, as our projections indicated in the original LSWMP. This in part due to the shift towards lightweight packaging and relatively stagnant population. Future projections can be found in **Section 4**.



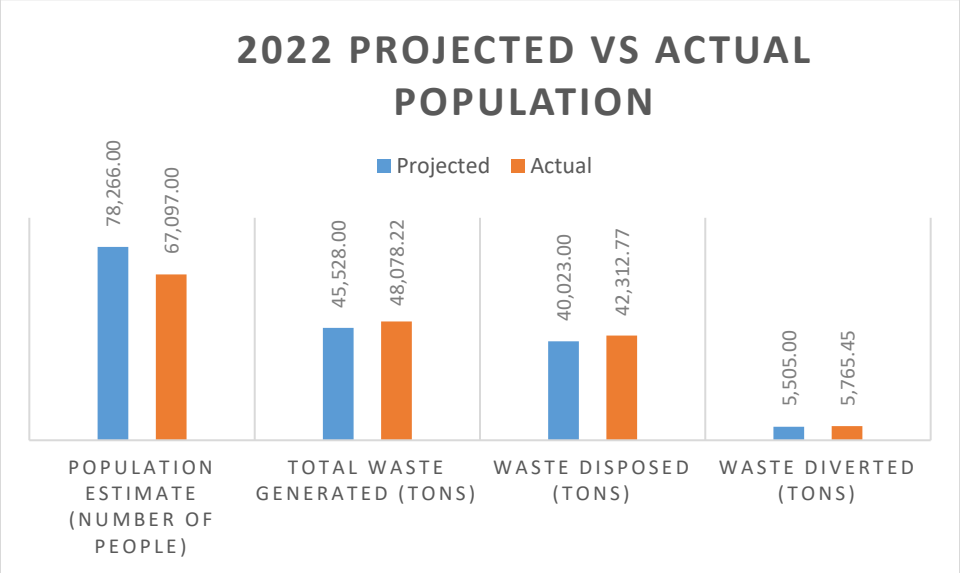


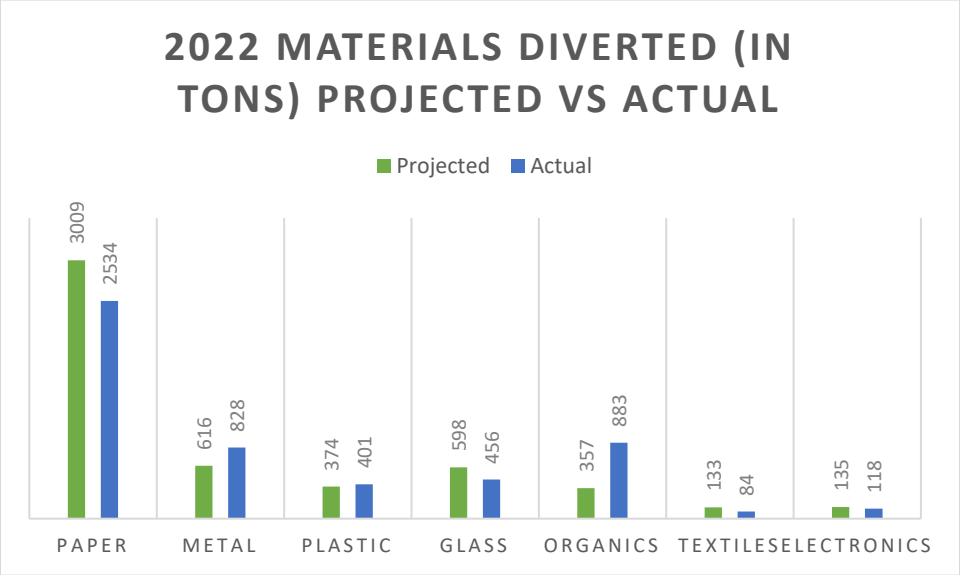
Projected numbers were based on amounts from 2019. This is important to note as the actual amount of organics is much higher in 2020 than what was originally projected. This could be due to the change in reporting between the two years as oversized, municipal and commercial green waste were beginning to be weighed into the scale system in 2020. Previously, this had not been done consistently and was an estimated tonnage.

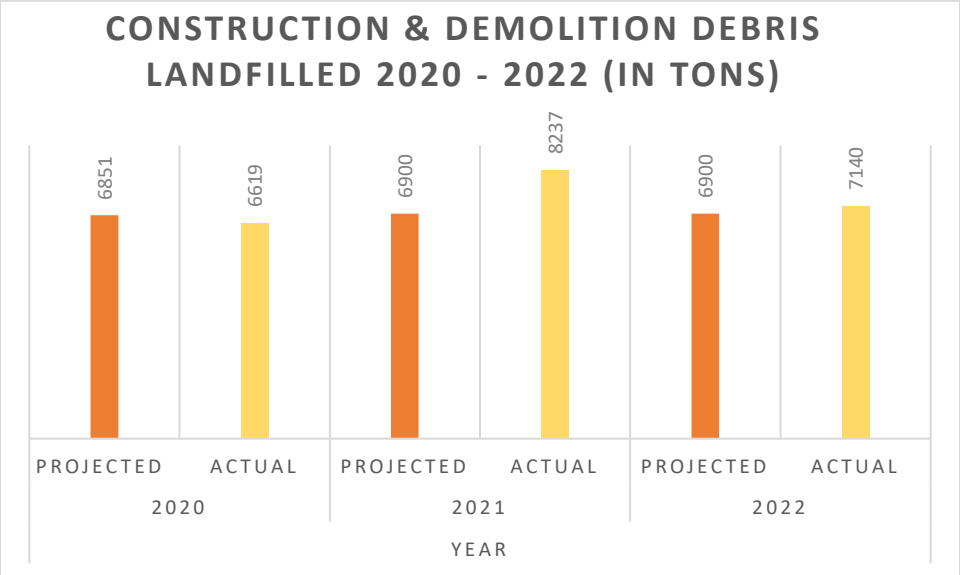




An increase in organics also occurred in 2021 due to another change in reporting. The County started to bring yard waste from the Cazenovia Transfer Station to the Buyea Road Facility and weighed it into the scale system. The organic material collected at the other transfer stations were visually estimated based on volume and then converted into weight. With this scaling in change, the County was able to get more accurate data on the amount of yard waste diverted.







As previously mentioned, many home renovation and construction projects took place during the pandemic and as businesses reopened, larger construction projects were able to resume.

1.3 Changes to Solid Waste Management Practices

Overall Solid Waste Management Practices

The County continues to utilize the Landfill site, the four transfer stations with yard waste and recyclables drop-off components and the central MRF to process solid waste. There have been no major changes to the solid waste management practices during the reporting period.

In 2021, the Madison County Board of Supervisors passed a resolution to hire an engineering firm, Cornerstone Engineering and Geology, PLLC (Cornerstone), to study the long-term

sustainability of the Madison County landfill operations as they currently stand. Madison County is concerned about the financial viability of the current operations, as the County Landfill is one of the smallest operating landfills in the State and they do not want the ever increasing disposal fees to financially burden the community. While it is paramount to continue Madison County's successful solid waste management system, it's equally important that the County evaluate all options that could help minimize or stabilize the cost of services for County residents and businesses.

Cornerstone was tasked with first assessing the current system and then evaluating alternatives that may improve the long term financial sustainability of the solid waste management system. Cornerstone released a final report of their findings and recommendations in February 2023 (**see Appendix A**).

With respect to alternatives, the study evaluated three options: 1) status quo, with the implementation of some efficiency measures, such as closing some of the transfer stations and beginning to charge a fee for recyclables; 2) a public-private partnership for operation and maintenance of the Madison County Landfill; and 3) closure of the Madison County Landfill and construction of a transfer station to send waste elsewhere.

The option to close the landfill was ruled out, as it does not achieve the ultimate goal of long term financial stability and sustainability. While the status quo option offered some opportunities for cost reductions, it would require the closure of transfer stations and changes to the recycling system. Ultimately, the Madison County Board of Supervisors determined that the public-private partnership option may provide the best opportunity to achieve the long term goal of financial stability and sustainability. To continue evaluating that option, the County is in the process of issuing a Request for Proposals for the Operation and Maintenance of the Madison County Landfill. This would provide the County with better information about the opportunities associated with that alternative. The County continues to collect more information and review the options to make the best informed decision possible.

For the reporting period, there were no changes to the current solid waste management system. Should any changes go into effect, the County will update the SWMP accordingly to reflect the current status in the next report.

Dual-Stream Recycling Program

Since 1990, Madison County has operated under a dual-stream recycling system. The Arc of Madison Cortland continues to operate the County MRF to process and bale recyclables according to the planning unit's recycling program. The planning unit continues to market and recycle newspaper, magazines, boxboard, office paper, junk mail, plastic bottles and jugs, plastic dairy containers, glass, ferrous cans and mixed aluminum. When quantity is sufficient, the planning unit will also request quotes for baled plastic film along with agricultural and boat

wrap plastics and mixed rigid plastics to evaluate recycling markets.

Beginning January 1, 2020, the County began to weigh incoming recycling trucks in order to better track recycling data, reduce contamination from communities and provide a baseline for the amount of material coming in from different locations. Prior to this, the County did not weigh incoming recycling trucks as recycling tonnage was based on moved materials once they were baled and marketed. Since the implementation, the County has been able to successfully record the quantity of recyclables coming in from different communities and provide financial incentive (through a contaminated recycling fee) for cleaner recycling brought in from private haulers. Through this change, the planning unit has been able to provide institutions such as Colgate University with exact tonnage brought into the MRF to help them better execute their recycling program.

During the current reporting period, there were no other major changes to the dual-stream recycling program practices.

Special Recycling Programs

Madison County has continued to provide several special recycling programs for electronic recycling, household hazardous waste (HHW), household and vehicle batteries, fluorescent bulbs, mercury thermostats, sharps, tires, expanded polystyrene, white goods and bulk metal.

The majority of these special recycling programs have continued to operate during this period, with the exception of the household hazardous waste and electronics recycling program being placed on temporary hold during the beginning of the 2020 COVID-19 pandemic. Those programs resumed a few months later and have been operating normally ever since. The planning unit continues to contract with LOJO Technology to oversee the electronics recycling program and Miller Environmental Group, Inc. for the HHW program.

On an exciting note for the planning unit, a new recycling program became available in 2022 for unused paints. As of May 1, 2022, the PaintCare program set up free collection sites for oil- and latex-based paints, along with primers, sealers, stains, varnishes and more. The planning unit diligently worked with PaintCare representatives and local paint retailers to ensure convenient paint drop-off sites were located within Madison County. The planning unit successfully reached out to local paint retailers and were able to set up three drop-off sites around the County. The PaintCare program is coming up on one year of implementation and residents have been thrilled to have local and convenient options to recycle their old paints.

While some programs expanded, others did not. In 2015, the planning unit launched a pilot project for recycling expanded polystyrene and shortly thereafter received a grant to purchase a styrofoam densifier. Up until July 2022, the planning unit was collecting expanded polystyrene, densifying the material and palletizing it for the market. Due to extensive program

costs, aging equipment, staffing challenges and limited recycling markets for the material, the planning unit made the difficult decision to discontinue the expanded polystyrene recycling program as of July 2022. Fortunately, the implementation of the Expanded Polystyrene Foam Container and Polystyrene Loose Fill Packaging Ban in 2020 has reduced the quantity of this type of material in the waste stream. It was not anticipated that ending this program would generate larger amounts of waste as this material is very light and there has been progress in alternative packaging solutions.

One other minor change in special recycling programs went into effect February 1 of 2021. As of this date, used motor oil were no longer accepted at the transfer stations. Per NYS law, most vehicle service and vehicle retail businesses must accept used motor oil for recycling at no charge to the public. Due to the many retailers in the planning unit, with several options only a few minutes away from each of the transfer stations and open more frequently, the planning unit felt it necessary to rely on the multiple collection sites created through the law as opposed to the transfer stations. The planning unit put together a list of 15 nearby stores that accept used motor oil and dispersed the information to the public as a flyer.

Where Can I Drop Off Used Motor Oil?

RETHINK WASTE IN MADISON COUNTY

Effective February 1st, 2021, we will no longer accept motor oil at our transfer stations. Per NYS law, most vehicle service and vehicle retail businesses must accept used motor oil from the public for free recycling. Some places may even accept hydraulic & transmission fluids. Call ahead for limitations/restrictions.

Near Buyea Road Residential Station:
- NAPA Auto Parts, Canastota
- Advantage Auto Stores, Canastota
- Walmart Auto Care Center, Oneida
- Advanced Auto Parts, Oneida
- NAPA Auto Parts, Oneida

Near Sullivan Transfer Station:
- Advanced Auto Parts, Chittenango
- NAPA Auto Parts, Chittenango
- O'Reilly Auto Parts, Chittenango
- O'Reilly Auto Parts, Cicero (Border of Bridgeport)

Near Cazenovia Transfer Station:
- Cazenovia Auto Sales & Service, Cazenovia
- NAPA Auto Parts, Cazenovia
- Quality Auto Care of Cazenovia, Cazenovia

Near Hamilton Transfer Station:
- D's Auto, Hamilton
- Advanced Auto Parts, Hamilton
- Small Town Auto Repair, Earlville

For more motor oil drop-off locations, visit:
MadisonCountyRecycles.ny.gov

Other special programs such as the collection of household and vehicle batteries, fluorescent bulbs, mercury thermostats, sharps, tires, white goods and bulk metal at the transfer stations have continued. Whereas in the past the planning unit received free 1-Quart sharps containers from the NYS Department of Health to distribute to residents, the quantity of this free supply has dwindled. The planning unit still receives a few boxes of 1-Quart sharps containers through

this program but has also committed to buying their own to ensure the longevity of the safe syringe disposal program.

Green Waste

The planning unit continues to divert leaves, brush and other green waste from the landfill through collection at each of the four transfer stations. The material is then chipped on site and available to residents as mulch or compost. There have been no changes to the green waste program practices during the current reporting period, other than methods of reporting which was discussed in Section 1.2.

The planning unit recognizes the importance of diverting other organic material such as food scraps to help reduce the amount of waste going into the landfill. Given the smaller size of Madison County, limited available funding for on-going operations and proximity to nearby organic diversion options, it would not be economically feasible for the county to invest in an on-site organics recovery program. Instead, the County aims to promote backyard composting as an alternative method to diverting food scraps. Section 1.4 goes into further detail on how the planning unit has promoted this goal so far.

As of January 1, 2022, the NYS Food Donation and Food Scraps Recycling Law went into effect, requiring businesses and institutions that generate at least two tons of wasted food per week to donate excess edible food and recycle remaining food scraps if they are within 25 miles of an organics recycler. Leading up to this new law, the planning unit identified potential food waste generators that would be affected by the new law. Due to the distance to nearby organics recyclers, only a handful of sources were directly required to donate excess eligible food. However, the planning unit has encouraged large food waste generators, such as Green Empire Farms, to explore capacity in nearby organics recovery programs in the neighboring counties of Onondaga and Oneida to help divert food waste regardless of being outside the 25 mile radius.

Waste Disposal

The Madison County Landfill is the only active landfill in the county. Currently, the landfill is permitted for 60,000 tons a year, as approved by the DEC. At roughly 60,000 tons per year, the life of the remaining permitted capacity (that is not yet constructed) is 8,919,585 cubic yards of airspace, projecting over 120 years of expected life remaining. The construction of the landfill's newest cell will begin in the Spring of 2023.

The landfill accepts residential, commercial and institutional MSW, C & D debris, along with bio-solids. The landfill operates under a flow control law (**see Appendix B**), directing all waste generated within the county to the landfill for disposal. All County solid waste operations are done in compliance with DEC's Part 360 regulations. Generated solid waste is transported through direct hauling from the source, the Madison County Transfer Stations, or from residue at the MRF. Section 1.2 reviews the amount of waste generated in each of the reporting years.

There have been no major changes to the collection or handling of waste during the current reporting period.

Landfill Leachate and Gas Collection

The landfill includes a leachate collection and removal system that is set up to divert liquids from entering the surrounding environment. The leachate is piped through a primary and secondary collection system where it is stored in the leachate collection pond and then transported to the City of Oneida Wastewater Treatment Plant for proper treatment. In August of 2020, the City of Oneida Wastewater Treatment Plant experienced an upset, requiring the facility to undergo upgrades and restricting leachate intake. Since then, the planning unit has been coordinating transporting additional loads to the City of Rome to properly manage the leachate in the interim. Currently, the planning unit is mainly sending leachate to the City of Oneida Wastewater Treatment Plant and hauling to the City of Rome when necessary.

In addition to diverting leachate, the planning unit installed a landfill gas collection system for both the closed East Side Landfill and the active West Side Landfill. Through this system, methane gas produced by the landfilled organic material decomposing was collected through a vacuum pressure system where it was piped to a flare skid and a Landfill Gas to Energy Plant operated by Waste Management Renewable Energy, LLC. The Landfill Gas to Energy Plant began utilizing methane gas in 2008; it produced up to 1.4 megawatts of electricity and excess heat as byproducts. The excess heat was then piped and used as a heating system for onsite buildings such as Johnson Brothers Lumber wood drying kilns, which were part of the Agricultural and Renewable Energy Park located at the landfill site. Unfortunately, insufficient methane production escalating in October 2021, coupled with low electricity rates, led to Waste Management asking to terminate the agreement to run the Landfill Gas to Energy Plant in February 2022. At the December 13, 2022 Solid Waste Committee meeting, the committee approved the resolution to terminate the agreement, which was then passed by the Board.

Since the transition away from the Landfill Gas to Energy plant, the department has continued to manage the methane gas by flaring it to reduce powerful greenhouse gases from being released into the atmosphere.

1.4 Outreach and Education

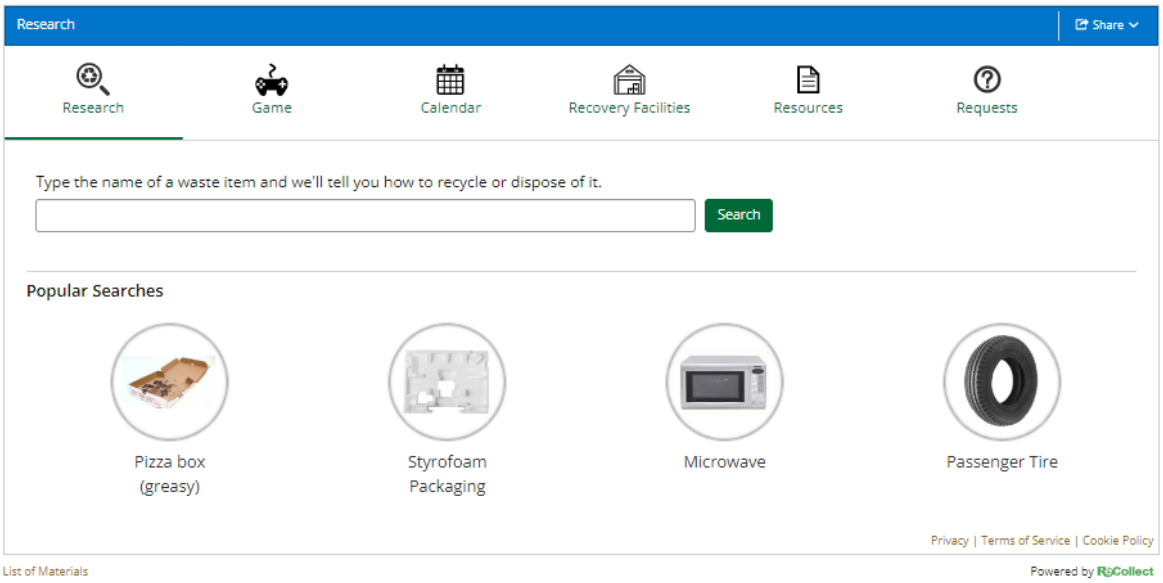
The County continued to fund a full-time recycling coordinator position during the reporting period, allowing more time and energy on recycling, waste reduction and reuse efforts. The County's recycling coordinator provided updated educational materials, program information and presentations to the community to encourage waste diversion and reduction. The recycling coordinator works closely with a multitude of groups including schools, libraries and local organizations such as Rotary Clubs to educate the community. During the reporting period, the

recycling coordinator expanded its outreach and education efforts in a variety of ways.

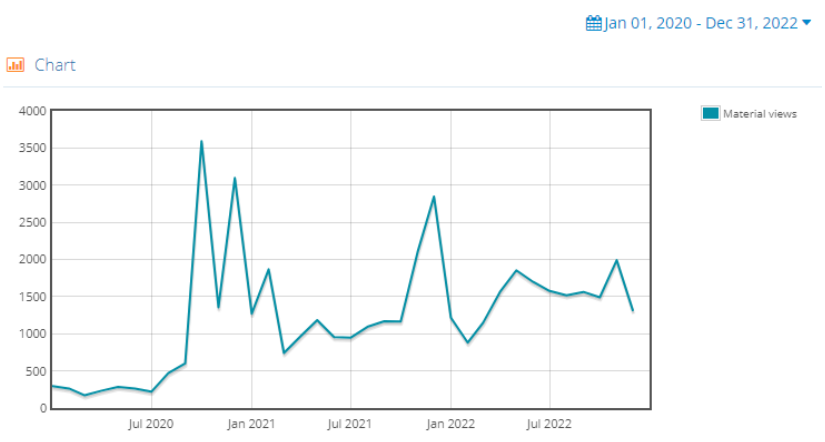
"Rethink Waste in Madison County" Campaign

In 2019, the planning unit invested in new materials including a new website, recycling bins, recycling guides and magnets to give residents the tools they need to recycle properly. These resources (some shown below) continue to be used and highlight the current recycling program. Resources were dispersed throughout the county at town/village offices, libraries and community presentations in order to provide residents with the current recycling information.

In addition to printed resources, the planning unit revamped their website as part of the new campaign. The planning unit added a new search tool in 2019, which allows residents to type in the name of an item to find out how to properly recycle or dispose of the material. The search tool also has tabs for recycling resources, facilities, an event calendar and a request form for tours/presentations.



The online search tool has been a huge asset to the department in providing quick and easy recycling/disposal information on a variety of materials. Residents have searched for almost 45,000 materials during the reporting period. Most commonly searched items have been identified and used in targeted social media posts.



Views	Title
3235	Soda and beer cartons and carriers
1363	Mattress
923	Passenger Tire
687	Shredded paper
624	Propane Tank (20 lbs - empty or partially full)
604	Styrofoam Packaging
591	Air conditioner
574	Hard cover book
492	Television
430	Furniture

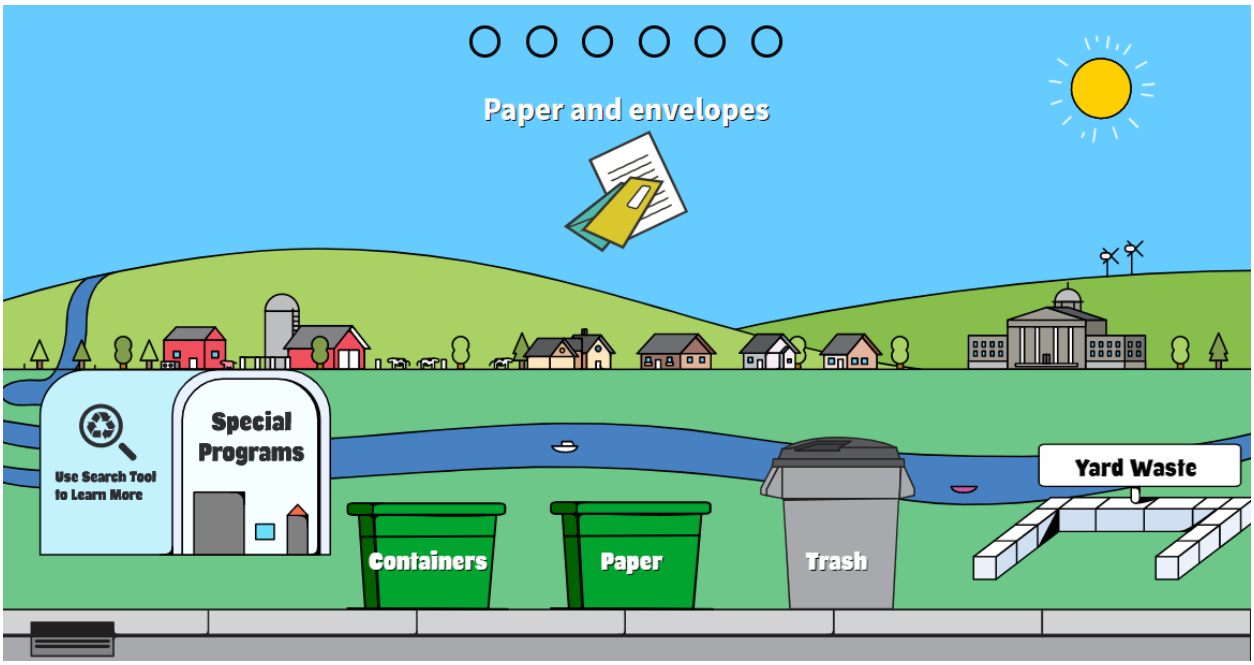
30 Years of Recycling

2020 marked the 30th year of recycling in Madison County. To help celebrate this milestone, the County planned a 'Rethink Waste Challenge' where local K-12 students could submit a video or piece of artwork that promoted recycling education. Unfortunately, the pandemic and abrupt switch to online learning prevented the school competition from being completed.

In addition to the school competition, the County was planning an "open house" to celebrate the recycling milestone. Unfortunately, the COVID-19 pandemic put a halt to many of the events and in-person education efforts but the planning unit was still able to hold a small 30th recycling anniversary celebration with Senator May and recycling center staff, recognizing the accomplishments of the program.

Waste Sorting Game

Despite the loss of in-person events and presentations during the beginning of the pandemic, the County was still able to make new connections within the local school districts. The County promoted their new online recycling and waste sorting game where students and residents could test their recycling knowledge by properly sorting a variety of materials into different streams. The sorting game was tailored to Madison County's program specifically and launched in early March of 2020.



Since the implementation of the Waste Sorting Game in March 2020, the game has had around 1,400 game plays during the reporting period.

Working with Local Colleges and Organizations

The planning unit has continuously worked with the three local colleges-- SUNY Morrisville, Cazenovia College and Colgate University in order to improve recycling on campus. In 2020, the recycling coordinator worked with a Cazenovia College student to assess recycling knowledge on campus, address areas of confusion and improve recycling signage. The survey was a great

tool to identify how the college could improve recycling on campus (**See Appendix C for the results**). In the following year, the recycling coordinator also worked with Morrisville College to help with their recycling signage in dorm recycling rooms and educating their students.

The recycling coordinator has also worked with community groups such as the United Climate Action Network of Cazenovia (UCAN). In 2020, UCAN wanted to improve the recycling of corrugated pizza boxes and created a poster for local pizza shops throughout the community.

In 2021, the planning unit worked with an intern to create educational videos related to electronics recycling, household hazardous waste disposal, and special program recycling for batteries, fluorescent bulbs and sharps. In addition, a local Eagle Scout developed educational recycling boards to be displayed at each transfer station.

The interest and involvement of local organizations helped make the recycling program a success during the reporting period.

The Power of Social Media & the "Rethink Waste Wednesdays" Campaign

Since several in-person events, presentations and tours were put on hold during the beginning of the pandemic, the department turned to social media in order to engage the public through specific weekly posts. There has been great success in reaching a large part of the population through the Department Facebook page and running social media campaigns reminding residents of the two bin recycling system and proper recycling techniques.

The department also launched a social media campaign, "Rethink Waste Wednesdays," where the department would highlight one waste reduction and/or recycling tip each week. The topics varied from electronics recycling, batteries, plastic film, waste prevention tips, the PaintCare program, holiday recycling tips and more. The campaign began on April 6, 2022 and has continued to post weekly since its launch.

"Recycling Reminder" Stickers

The department continued to work with local towns, villages and the City of Oneida to increase recycling participation with the dual-stream recycling system and reduce contamination. One effort to reduce contamination was through "tagging." The planning unit provided "Recycling Reminder" stickers to local municipalities and haulers. Recycling bins full of trash or bagged material were tagged with these stickers and left behind in an effort to educate residents on proper recycling techniques. In addition, hundreds of recycling bins were dispersed to community members to encourage dual-stream recycling and reduce contamination.

Promoting Backyard Composting

As previously mentioned, the planning unit recognizes the importance of diverting organic material from entering the landfill but it is not economically feasible to set up its own organic composting process given the proximity to nearby alternatives and financial challenges. However, the planning unit has been working on implementing backyard composting workshops and educational resources to help residents divert organic material, such as food scraps, at their own home and farms. The planning unit has worked with the Cornell Cooperative Extension (CCE) of Madison County to develop these materials and workshop opportunities.

In collaboration with a local Master Gardener Volunteer, the planning unit developed a "Backyard Composting" website with information on how to set up a compost system at home. In addition, the planning unit has worked with CCE to promote backyard composting workshops for residents. The planning unit has more opportunities to expand backyard composting outreach in 2023.

Special Events

In addition to formal methods of education, the planning unit also hosted document shredding events throughout the reporting period to further disseminate recycling materials and collect confidential documents for recycling.

Outreach Tracking	2020	2021	2022
# of Residents Educated Through Tours, Presentations and Events	191*	500	750
# of Households Attending Shred Events	342	485	240

**Outreach numbers were especially low in 2020 due to the limitations of in-person events.*

Recap

Although COVID-19 disrupted many plans for 2020 and beyond, Madison County was still able to form new connections in the community and make progress on the education and outreach of their local recycling program. The planning unit was able to reach various residents through social media campaigns, newspaper ads, flyers, events and more.

1.5 Compliance with Local Recycling Laws

In an effort to enforce local disposal and recycling laws, the County has continued to employ a part-time Enforcement Officer who is responsible for ensuring compliance within the planning unit. The Enforcement Officer follows up on illegal dumping, the transporting of county generated waste to out-of-county facilities, improper sorting of recyclables and more. The compliance efforts are based on Madison County's Local Law 3 of 2004 (**See Appendix B**).

The Enforcement Officer conducts an investigation as necessary and reports their findings to the County. When appropriate, the Enforcement Officer distributes fines to those violating laws such as the flow control and mandatory source-separation of recyclables law.

In addition, the County has implemented fines within the waste and recycling system. In order to enforce proper collection, the planning unit can fine haulers if they bring in prohibited items to the landfill or if the recycling load contains a large amount of contamination (over 20% visual contamination of the load). The fines encourage haulers to educate those they service about proper disposal regulations in order to avoid any incurred fees. From 2020 to 2022, the contaminated recycling fee charges were $80/Ton, $128/Ton and $128/Ton, respectively. In 2021 and 2022, the contaminated recycling fees were increased to the current disposal rates to help incentivize compliance.

Several haulers were charged a contaminated recycling fee during this planning period when recycling loads exceeded the 20% visual contamination threshold, generating several thousand dollars in fees over the three years. However, the majority of recycling contamination enforcement came in the form of outreach. The managers at the MRF worked closely with the Recycling Coordinator to identify haulers and specific businesses that were mixing recyclables in the County's dual-stream system and incorporating an excessive amount of non-recyclables in the loads. 2021 saw 19 documented instances of excessive contamination whereas 2022 saw 15

instances. These were tracked and recorded from a variety of haulers and locations. Depending on the hauler's route and where the load was coming from, the Recycling Coordinator worked with both the haulers and identifiable businesses to reduce contamination. Recycling reminder stickers, recycling magnets and department brochures were made available to all. In most instances, haulers and businesses were receptive to the feedback and worked to improve their recycling collection methods. In reoccurring instances of contamination from the same hauler and truck routes, the recycling contamination fee was applied to the load. The County made a strong effort to educate first, then enforce monetarily when appropriate.

In addition to recycling enforcement, the County also implemented fines relating to prohibited items that were disposed of in the landfill. The landfill unacceptable waste fee for prohibited items remained at $25/item throughout the past three years. During this time, over 1700 prohibited items were identified, generating over $43,000 in fees.

Overall, the County worked closely with haulers, businesses, the MRF and its Enforcement Officer to encourage compliance with the planning unit's solid waste and recycling programs.

1.6 Obstacles

One of the most prominent and unexpected obstacles of the reporting period was the COVID-19 pandemic. Not only did the pandemic disrupt in-person outreach and education, it also completely shifted the consumer habits to favor more single-use and disposable items. The pandemic also messed with the supply chain, making it difficult to find certain products within stores. This made it extremely difficult to promote waste reduction as many households were stressed financially, mentally and physically.

Because the Madison County Department of Solid Waste is a self-funded program that does not rely on taxpayer money to offset the costs of operation, identifying excess funds to implement programs that do not represent a stable means of income to the program has also proven difficult. Historically, finances have proven an obstacle by limiting how much can be done in any given year. This continues to be the determining factor in the implementation of new programs and continuation of special recycling programs. Hence, the reason why the planning unit had to terminate the expanded polystyrene program. However, the County has been diligent in pursuing funding sources, such as applying for grants related to household hazardous waste programs and recycling coordinator and education expenses, as they become available to obtain additional funds necessary to implement the items outlined in the plan.

Another key challenge to the recycling program is identifying and securing markets for the materials collected. As previous years have shown, the availability of markets shape the decisions in a county's recycling program. The goal is to find reliable markets that are consistent, cooperative and not too costly. Madison County has been fortunate to develop strong domestic partnerships for recyclables but still feels the negative impacts from China's

"National Sword" policy and contamination restrictions. Since 2017, the international recycling system saw unprecedented volatile markets for recyclables with a loss in overall market value that has not fully bounced back since its inception. The planning unit continues to find markets for the recyclables but fluctuating lower values for materials such as hardpack and plastics have significantly impacted the overall recycling system. To help cover the recycling program costs, which are at a net loss even during periods of stronger markets, the planning unit has subsidized it by increasing tipping fees.

Even during these challenging financial times, the planning unit remains dedicated to finding markets for its materials. The following Table shows the breakdown in MRF revenue, expenses and net costs, with fluctuations in recycling market value that varied year to year.

Breakdown of MRF Revenue, Expenses, Net Cost and Cost per Ton					
Year	**Revenue from Marketing Recyclables**	**ARC MRF Billing**	**NET COST**	**Total Tons**	**Per Ton Cost**
2022	$ 394,565.87	$ 905,022.00	$ 510,456.13	3,565	$ 143.19
2021	$ 407,303.54	$ 814,655.00	$ 407,351.46	3,729	$ 109.24
2020	$ 221,104.80	$ 889,530.80	$ 668,426.00	3,709	$ 180.22

Recycling markets are a huge obstacle the financial viability of the planning unit's overall recycling program and are kept in mind as the county implements its goals.

Lastly, insufficient methane production and low electricity rates disrupted the original LSWMP objective for methane handling. This led to the termination of the Landfill gas to Energy Plant, resorting to flaring as the sole method of methane handling.

1.7 Status of Adherence to Implementation Schedule

Overall, the planning unit was able to continue the successful implementation of the 2020 LSWMP objectives and goals. The following Table outlines each objective and task of the LSWMP along with its current status. Any changes to the implementation schedule are outlined in Section 4.

Planning Unit Objective	Current LSWMP Projection	Project/Task/Milestone	Status / Comments
Solid Waste Operations			
Continue to landfill and manage solid waste from the planning unit	Ongoing	Dispose of non-recyclable and non-hazardous materials generated within Madison County in the landfill	**Successful & ongoing.**
Expand existing landfill capacity for solid waste disposal	2021 -2022	Planning unit plans new landfill cell	**Implemented, in progress.** The planning unit has been working closely with Barton and Loguidice to implement the design and construction on Cell 10. The schedule for the construction of the new cell is on-time (to be completed Fall 2023).
	2023	Planning unit completes construction on the new landfill cell	
	2024 - Ongoing	Begin filling new landfill cells	
Collect methane from landfill	Ongoing	Planning unit continues to utilize and monitor the landfill gas to energy plant	**Terminated. Now continuously flaring gas.** See Section 1.3 & Section 4
Utilize transfer stations to collect residential waste and recyclables	Ongoing	Continue to operate residential transfer stations	**Ongoing.** In 2021, Cornerstone Engineering was hired to study the long-term sustainability of the landfill operations and evaluating alternatives to improve the financial sustainability of the solid waste management system. No changes have been made at this time but consideration for other options are being explored. See Appendix A
		Evaluate improvements and efficiency	
Monitor solid waste management program & submit annual reports	Ongoing	Oversee landfill capacity to project long-term capacity & submit Annual Reports for solid waste and recycling facilities	**Successful & ongoing.**

Recycling Program			
Continue to process & market dual-stream recyclables	Ongoing	Collect, process and bale mandatory recyclables at the County's MRF. Evaluate current recycling markets & pursue outlets for recyclables	**Overall successful & ongoing.** The Arc of Madison Cortland has continued to operate the MRF since the beginning of the mandatory recycling program in 1990. The County continues to market materials amidst unstable markets and pricing. They also evaluate the list of mandatory recyclables to reflect current recycling market standards, although no materials were added during the reporting period due to infeasibility. The planning unit did have to end the expanded polystyrene program as outlined in Section 1.3
Improve recycling tracking and reporting	Ongoing	Weigh recycling trucks for better tracking	**Successful & ongoing.**
	2021 - 2024	Generate comprehensive recycling overview for more accurate recycling data	**Not yet implemented.**
	2021 - 2023	Explore financial changes in hauler tipping fees to incentivize bringing recyclables to the planning unit's MRF	**Implemented in each year's Fee Schedule.**
Evaluate current recycling program	2023 - 2024	Review other recycling alternatives	**Ongoing.** This was included in the Cornerstone Engineering report.
	2021-2022	Inventory existing reuse and product take-back programs	**Ongoing.**
	Ongoing	Promote reuse and product take-back programs	**Successful and ongoing**. Planning unit helped set up three PaintCare sites in the County and promoted the PaintCare program.
Organics Management			
Continue current yard waste program	Ongoing	Continue operation and education of the yard waste program to divert leaves, brush and other green waste.	**Successful & ongoing.** See section 1.3
Expand organic diversion to include backyard composting	Ongoing	Develop backyard composting resources and promote information through workshops and events	**Implemented.** See section 1.3 & 1.4
Explore other organics diversion programs	2021 - 2022	Identify local large generators of organic wastes and availability of local waste diversion efforts	**Implemented.**

Education and Outreach			
Continue flow control program & review local law	Ongoing	Enforce Local Flow Control Law & change as needed	**Successful & ongoing.** See Section 1.5
	2021 - 2022	Reach out to local grocery stores regarding clear and white plastic bag options	**Not implemented yet.** Pandemic disrupted the supply chain for many items, pushing the timeline back.
Increase recycling participation / awareness and lower contamination rates	Ongoing	Expand / continue education and outreach with county's recycling programs	**Successful & ongoing.** See section 1.4.
	Ongoing	Identify and address sources of contamination at the MRF	See section 1.4.
Special Recycling Programs / Partnerships			
Oversee special recycling programs and expand partnerships	Ongoing	Expand / continue programs for HHW, electronics, sharps, unused medications and special wastes at transfer stations	**Expanded & ongoing.** The County continues to contract with partner facilities such as LOJO Technology and Miller Environmental Group, Inc. to handle electronics and HHW, respectively. In addition, the County worked with PaintCare representatives to set up three in-county collection sites for leftover paint. Unfortunately, unstable markets and financial feasibility led to the termination of the expanded polystyrene collection program.
Research financial opportunities to support recycling programs	Ongoing	Apply for grants to support recycling programs.	**Successful & ongoing.**
Support State and Federal Legislation & stay involved	Ongoing	Attend solid waste and recycling conferences	**Successful & ongoing.**

Section 2 – Waste and Recyclables Data

The following section identifies the locations that accepted waste and recyclables from the planning unit during the reporting period.

2.1 Waste and Recycling Facilities

REPORT YEARS: 2020-2022	PLANNING UNIT NAME: Madison County	
ADDRESS: P.O. Box 27 Wampsville, NY 13163		COUNTY: Madison
CONTACT PERSON: Amy Miller	EMAIL: Amy.miller@madisoncounty.ny.gov	TELEPHONE NUMBER: 315-361-8408

LIST ALL FACILITIES IN YOUR PLANNING UNIT FOR WHICH DATA ARE		
	FACILITY NAME	REGISTRATION/PERMIT
1.	Madison County Landfill	7-2538-00011/00005
2.	Cazenovia Transfer Station	27T92
3.	Hamilton Transfer Station	27T90
4.	Sullivan Transfer Station	27T91
5.	Alternatives Recycling Center (The ARC of Madison Cortland)	27M01
6.	LOJO Technology	00392

Madison County is not directly involved in the collection of solid waste or recyclables. The individual municipalities within the County handle the collection process in whatever manner they see fit. Some provide municipal collection while others leave the responsibility for solid waste and recyclables collection to private haulers based on residents preference. Residents who choose not to use the services of a private waste hauler can bring their solid waste and recyclables to one of the County's three satellite transfer stations or the convenience station located across the street from the active County Landfill.

While all waste must come to the Madison County Landfill as part of the county's flow control law, the same is not true for recyclables. Haulers can choose to bring recyclables to the County's MRF or to a different recycling facility. Commercial businesses and institutions can also choose to manage their own recyclables, as often seen in big box stores who manage their own cardboard. This incomplete reporting of recyclables provides a gap in the total amount of recyclables generated within the planning unit.

All waste is brought to the Landfill through direct haul from private haulers or from the transfer stations. Recyclable materials are also brought to the MRF through direct haul or the transfer stations. Residents bring electronic waste to LOJO Technology where it is then sorted and sent to its final destination. Final destinations and quantities are listed by year in Section 2.2.

Amounts shown are based on what was reported in Annual NYSDEC Reports completed by the Madison County Department of Solid Waste and the ARC of Madison-Cortland (**See Appendix D**).

2.2 Waste and Recycling Facilities Data

2020		
Material/Waste Stream	Destination	Tonnage
Commingled Paper	Casella Recycling, LLC 13 Gibson Rd. Scarborough, ME 04074	2640.1
Gaylord Boxes	N H Kelman 41 Euclid St. Cohoes, NY 12047	4.03
Clear Glass	TOMRA NY Recycling 1 Corporate Dr. Suite 710 Shelton, CT 06484	147.35
Aggregate Glass	Madison County Landfill	407.69
Aluminum Cans and Foil	Conti Metals Inc. 1661 46th St. Brooklyn NY 11204	20.75
Tin and Steel Cans	Upstate Shredding P.O. Box 420 Owego, NY 13827	135.99
Deposit Cans/Bottles	Caz Cans, LLC 2439 Route 20 E Cazenovia, NY 13035	17.65
Commingled Plastic (#1-7)	N H Kelman 41 Euclid St. Cohoes, NY 12047	22.13
	Trigon Plastics 17 Orlan Rd. New Holland, PA 17557	273.21
Office Paper	Confidata 64 N Genesee St, Utica, NY 13502	7.31
Bulk Metal	Upstate Shredding P.O. Box 420 Owego, NY 13827	773.37
Batteries and Bulbs	E-Waste+ 7318 Victor Mendon Rd, Victor, NY 14564	6.70
	Interstate Batteries 393 N Collingwood Ave, Syracuse, NY 13206	8.54
	Call2Recycle	1.39
E-Waste	Maven 1450 Lyell Ave, Suite 5 Rochester, NY 14606	89.87
	Sun King 4 Owens Road Brockport, New York 14420	11.42
Brush, Branches, Trees & Stumps	Chipped on-site for public use	334.78
Yard Waste	Composted on-site for public use	249
Textiles	Salvation Army 677 South Salina Street Syracuse NY 13202	147.3
Miscellaneous Cooking & Waste Oil	JC Rendering 201 Jackson Rd Frankfort, NY 13340	0.23
Construction & Demolition Debris	Madison County Landfill	6,618.53
Municipal Solid Waste	Madison County Landfill	42,075.32
Biosolids	Madison County Landfill	5532.56
Tire Chips	Madison County Landfill (Maintenance Material)	154.57
	Nucor Steel 25 Quarry Rd, Auburn, NY 13021	168.05

2021		
Material/Waste Stream	Destination	Tonnage
Commingled Paper	Casella Recycling, LLC 13 Gibson Rd. Scarborough, ME 04074	2774.21
Gaylord Boxes	N H Kelman 41 Euclid St. Cohoes, NY 12047	8.98
Clear Glass	TOMRA NY Recycling 1 Corporate Dr. Suite 710 Shelton, CT 06484	132.75
Aggregate Glass	Madison County Landfill	374.78
Aluminum Cans and Foil	Conti Metals Inc. 1661 46th St. Brooklyn NY 11204	23.21
Tin and Steel Cans	Ekman Group, 1800 Route 34Building 4, Suite 401, Lakewood, NJ 07719	44.72
	TMS International LLC. 1155 Business Center Dr #200, Horsham, NJ 19044	23.44
	N H Kelman 41 Euclid St. Cohoes, NY 12047	23.51
	Upstate Shredding P.O. Box 420 Owego, NY 13827	23.56
Deposit Cans/Bottles	Nickleback Redemption 379 Stafford Ave, Waterville, 13480	9.10
	Caz Cans, LLC 2439 Route 20 E Cazenovia, NY 13035	8.63
Commingled Plastic (#1-7)	N H Kelman 41 Euclid St. Cohoes, NY 12047	179.16
	Trigon Plastics 17 Orlan Rd. New Holland, PA 17557	22.28
	Conti Metals Inc. 1661 46th St. Brooklyn NY 11204	68.13
Office Paper	Proshred 6067 Corporate Dr, East Syracuse, NY 13057	7.88
	Confidata 64 N Genesee St, Utica, NY 13502	2.89
Bulk Metal	Upstate Shredding P.O. Box 420 Owego, NY 13827	613.5
Batteries and Bulbs	NLR 250 Main St. East Windsor, CT 06088	6.27
	Interstate Batteries 393 N Collingwood Ave, Syracuse, NY 13206	6.55
	Call2Recycle	1.25
E-Waste	SunnKing 4 Owens Road Brockport, New York 14420	131.47
Brush, Branches, Trees & Stumps	Chipped on-site for public use	1081.46
Yard Waste	Composted on-site for public use	143.19
Textiles	Salvation Army 677 South Salina Street Syracuse NY 13202	69.8
Miscellaneous Cooking & Waste Oil	JC Rendering 201 Jackson Rd Frankfort, NY 13340	0.4
Construction & Demolition Debris	Madison County Landfill	8,237.10
Municipal Solid Waste	Madison County Landfill	42,728.33
Biosolids	Madison County Landfill	6640.28
Tire Chips	Madison County Landfill (Maintenance Material)	110.82
Styrofoam	Eco Development 123 E Main St. Mason, OH 45040	7.9

2022		
Material/Waste Stream	Destination	Tonnage
Commingled Paper	Casella Recycling, LLC 13 Gibson Rd. Scarborough, ME 04074	2528.51
Gaylord Boxes	N H Kelman 41 Euclid St. Cohoes, NY 12047	6.81
Clear Glass	TOMRA NY Recycling 1 Corporate Dr. Suite 710 Shelton, CT 06484	125.00
Aggregate Glass	Madison County Landfill	331.47
Aluminum Cans and Foil	Conti Metals Inc. 1661 46th St. Brooklyn NY 11204	20.4
Tin and Steel Cans	Ekman Group, 1800 Route 34 Building 4, Suite 401, Lakewood, NJ 07719	23.62
	TMS International LLC. 1155 Business Center Dr #200, Horsham, NJ 19044	22.42
	The Remm Group, 217 Terrace Hill St, Suite B10 Bradford, ON	23.16
	Upstate Shredding P.O. Box 420 Owego, NY 13827	47.23
Deposit Cans/Bottles	Nickleback Redemption 379 Stafford Ave, Waterville, NY 13480	21.28
Commingled Plastic (#1-7)	N H Kelman 41 Euclid St. Cohoes, NY 12047	110.50
	Trigon Plastics 17 Orlan Rd. New Holland, PA 17557	202.16
	The Remm Group, 217 Terrace Hill St, Suite B10 Bradford, ON	42.81
	Hamilton Polymers Company 3040 78th Ave SE 1445 Mercer Island, WA	45.45
Office Paper	Proshred 6067 Corporate Dr, East Syracuse, NY 13057	5.00
Bulk Metal	Upstate Shredding P.O. Box 420 Owego, NY 13827	678.35
Batteries and Bulbs	NLR 250 Main St. East Windsor, CT 06088	8.31
	Interstate Batteries 393 N Collingwood Ave, Syracuse, NY 13206	7.85
	Call2Recycle	1.81
E-Waste	Sunnking 4 Owens Road Brockport, New York 14420	117.98
Brush, Branches, Trees & Stumps	Chipped on-site for public use	402.88
Yard Waste	Composted on-site for public use	371.29
Textiles	Salvation Army 677 South Salina Street Syracuse NY 13202	83.71
Miscellaneous Cooking & Waste Oil	JC Rendering 201 Jackson Rd Frankfort, NY 13340	1.46
Construction & Demolition Debris	Madison County Landfill	7,139.81
Municipal Solid Waste	Madison County Landfill	42,312.77
Biosolids	Madison County Landfill	6,493.02

Tires	SGS Recovery LLC 4870 Packard Rd, Niagara Falls, NY 14304	124.83
	Geiter Done of WNY Inc. 300 Greene St, Buffalo, NY 14206	278.03
Ink Cartridges	Evolve Recycling	0.24

Section 3 – LSWMP Section Updates

As previously mentioned in Section 1.3, the planning unit is currently evaluating options to achieve the long term goal of financial stability and sustainability by working on a Request for Proposals for the Operation and Maintenance of the Madison County Landfill. The County continues to collect more information and review the options to make the best informed decision possible. For the reporting period, there were no major changes to the current solid waste management system. Should any changes go into effect, the County will update the SWMP accordingly to reflect the current status in the next report.

The planning unit has not implemented any programs that deviate from the adopted 2021 SWMP during the reporting period. The planning unit intends to address all of the items identified in the implementation schedule as time and budget allows. Any changes to the proposed implementation schedule are addressed in the next section.

Section 4 – Revised Implementation Schedule and Waste Projections

The revised implementation schedule is outlined below with the original task/objective, the revised task with corresponding comments and an updated timeframe, which includes the additional two years under the requested extension.

Revised Implementation Schedule for the Madison County Solid Waste Management Plan		
Task	**Revised Task / Comments**	**Updated Timeframe**
Planning unit continues to utilize and monitor the landfill gas to energy plant	As discussed in section 1.3, landfill gas system will continue to be monitored and methane gas will be flared. The Landfill Gas to Energy Plant is currently terminated.	Ongoing
Generate comprehensive recycling overview for more accurate recycling data	The planning unit was not able to implement this task yet but has started to compile a recycling survey to send out to businesses within the County to better establish recycling rates.	Revised timeline of 2023-2025
Reach out to local grocery stores regarding clear and white plastics bag options.	The pandemic disrupted supply chains, making it difficult to find certain products.	2023-2024

Madison County Local Solid Waste Management Plan
2021-2032

Program Strategy	*Task Name*	2021 H1	2021 H2	2022 H1	2022 H2	2023 H1	2023 H2	2024 H1	2024 H2	2025 H1	2025 H2	2026 H1	2026 H2	2027 H1	2027 H2	2028 H1	2028 H2	2029 H1	2029 H2	2030 H1	2030 H2	2031 H1	2031 H2	2032 H1	2032 H2
LSWMP																									
1) Finalize new LSWMP	Planning unit incorporates DEC comments and submits revised draft to DEC for review																								
	Planning unit receives additional feedback & approval from DEC																								
	Planning unit presents new plan to County Board for approval and adopts new SWMP																								
2) Carryout goals of LSWMP	Planning unit operates under new LSWMP from 2021-2032																								
	Planning unit evaluates progress and success of identified SWMP goals																								
Solid Waste Operations																									
1) Landfill and manage solid waste from the planning unit	Planning unit continues to dispose of non-recyclable and non-hazardous materials in the existing landfill cells																								
2) Expand existing landfill capacity for solid waste disposal	Planning unit begins to plan new landfill cells for expansion																								
	Planning unit completes construction on the new landfill cells																								
	Planning unit begins filling new landfill cells																								
3) Collect methane from landfill	Planning unit continues to monitor and flare methane gas.																								
4) Utilize transfer stations to collect residential waste and recyclables	Planning unit will continue to operate transfer stations for the collection of residential waste and recyclables under a pay-as-you-throw system																								
	Evaluate improvements and efficiency of residential drop off procedures																								
5) Submit annual reports	Planning unit will continue to submit annual reporting on solid waste and recycling facilities																								
6) Monitor solid waste management program	Planning unit oversees landfill capacity utilized each year to project long-term capacity																								
Recycling Program																									
1) Continue to process dual-stream recyclables	The Arc of Madison Cortland collects, processes and bales mandatory recyclables at the County's MRF on behalf of the planning unit																								
	Planning unit renews MRF contract with the Arc of Madison Cortland																								
2) Market recyclables	Planning unit will pursue on-going outlets for recyclable material																								
3) Analyze recycling markets	Planning unit will evaluate current recycling markets and consider new methods and materials for recovery																								
4) Review local law	Planning unit will review and update the local law as necessary																								
5) Improve recycling tracking & reporting	Planning unit will continue to weigh recycling trucks for better tonnage tracking and to identify areas that need recycling outreach																								
	Planning unit will generate a comprehensive recycling overview by reaching out to local businesses, schools, institutions and haulers for recycling data																								
	Planning unit will explore financial changes in hauler tipping fees to further incentivize haulers to bring their recyclables to the planning unit's MRF																								
6) Evaluate current recycling program	Planning unit will review alternatives such as C&D recycling and plastics to oil as needed and as resources and feasibility is available																								
	Planning unit will inventory existing reuse and product take-back programs																								
	Promote reuse and product take-back programs to residents and businesses																								

Madison County Local Solid Waste Management Plan
2021-2032

Program Strategy	*Task Name*	2021 H1	2021 H2	2022 H1	2022 H2	2023 H1	2023 H2	2024 H1	2024 H2	2025 H1	2025 H2	2026 H1	2026 H2	2027 H1	2027 H2	2028 H1	2028 H2	2029 H1	2029 H2	2030 H1	2030 H2	2031 H1	2031 H2	2032 H1	2032 H2
Organics Management																									
1) Continue current yard waste program	Planning unit will continue operations of the County yard waste program which diverts leaves and brush																								
	Planning unit will produce a useful by-product available to planning unit's residents through the yard waste program																								
	Recycling Coordinator provides continuous education to residents and businesses on the yard waste program to increase participation																								
2) Expand organic diversion to include backyard composting	Recycling Coorinator develops backyard composting resources and workshops to tackle organic food scrap waste																								
	Recycling Coordinator offers and promotes backyard composting workshops to residents through events and presentations																								
3) Explore other organics diversion programs	Planning unit identifies local large generators of organic waste such as Green Empire Farms and determines available tonnage																								
	Planning unit works with identified generators to explore availability and feasibility of local waste diversion efforts																								
	Planning unit determines level of involvement to support large generators organics management programs																								
	Planning unit monitors new opportunities for organics management programs																								
Education & Outreach																									
1) Continue flow control program	Planning unit's Director and the Enforcement Officer enforce local flow control laws																								
	Reach out to Madison County grocery stores regarding clear and white plastic bag options for residents.																								
2) Increase Recycling Participation and Lower Contamination Rates	Recycling Coordinator offers continuous education and publicity on proper recycling to residents and encourages compliance with county's recycling programs																								
	Recycling Cooridnator analyzes data from outreach, program observations and MRF contamination to plan targeted recycling education campaigns																								
	Recycling Coordinator promotes recycling campaigns through social media to highlight specific materials such as HDPE cardboard and PET																								
	Recycling Coordinator identifies and addresses sources of contamination in the MRF																								
	Recycling Coordinator develops and maintains a list of local school districts and college/university contacts along with their waste handling practices to identify areas for improvement																								
	Recycling Coordinator identifies potential partnerships, collaborations or grant opportunities to increase recycling participation within schools and colleges																								
	Recycling Coordinator offers recycling programming through assemblies and class presentations/tours for schools/colleges																								
	Recycling Coordinator expands recycling outreach efforts to local organizations, events and businesses																								
	Recycling Coordinator maintains department's website and educational materials with accurate recycling information																								
	Recycling Coordinator works with local haulers to increase recycling participation and help haulers educate residents about local recycling rules through 'recycling reminder' stickers and program resources																								

Madison County Local Solid Waste Management Plan
2021-2032

Program Strategy	*Task Name*	2021 H1	2021 H2	2022 H1	2022 H2	2023 H1	2023 H2	2024 H1	2024 H2	2025 H1	2025 H2	2026 H1	2026 H2	2027 H1	2027 H2	2028 H1	2028 H2	2029 H1	2029 H2	2030 H1	2030 H2	2031 H1	2031 H2	2032 H1	2032 H2
Special Recycling Programs																									
1) Continue special recycling programs	Planning unit continues to oversee and promote special programs such as the electronic waste program, household hazardous waste program, sharps collection program, unused medication program and evaluates program efficency and feasibility																								
2) Research financial opportunities to support recycling programs	Apply for grant funding to support recycling programs such as the household hazardous waste grant and the municipal waste reduction and recycling program grant																								
3) Expand partnerships and collaborations for special recycling programs	Explore collaboration opportunities with other partners to oversee special waste programs																								
4) Support State and Federal legislation	Planning unit will support initiatives designed to reduce waste such Extended Producer Responsibility legislation																								
Partnerships																									
1) Increase hauler participation	Planning unit will maintain ongoing communication with local haulers about permit requirements and recycling program rules																								
2) Identify sources of contamination	Planning unit will maintain ongoing communication with the MRF to observe common contaminants and identify areas of education and outreach																								
3) Increase recycling awareness	Planning unit will maintain ongoing communication with towns, villages and the City of Oneida to promote special events and recycling resources through their social media and clerk offices																								
4) Continue partnership with Miller Environmental Group to oversee HHW collection	Planning unit renews contract with Miller Environmental Group to oversee the collection of HHW at their Syracuse facility																								
5) Evaluate electronic waste program	Planning unit tracks changes in the electronic waste tonnage and researches opportunities to support and fund the residential e-waste collection program																								
	Planning unit reviews and renews contract with LOJO Technology/the Arc of Madison Cortland to oversee e-waste collection																								
6) Support local syringe and pharmaceutical take-back programs	Planning unit contacts State's Expanded Syringe Access Program to explore options for funding of sharps program and costs of sharps containers																								
	Planning unit and local pharmacies discuss setting up their own sharps container program for residents with used needles																								
	Planning unit reaches out to medical community for input on how to continue sharps collection																								
7) Stay involved in local, statewide and national conversations regarding solid waste management	Attend solid waste and recycling conferences such as NYSAR3 and the NY Federation.																								

Projections for 2023-2032

Adjusted waste and recycling projections, found in Appendix E, have been updated and now reflect projections through 2032, as required under the two year planning period extension. These projections show the breakdown of materials each year between 2020 and 2032 and are different than what was previously outlined in the original LSWMP for a few different reasons.

First, the MSW diverted numbers for the years 2020, 2021 and 2022 were updated with reported data collected by the planning unit. These numbers are no longer projections and currently reflect the tonnages captured for each material in the given year. However, it is important to note that while the County has flow control over solid waste generated, the same is not true for recyclable materials. Some industries, such as manufacturing, agriculture and certain haulers, choose to handle recyclables through their own reuse process. Therefore, some data may be unavailable, giving the County an incomplete look at the total amount of materials recycled for both the completed and projected years.

Over the last two years, the County has not generated more than 50,000 tons of MSW (including recyclables) per year. This number is not expected to increase as many manufacturers are continuing to opt for lighter plastics in the packaging and production of goods and the population of Madison County is expected to be relatively stagnant/declining as shown in the 2020 Census. Therefore, the amount of MSW generated each year is expected to remain the same or even decline due to the declining population, given no changes in flow control laws or otherwise. This is also reflected in the updated waste projections found in Appendix E.

Cazenovia College closing could potentially have an impact on the waste generated; it is unknown at this time who or what enterprise may buy the facilities.

Appendix A

Madison County Solid Waste Management System Assessment – RFQ 121

Recommendations for Improving Long Term Sustainability

February 16, 2023

209-4223194

PRESENTED TO

Madison County Department of Solid Waste
6663 Buyea Road
Canastota, NY 13032

SUBMITTED BY

Cornerstone Engineering and Geology, PLLC
100 Crystal Run Road, Suite 101
Middletown, NY 10941

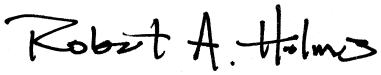
P +1.877.294.9070
F +1.877.845.1456
tetratech.com

REPORT CERTIFICATION

The material and data in this report were prepared under the supervision and direction of the undersigned.

February 16, 2023

Marcus Scrimgeour, PE — Date
Senior Engineering Manager



February 16, 2023

Robert A. Holmes, PE — Date
Client Manager

EXECUTIVE SUMMARY

Solid Waste Program Evaluation Goals and Approach

The Madison County Department of Solid Waste (County) implements a solid waste program within Madison County, New York. The County's solid waste program includes ownership and operation of:

- a municipal solid waste (MSW) landfill;
- a material recovery facility (MRF), with operations contracted to Madison-Cortland Chapter, NYSARC, Inc. (ARC); and,
- four (4) solid waste transfer stations/residents' convenience centers.

The County is expected to fund the solid waste program activities entirely with revenue received via those same activities, including landfill tipping fees, MRF material sales and resident punch card sales. However, such revenues have historically not been sufficient to cover solid waste program costs, resulting in annual budget shortfalls and requiring the County to draw from capital reserve funds. Further, the County has occasionally needed to assume debt to complete significant projects, such as a landfill expansion and construction of a pipeline to convey landfill leachate to the wastewater treatment plant.

The County retained Cornerstone Engineering and Geology, PLLC (Cornerstone) to perform an evaluation of the County's solid waste program and identify potential options to improve financial performance of the solid waste program, with a goal of balancing overall revenues and costs. This evaluation included the following:

- **an existing conditions assessment** including visits to the solid waste program facilities and meetings with County staff, calculation of the true cost of services provided under the solid waste program in comparison to current user fees, and review of current solid waste program reserve funds and potential impacts from impending regulations;
- **an alternatives analysis** identifying and analyzing alternatives to improve the long-term financial sustainability of the solid waste program, including impacts on finances, operations, provided services, environment and other issues; and,
- **identification of recommendations** of alternatives for the County to review and consider to improve the overall performance of the solid waste program.

Solid Waste Industry – Market Drivers

Waste disposal capacity in New York State (NYS) is in decline. Based on current political and regulatory trends, there is limited capability for increase to this capacity (e.g., via new landfills). Without such additional capacity, the state will need to begin to export waste by 2025. As the County owns one of the few remaining operational MSW landfills in NYS, with significant allowable future capacity based on available expansions, the County has a valuable asset. This emphasizes the importance for the County to carefully manage this asset to ensure that it yields financial benefits during operations while also saving enough to cover closure and post-closure costs.

Based on USEPA 2018 data, the average waste generation rate has remained relatively stable between 2000 and 2017, decreasing only slightly from 4.74 to 4.53 pounds per person per day (lb/pp/day). Within the County, the 2021 disposal rate was approximately 4.67 lb/pp/day. The New York State Department of Environmental Conservation (NYSDEC) has established a long-term goal to reduce waste disposal to 0.6 lb/pp/day by 2030. Actual waste disposal data suggests that NYS will continue to utilize landfills well into the future despite NYSDEC's stated goal, and that the value of landfill capacity will continue to grow as NYS landfill capacity shrinks.

From 2000 to 2017, U.S recycling rates increased from 28.5% to 35%, while waste generation and disposal rates remained relatively stable. At the County's MRF, recycling quantities have declined between 2012 and 2021 from

nearly 5,000 tons per year (tpy) to approximately 3,700 tpy, though this trend is in-part due to recyclables being diverted to other MRFs, as well as a decrease in the quantity of newspapers and an industry trend referred to as "thin-walling", or reducing the thickness of packaging materials in items such as water bottles. Still, absent major changes in recycling and other waste diversion rates both within the County and from other contributors to waste filling from outside the County, reliance on the landfill may remain steady or even grow in future years. This places additional emphasis on the value of the landfill asset.

Regulatory Environment

Several regulatory changes are underway in NYS which will have operational and cost impacts on the solid waste program. These changes are summarized as follows:

- **NYS Part 360 Solid Waste Facility Regulations:** NYSDEC issued proposed revisions on May 18, 2022. NYSDEC anticipates making the new regulations effective in the first half of 2023. Changes include:
    - Siting: The proposed regulation could prohibit the landfill (without variance) from vertical or lateral expansion due to nearby residences.
    - Liner Materials: The requirements for the double composite liner system are being amended to require 80-mil HDPE geomembrane in the primary and secondary composite liner systems, in lieu of the current 60-mil HDPE geomembrane requirement. This could increase liner construction costs by $0.10 to $0.25 per square foot.
- **Climate Leadership and Community Protection Act (CLCPA):** CLCPA became law effective January 1, 2020, which directs NYSDEC to determine if the decisions they make (e.g., issued permits) are consistent with the Statewide greenhouse gas (GHG) emission limits. CLCPA currently requires NYSDEC to review applications for new state facility permits, new Title V permits, and significant modifications to both state facility and Title V permits for consistency with the requirements and goals of CLCPA. Future modifications/additions to the air or solid waste permitting should be assumed to result in the need to perform a GHG analysis, which can add complexity and delays to permitting, as well as requirement for GHG mitigation/offset projects (e.g., construction and operation of facilities to divert waste from the landfill), or risk denial of permits for which applications are submitted.
- **Emerging Contaminants:** Recent USEPA health advisory for per- and poly-fluorylalkyl substances (PFAS) and perfluorooctanoic acid (PFOA) at parts per quadrillion levels, as well as new low requirements in nearby states (including New Jersey) may result in discharge concentration limits for these substances. While landfills themselves do not generate PFAS, PFAS are found in every part of landfill operations due to incoming consumer products that contain PFAS at high levels. Regulations could require treatment of leachate to reduce PFAS/PFOA concentrations. The preliminary capital costs for a facility of similar size to that which would be required for the landfill are estimated to be approximately $2 to $2.5 million with operating costs of approximately $250,000 to $300,000 per year, which would be required in addition to existing leachate management/treatment costs.
- **Disadvantaged Communities:** The NYS Climate Justice Working Group is releasing draft criteria under CLCPA to identify disadvantaged communities (DACs). DACs are communities that bear the burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high concentrations of low- and moderate-income households. Currently, the landfill and Buyea Road transfer station may be located within a draft DAC. As a result, the GHG analysis required as part of the CLCPA process for new or modified air permits for these facilities may become more complicated and may increase the potential for the need to perform offset/mitigation of GHG emissions.

Summary of Existing Facilities

A brief summary of the existing solid waste program facilities is as follows:

- **Landfill:**
    - Permitted annual capacity of 60,000 tpy or 375 tons per day (tpd).
    - Accepts MSW, construction and demolition (C&D) debris and sewage treatment sludge/biosolids, and MSW combustion ash, foundry sand and contaminated soil as alternative cover materials.
    - Currently under expansion, with significant capacity for future expansion yielding approximately 120 years of operating life at currently permitted disposal rate.
    - Includes leachate collection system and landfill gas (LFG) collection and control system (GCCS).
    - Current (i.e., 2023) default tipping fee for MSW is $88/ton.
- **MRF:**
    - Has processed an average of approximately 4,000 tons per year of dual-stream, source-separated recyclables from 2012-2021.
    - Received/processed recyclables quantities are currently in decline, likely due to increases in third party curbside pickup/hauling that may bypass the MRF.
    - ARC operations contract cost is approximately $1 million/year
    - County receives between approximately $210,000 and $510,000 per year from recyclables sales.
    - MRF operating costs exceed revenues and as such, the recycling program is effectively funded in part by landfill tipping fees and resident punchcard sales.
- **Transfer Stations:**
    - Operated for in-County residential recyclables and waste drop-off, where such residents have not otherwise opted to contract with a private hauler for curbside collection.
    - County transports the materials collected at the transfer stations to the MRF and Landfill for recycling and disposal, respectively.
    - The Buyea Road facility is currently open 5 days per week and offers other special recycling programs such as batteries, textiles, refrigerant equipment and scrap metals.
    - The other transfer stations in Sullivan, Cazenovia and Hamilton are each only open two days per week (eight hours per day) and offer special recycling programs as well.
    - Transfer stations accept MSW based on a Pay-As-You-Throw (PAYT) punch card system at $20/card; no charge for recyclables drop-off or residential yard waste, along with some other special wastes (i.e., household white goods, yard/green waste, scrap metal, automotive batteries). While this punch card revenues subsidize operation of the transfer stations, they have historically been insufficient to cover all transfer station operational costs.
    - Yard/green waste is banned from disposal in the landfill, and the County collects such waste at the transfer stations for composting. Wood chip and mulch products are available to residents at no charge. Yard waste collected at the Buyea Road, Sullivan and Hamilton transfer stations is composted on site. Yard waste collected at the Cazenovia transfer station is hauled to the Buyea Road transfer station for composting.
- **Landfill Gas-to-Energy (LFGTE) Facility History:**
    - The GCCS currently directs collected LFG to a flare.
    - A LFGTE facility formerly included a CAT 3520 genset, operated by Waste Management Renewable Energy, LLC (WM) for production of electricity.

- The genset was recently shut down due to a combination of low LFG flow and low market-driven electrical sales rates, so all LFG is directed to the flare. The genset was removed from the landfill by WM.

Financial Model

An analysis of the current state of the financial sustainability of the County's solid waste management system was performed to assess the cost (per ton of waste) to operate and fund the future development costs for the landfill (including liner construction and closure and long-term maintenance of the facility). This financial model indicated that, based on current operations of the landfill, it was estimated that $83.88/ton of waste disposed in the landfill is required to fund only landfill operations/expenses (including closure and post-closure costs), and $95.85/ton to fund all current County solid waste program facilities (i.e., landfill, MRF, transfer stations and LFGTE facility), which includes resident PAYT punchcard revenues. The County currently charges $88/ton for most waste disposed at the landfill, leaving a gap between collected revenues and operating expenses.

Alternatives Identification and Evaluation

To improve financial sustainability of the solid waste program while minimizing impacts to the current solid waste tipping fee at the landfill, the following broad alternatives were identified and evaluated:

- Implementation of efficiency measures at each facility;
- Enter a public-private partnership for operation of various facilities within the solid waste program; and,
- Close landfill.

Each of these alternatives is described in additional detail, and a summary of the evaluation is provided, below.

Facility Efficiency Measures

A summary of the efficiency measures considered by facility is listed below:

- **Transfer Stations:**
  - Efficiency measures while maintaining County operation of transfer stations:
    - Eliminate the extra aide/attendant at the Sullivan transfer station.
    - Reduce weekly operating days at the Hamilton, Sullivan and/or Cazenovia transfer stations to one day per week, or 3 days per week at the Buyea Road transfer station.
    - Reduce daily operating hours to 3-4 hours per operating day.
    - Increase punch card fees or transfer station host towns to subsidize operation costs.
  - Close Sullivan and Hamilton transfer stations.
- **MRF:**
  - Efficiency measures while maintaining County operation of MRF (via ARC):
    - Revise ARC contract terms to provide incentive for operational efficiency.
    - Increase MRF recyclables throughput by broadening the service area or potentially expanding recycling education efforts in the County.
    - Change/update recyclables recovery processes and equipment to increase value of recyclables (particularly paper products).
    - Assess recyclables tipping fee to haulers and require PAYT punchcard usage for recyclables at transfer stations.
  - Convert MRF to recyclables transfer facility, which would haul collected recyclables to MRF for processing, thus significantly reducing facility operating costs.

  - Accept only recyclables self-hauled from residences (and haul these to another MRF) and require private haulers to take their collected recyclables to another MRF.
- **LFGTE Facility/Beneficial Use Alternatives:** The existing LFGTE facility is no longer operational, the genset was removed by WM and collected LFG is being combusted in the flare. As such, other options for beneficial use of collected LFG were considered, including:
  - Renewable natural gas (RNG) conversion technology for pipeline injection (through either installed pipeline or trucking to an injection point).
  - On-site leachate evaporation and/or selling the LFG to local partners for direct use in a boiler heating system as medium BTU fuel.
  - If above beneficial use options are infeasible or when beneficial use equipment is not operating, the County remains responsible for combusting LFG in the flare for emissions control and permit compliance.
- **Landfill:**
  - Reduce landfill operating days/hours by closing on Saturdays.
  - Optimize equipment usage by increasing solid waste throughput to the landfill and continue to reduce equipment redundancies.

Public-Private Partnership

While the landfill is one of the smallest operating MSW landfills in NYS with a permitted annual capacity of approximately 60,000 tpy, it has significant available capacity which can be realized via expansion. Still, the County is currently operating the landfill at a net cost of $84/ton. A MSW landfill with waste input of about 250,000 tpy or more under municipal operations may realize a reduced net operating cost of $50-55/ton. A large, private landfill operator could further reduce the net operating cost to $30-$35/ton. Cost reductions are made possible largely via economy of scale.

Via a public/private partnership, the County could establish an agreement with a private waste management firm to take advantage of the economies of scale available to non-municipal entities. Under this agreement, this firm would operate the landfill so that the County would be compensated today for the use of the future permitted landfill capacity. This agreement could even require the firm to perform closure and post-closure care of the landfill, thus releasing the County from future uncertainties. With this said, the firm would likely seek to increase the permitted annual capacity of the landfill and accept waste from outside the County to operate on a more cost-effective basis, which would increase the rate of remaining landfill capacity consumption. As the current estimated landfill life is 120 years, the County would need to reconsider its long-term waste management strategy under a public-private partnership.

For such a partnership, the County should consider an initial agreement term of at least 20 years, with the potential 5-year extensions at mutual interest. At its core, the agreement would require the waste company to pay for operation, maintenance, expansion, closure and long-term post-closure maintenance and monitoring costs for the landfill (including operation of the Buyea Road transfer station). Other items could be included as optional line-items for County consideration, including:

- Management of the County's recyclables;
- Operation of any of the remaining three County-owned transfer stations;
- Beneficial utilization of LFG collected at the landfill;
- Other options as identified by the County.

This agreement could also include other provisions which could address issues such as payment schedules, additional payments for waste acceptance over an agreed threshold, agreement terms renegotiation, stabilized tipping fees for in-County waste and other items.

Overall, data reviewed suggests a public-private partnership between the County and waste company could yield an agreement that allows the County to manage its solid waste program in a financially self-sustaining manner. The specific financial benefit to the County would likely be contingent upon which services (e.g., operation of County transfer stations, recyclables management) are included in the agreement. These benefits would likely be further contingent upon an increase in the permitted annual tonnage limit from 60,000 tpy to about 240,000 tpy, which would reduce the estimated landfill remaining life from 120 years to about 30 years. In addition to any payment negotiated, the County would avoid the cost of running the contracted solid waste operations.

Close Landfill

Under this alternative, the costs were evaluated associated with stopping waste acceptance in 2025 and fully closing the landfill. This would preclude future liner construction costs, but would require costs for final cover installation, post-closure care and repayment of existing debts. Based on the value of the landfill as an asset to the County and the potential high cost of future waste and recyclables management, it is recommended that the County does not close the landfill.

Overall Recommendation

Based on this evaluation, it is recommended that the County prepare a RFP for a public-private partnership to operate the County's solid waste program. This RFP should consider an initial agreement term of at least 20 years, with the potential 5-year extensions at mutual interest. The agreement would require the waste company to pay for operation, maintenance, expansion, closure and long-term post-closure maintenance and monitoring costs for the landfill (including operation of the Buyea Road transfer station). Other items to be included as optional line-items for County consideration in the RFP should include:

- Management of County recyclables;
- Operation of any of the remaining three County-owned transfer stations; and,
- Beneficial utilization of LFG collected at the landfill.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDIX SECTIONS

APPENDICES

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
TS	Transfer Station
CLCPA	Climate Leadership and Community Protection Act
DAC	Disadvantaged Community
MRF	Materials Recovery Facility
ARC	Madison-Cortland Chapter, NYSARC, Inc.
scfm	standard cubic foot per minute
tpd	Tons per day
tpy	Tons per year
RTF	Recycling Transfer Facility

1.0 INTRODUCTION

Cornerstone Engineering and Geology, PLLC (Cornerstone) has been tasked with the evaluation of the Madison County Department of Solid Waste (County) solid waste management system to consider alternative scenarios for future management of operations which would allow the system to operate in a more financially sustainable manner.

To provide a greater understanding as to the challenges facing Madison County and the factors driving not only what approaches were evaluated, but also the outcomes, additional background on the state of the industry in New York is relevant.

1.1 SOLID WASTE INDUSTRY – MARKET DRIVERS

1.1.1 NYS Waste Disposal Capacity

Based on New York State Department of Environmental Conservation (NYSDEC) 2019 data, there were 7 private landfills; 19 County/Municipal landfills; and 10 waste-to-energy (WTE) plants operating within the state. In 2022, one county/municipal landfill closed (Auburn Landfill No. 2) leaving 25 operating landfills and 10 WTE plants. The 2022 total landfill capacity in the state is 11,100,833 tons per year plus 4,203,967 tons per year of WTE capacity for a combined total of 15,304,800 tons of annual disposal capacity. Based on the 2020 data, all but 2.4M tons were utilized in that year.

Over the course of the next 15 years, assuming no expansions or new landfills and continued use of the existing WTE facilities, the available capacity will decrease from 15,304,800 tons to 9,004,807 tons. NYSDEC 2020 disposal data shows that New York disposed of 12,915,727 tons of waste in landfills and combustion facilities. This means that without additional capacity being added, NYS will need to begin to export MSW by 2025. NYSDEC's new solid waste regulations have signaled that it will become increasingly difficult to site new landfill and WTE facilities

Currently, New York City (NYC) exports a large portion of its waste out-of-state by rail and Nassau and Suffolk Counties rely on WTE facilities for the bulk of their waste disposal. This allows Upstate NY landfills to remain an importer of MSW. Because of this it is unlikely that, in the near future, New York will run out of disposal capacity. However, neighboring states, particularly Connecticut and Massachusetts, will continue to haul waste to New York as landfills and WTE facilities in those states close.

Figure 1 - New York State Disposal and WTE Capacity (2021 – 2035)

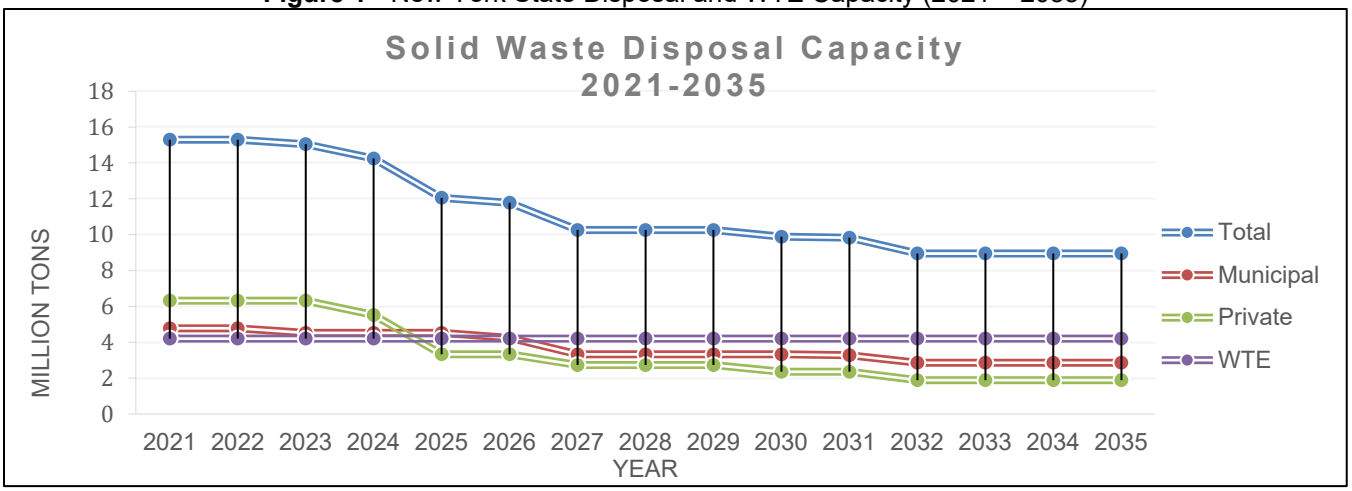


Figure 2 – New York State Landfill Capacity Summary

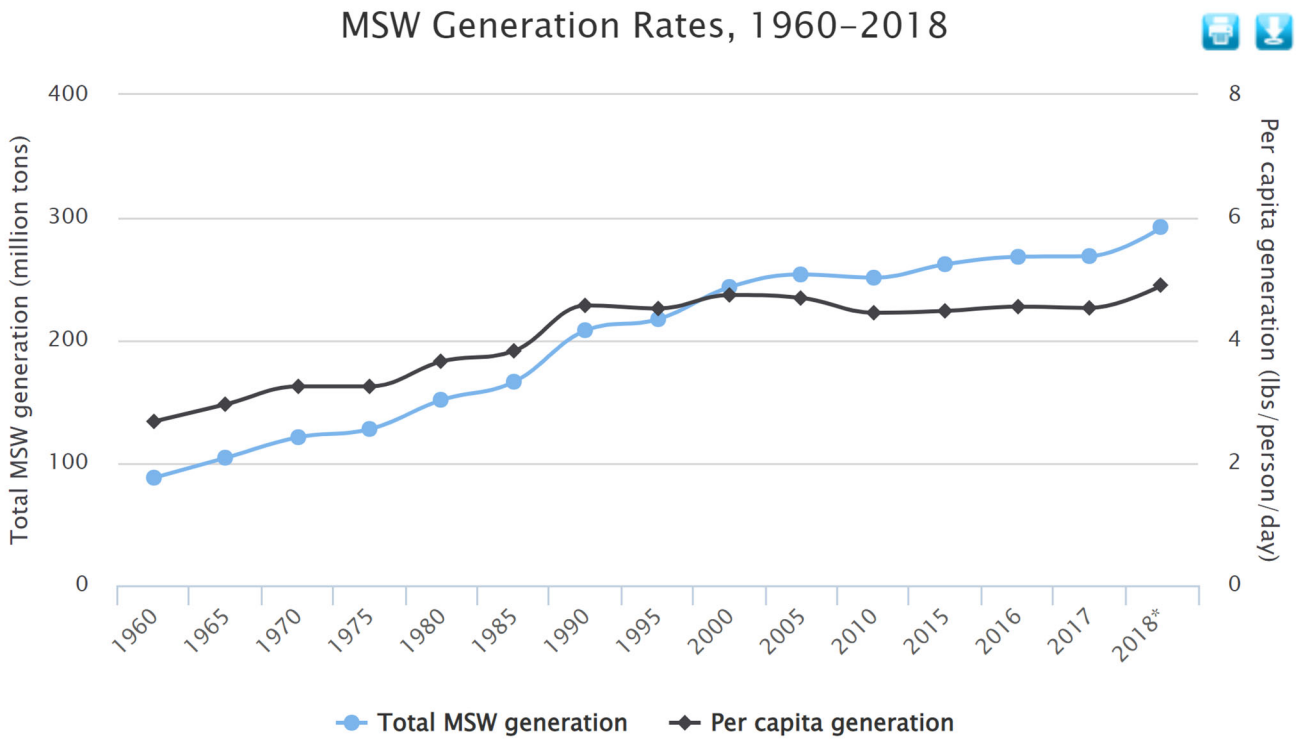
Name	County	2020 WASTE QUANTITY (TPY)	EXISTING ANNUAL PERMIT LIMITS (TPY)	EXISTING & ENTITLED CAPACITY UNDER PERMIT (TONS)	PROPOSED CAPACITY NOT UNDER PERMIT (TONS)	REMAINING YEARS AT CURRENT CAPACITY AND LIMITS (YEARS)
PRIVATELY HELD LANDFILLS						
Allied Waste Niagara Falls Landfill	Niagara	417,084	800,000	2,699,101	0	3
Chaffee Landfill	Erie	510,613	600,000	3,800,000	5,100,000	6
Green Ridge	Saratoga	268,545	375,500	3,532,557	0	9
High Acres Western Expansion Landfill	Monroe	947,985	1,074,500	40,597,151	0	38
Hyland Landfill	Allegany	375,547	465,000	5,214,426	0	11
Modern Landfill	Niagara	806,802	815,000	18,500,000	0	23
Seneca Meadows LF	Seneca	1,738,844	2,190,000	8,520,432	0	4
PRIVATE SUBTOTAL		**5,065,420**	**6,320,000**	**82,863,667**	**5,100,000**	**14**
MUNICIPAL/COUNTY OWNED LANDFILLS						
Chenango County Landfill	Chenango	35,667	41,550	1,338,127	0	32
Cortland County Landfill Westside Extension	Cortland	37,196	44,500	660,899	0	15
Delaware County SWMF	Delaware*	22,699	52,800	519,953	0	50
Madison County West Side Extension LF	Madison	54,226	60,000	7,471,329	0	125
Auburn Landfill No.2	Cayuga	16,327	96,000	0		
Bristol Hill SLF	Oswego	72,319	100,000	2,119,474	0	21
Franklin County Regional Landfill	Franklin	103,758	125,000	2,012,065	0	16
Fulton County Landfill	Fulton	141,124	180,000	6,095,312	0	34
Broome County Landfill	Broome	181,432	232,000	8,900,226	0	38
Clinton County Landfill	Clinton	249,785	250,000	3,967,123	0	16
Development Authority of the North Country Landfill	Jefferson	193,446	250,000	11,928,255	0	48
Colonie (T) SWMF	Albany	253,803	255,840	6,985,892	0	27
Bath Sanitary Landfill	Steuben	158,612	256,700	595,071	5,148,000	2
Albany (City) SWMF	Albany	97,859	275,100	1,335,948	0	5
Ava Landfill	Oneida	306,254	312,000	22,269,578	0	71
Chautauqua Landfill	Chautauqua	263,624	408,000	7,152,155	0	18
Chemung County Sanitary Landfill	Chemung	352,178	417,000	4,478,850	0	11
Mill Seat SLF	Monroe	565,971	598,650	26,017,572	0	43
Ontario County Sanitary Landfill	Ontario	774,415	920,693	5,456,523	0	6
MUNICIPAL/COUNTY SUBTOTAL		**3,880,695**	**4,875,833**	**119,304,352**	**5,148,000**	**26**
TOTAL LANDFILL CAPACITY		**8,946,115**	**11,195,833**	**202,168,019**	**10,248,000**	**19**

* Delaware County recently obtained NYSDEC approval for an expansion that will provide 40-50 years of additional capacity.

1.1.2 Waste Generation and Disposal

Based on USEPA 2018 data, the average waste generation rate has remained relatively stable from 2000 to 2017 decreasing from 4.74 lbs/pp/day to 4.53 lbs/pp/day. In 2018, the amount of MSW generated in the U.S. was 292.4 million tons. The amount recycled was 69.0 million tons and the amount composted was 24.9 million tons and about 17.7 million tons of food were managed by other methods. The amount of MSW combusted in WTE facilities was 34.6 million tons, while the amount of MSW sent to landfills was 146.2 million tons. Based on a 2018 U.S. population of 326.8 million and disposal of 180.8 million tons at landfills or WTE facilities, this equates to a disposal/WTE rate of 3.03 lbs/day/pp.

Figure 3 - National MSW Generation Rates



*The 2018 generation rate was 4.9 lbs/pp/day; this increase was largely attributed to EPA's enhanced for measurement methodology to better account for the ways food waste is managed.

Source: National Overview: Facts and Figures on Materials, Wastes and Recycling | US EPA

According to the NYSDEC 2010 Sustainable Materials Management Strategy for New York State – Beyond Waste report, the NYSDEC established a long-term goal to reduce waste disposal to 0.6 lbs/pp/day by 2030.

While this is an admirable goal, the fact is that it is not likely going to come to fruition within the next 20 years. The NYSDEC 2020 disposal data shows that New York disposed of 12,915,727 tons of waste in landfills and combustion facilities; that equates to a disposal rate of 3.57 lbs/pp/day. In Madison County, the 2021 total disposal at the landfill was 57,607.69 tons; this equates to a disposal rate of 4.67 lbs/pp/day.

The disposal data suggests that people in the U.S. and NY will continue to utilize landfills well into the future and the value of landfill capacity will continue to grow as NYS landfill capacity shrinks.

1.1.3 Madison County Operations

The Madison County operates one of the smallest landfills (and associated solid waste infrastructure) in NY State with an annual permitted disposal capacity of about 60,000 tpy. Only three other NY State landfills have less annual capacity. The County is currently running the landfill at a net operating cost of about $84/ton and subsidizing other solid waste management activities (e.g., recycling) through the tipping fees generation by the landfill To put this in perspective, a large municipal landfill (>250,000 tpy) may have a net operating cost of around $50-55/ton; a large private landfill operator may have a net operating cost of $30-$35/ton.

This is mainly due to two factors. First, a small operation must have a minimum amount of equipment to effectively operate, irrespective of size. Cornerstone took a hard look at the current landfill operations and in the

case of Madison County operations, due to the size of the operation, some equipment appears to be idle for a large portion of the workday. Equipment, such as compactors and dozers are expensive to purchase, maintain, and operate, but a landfill cannot be operated without such equipment.

Secondly, a large operation can take advantage of greater efficiencies of equipment and economies of scale when ordering supplies and services.

1.2 ASSESSMENT APPROACH

With the challenges associated with the financial stability of the County system (e.g., landfill subsidizing other operations), the small-scale cost implications, and the opportunities associates with landfill airspace, several potential approaches presented themselves. These potential approaches – consisting of looking for efficiencies, closing the landfill, or taking advantage of the landfill airspace and operating at a larger scale guided our analyses that are described throughout this report.

To assess the overall system, we first looked at the current state of the facilities integrated in the County's solid waste management system. Cornerstone conducted initial site visits to gather details about each facility including, but not limited to, leachate management at the Madison County Landfill (Landfill), landfill gas (LFG) collection and operation of the recycling facility and transfer stations. Subsequently, Cornerstone attended meetings with the County to discuss data collection and get additional information regarding the existing system and facilities to assist with the analysis. The results of this initial assessment were compiled into a financial analysis that evaluated the solid waste system "cost centers" and calculates the true cost of the services provided as compared to the current user fees (e.g., Landfill tipping fees, resident punch card prices). This assessment also included a review of the current solid waste reserve funds and a projection of how the impending regulations (i.e., organics diversion, Per- and Polyfluoroalkyl Substances (PFAS) regulations and the Climate Leadership and Community Protection Act (CLCPA)) will impact the long-term sustainability of the current solid waste system.

Following the "existing conditions assessment", the second phase of the analysis, the "alternatives analysis included collaboration with the County to identify and analyze potential efficiencies that could improve the long-term financial sustainability of the system. The efficiencies analysis considered the financial impact (cost reductions/revenues), operational impacts (necessary changes), impacts on services to County residents/businesses, other community impacts, environmental impacts, operational and financial challenges and opportunities, potential unintended consequences, as well as actions and resources necessary to implement alternatives.

In addition to looking at potential efficiencies, we also explored the potential of taking advantage of economies of scale within the system. While the landfill may be one of the smallest in the state, it also has one of the longest permitted lifetimes (Figure 1-2) of 122 years. Therefore, we assessed a public/private partnership, which has the greatest potential to increase the size of the landfill operations (gaining efficiencies) by using the permitted airspace over shorter time frame.

Finally, we assessed the implications of closing the landfill – which carries the largest expense (and risk) to the County.

The ultimate goal of the various assessments and alternatives analyses was to identify opportunities that could move the County toward operating more financially stable and self-sustaining system that would successfully function over at least the next 30 years.

1.3 EXISTING CONDITIONS ASSESSMENT

1.3.1 Landfill

The Madison County Department of Solid Waste owns and operates a non-hazardous landfill (Landfill) located in the Town of Lincoln at 6663 Buyea Road, Canastota NY 13032. This property also contains a transfer station (TS) and a materials recovery facility (MRF), which are further described in the following sections. The Landfill operates under a flow control law, which diverts all waste and recyclables generated within the County to County-operated facilities. Waste is transported to the Landfill either through direct hauling from the source, the County transfer stations, or from the County MRF (residuals).

The Landfill is permitted to accept 60,000 tons per year, or up to 375 tons per day, of the following wastes under NYSDEC Permit No. 7-2538-00011/00005 originating within the County:

- Construction and demolition debris
- Mixed municipal solid waste (residential, commercial, and institutional)
- Sewage treatment plant sludge (biosolids)

The Landfill also accepts several out-of-County waste streams including MSW ash from the Onondaga County Waste-to-Energy Facility for daily operating cover, foundry sand from Onondaga County and contaminated soil from nearby planning units as alternative operating cover.

The west side of the Landfill property is being developed for active waste placement, in accordance with the approved drawings set “West Side Landfill Expansion” dated February 2006 and revised in February 2007. Construction at the Landfill has been consistent with the Cell Development Summary table on Sheet No. 8 “Subgrade Plan” of the 2006 permit drawings. Based on current acceptance rates, Cells 8 and 9 of the Landfill are expected to provide an additional three (3) years of life, until 2025. As of January 2021, there were approximately 8,919,585 cubic yards of permitted airspace not yet constructed. This airspace is authorized under the Part 360 permit and includes 433,185 cubic yards of airspace remaining that is already constructed in Cells 8 and 9. Based on the Landfill’s permitted annual waste acceptance rate of 60,000 tons per year, or 74,074 cubic yards per given a historical average waste density of 0.81 tons per cubic yard, the Landfill has an anticipated lifetime on the order of 120 years, or until 2142.

1.3.1.1 Leachate Collection and Removal System

The Landfill contains a leachate collection and removal system (LCRS) which diverts liquids from entering the surrounding areas. The collected leachate is transported via piping through a primary and secondary collection system where it is stored in the on-site leachate collection pond before being transported and treated at either the City of Oneida or City of Rome Wastewater Treatment Plant.

1.3.1.2 Landfill Gas

The Landfill contains a Landfill Gas Collection and Control System (GCCS) that collects landfill gas (LFG) from the closed East Side Landfill and the active West Side Landfill and directs the LFG to an on-site flare. LFG from the Landfill was historically used for the generation of electricity through combustion in a CAT 3520 genset operated by Waste Management Renewable Energy, LLC (WM). However, the genset was recently shut down and removed due to low LFG flow and electricity sale rates. LFG is currently being directed to the onsite flare for combustion.

Cornerstone has evaluated LFG generation from the landfill through computer modeling (using LandGEM) and options for beneficial use of the LFG. The LFG modeling was conducted to assess the potential quantity of LFG available for utilization and to assist in determining what potential level of flow can be anticipated in the future.

Cornerstone has compared actual historic LFG collection with modeled estimates, and reviewed historic documents prepared by others to understand the LFG quantities that could be utilized for beneficial use.

Cornerstone examined various options for utilization along with the advantages and disadvantages of each to assist the County in making financial decisions concerning the future use(s) of collected LFG. As part of this work, budgetary costs and revenue estimates are presented for each potential LFG utilization option. Results of this analysis are included in the separately-issued report entitled, “Landfill Gas Beneficial Use Study”, and relevant material is summarized in this report under Section 2.3.

1.3.2 Materials Recovery Facility

The County contracts with Madison-Cortland Chapter, NYSARC, Inc. (ARC) to operate the Materials Recovery Facility (MRF), and self-markets the recovered recyclables. Over the 10-year period between 2012 and 2021 (inclusive), the County has processed an average of over 4,000 tons per year of dual-stream, source separate recyclables, varying between approximately 3,700 tons (2021) and 4,900 tons (2012). The declining trend in MRF throughput quantities is likely due to increases in third party curbside hauling that may already bypass the MRF.

The MRF generally accepts recyclables in dual-stream format (i.e., commingled paper and containers)

Recyclables are collected at the County’s four solid waste transfer stations/resident convenience centers and by private haulers (including municipally contracted solid waste/recyclables collection in the Villages of Chittenango and Hamilton). Approximately one-third of recyclable materials are collected at the transfer stations and the other two-thirds by the private haulers. Recyclables collected at the transfer stations are hauled to the MRF by the County; private haulers also deliver recyclables directly to the MRF.

The County budgets approximately $1 million/year for ARC to operate the MRF and receives between approximately $210,000 and $510,000 for marketing of recyclables (2012 through 2021, inclusive). Further costs associated with the County’s recycling program are hauling costs for residential recyclables collected from the transfer stations, as well as increased operational costs at the transfer stations to support recyclables collection and quality control. As operating costs exceed revenues, the County’s recycling program is effectively funded in part by revenue received from landfill tipping fees and the residential solid waste pay-as-you-throw (PAYT) punch-card system. The quantity and cost trends between 2012 and 2021 are explained in more detail within Section 2.2.

1.3.3 Transfer Stations

The County owns and operates four transfer stations for residential recyclables and waste drop-off. The transfer stations accept in-county residential municipal solid waste, construction and demolition debris, source-separated recyclables, and yard waste. See Figure 1-4 for a map indicating the locations of the transfer stations within the County.

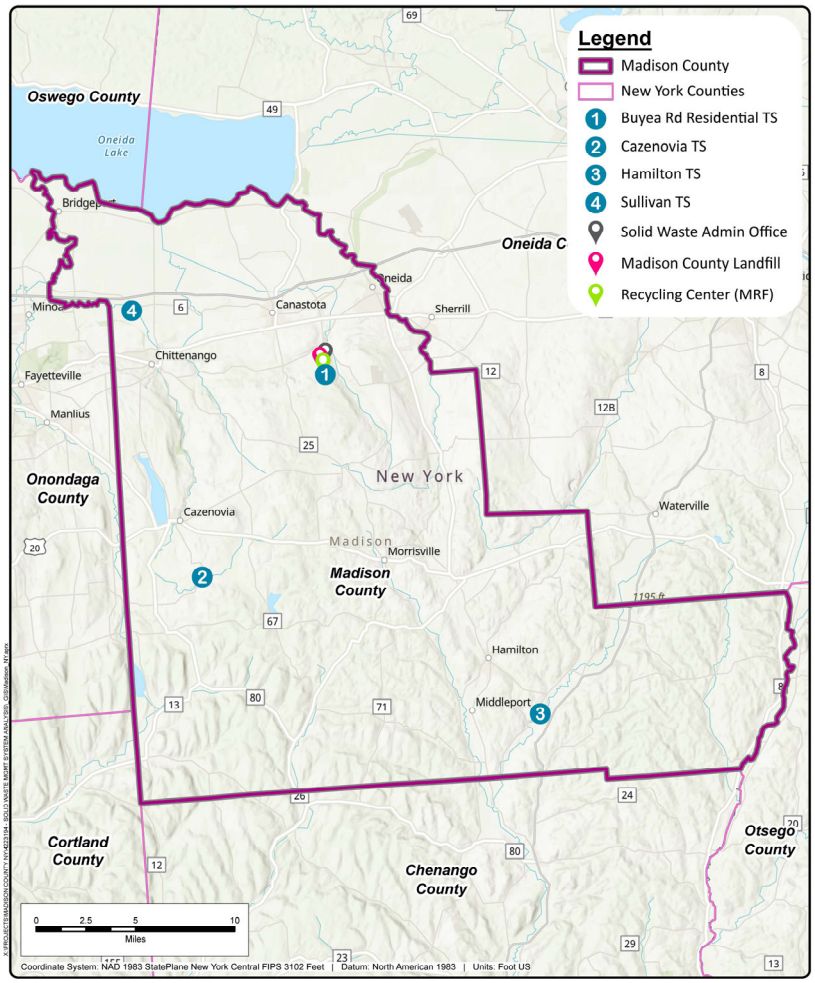
The transfer stations serve as centralized facilities in areas of low population density where residents can bring waste and recyclables, when residents opt to not contract for curbside collection by a waste hauler. The four transfer stations utilize a drop-off center with segmented roll-off containers for recyclable materials and include a yard waste program for brush and yard clippings. The County transports the materials collected at the transfer stations to the Landfill and MRF where they are weighed in through the County’s scale system and processed for recycling or disposal.

The Buyea Road Residential Transfer Station serves the central population of the County and is located adjacent to the Landfill. Due to its key location, this transfer station is currently open 5 days per week and offers other special recycling programs such as batteries, textiles and scrap metals under Madison County Solid Waste Management Plan collection. The other transfer stations in Sullivan, Cazenovia and Hamilton serve the northwestern, southwestern and southeastern parts of the County, respectively. These three transfer stations are each only open two days per week (eight hours per day) and offer special recycling programs as well.

The transfer stations accept MSW based on a punch card system. Punch cards may be purchased by County residents for $20, each card allowing 5 x 33-gallon bags of waste to be delivered to the transfer stations (punch cards may also be used for drop-off of tires, C&D debris and bulky wastes). The County does not charge for recyclables drop-off or residential yard waste (see more below), along with some other special wastes (i.e., household white goods, scrap metal, automotive batteries). Further, the County only accepts refrigerant equipment and propane tanks for recycling at the Buyea Road facility.

In 1988, the County established voluntary residential yard waste composting and brush chipping sites at each of the transfer stations. The following year, the County banned green waste from going into the Landfill. Since then, the County has continued to collect yard waste such as grass clippings, leaves, wood chips and brush at the transfer stations. This diversion of organic material has played a role in extending the life of the Landfill and composting the material into a wood chip and mulch byproduct that is available to residents at no charge. The County anticipates continuing the yard waste collection program into the future. Yard waste collected at the Sullivan and Hamilton transfer stations is composted on site as exempt operations due to small quantities. Yard waste collected at the Cazenovia transfer station is hauled to the Buyea Road transfer station and bulked with yard waste collected at that facility for composting. Compost generated from the composting operations is picked up by residents (i.e., there is no significant surplus of compost material).

Figure 4 – Locations of County Transfer Stations



1.3.4 Financial Model - Baseline 30-Year

Cornerstone performed an analysis of the current state of the financial sustainability of the County's solid waste management system. The ultimate goal of this analysis was to assess what the cost (per ton of waste) is to operate and fund the future development costs for the landfill (including liner construction and closure and long-term maintenance of the facility). Table 1-2 below, summarizes Cornerstone's financial analysis based on existing operations.

The financial analysis involved several assumptions including the anticipated rate of inflation, expected discount rate on County's municipal bonds over the remaining life of the landfill, expected rate of leachate generation decline during post-closure, and the cost of custodial care following the post-closure period. The financial analysis assumed a discount rate of 2.215%, which is the average 10-year municipal bond rate based on credit rating. However, according to the US Bureau of Labor Statistics, the average consumer price index (CPI) over the last ten (10) years was 2.1% and in 2021 it was 3.9%. Thus, our financial model assumed an average inflation rate of 2.5%. This means that the rate of inflation will overcome the discount rate on the County's account(s), which contributes to additional costs as time goes on. As of August 22, 2022, the Solid Waste Management Facility Reserve fund was $8,729,733.57. However, the interest accrued on the County's reserve funds were not incorporated into the financial model to maintain the County's flexibility to withdraw from the reserve funds when needed.

To reflect a representative operating baseline scenario, Cornerstone evaluated the financial condition of the landfill over the next 30 years based on an existing conditions assessment, including but not limited to annual operating costs, debt repayment for previous capital expenditures related to landfill expansion and sewer line construction, the Net Present Value (NPV) of anticipated future development such as liner construction and capping costs, as well as the NPV of the required 30-year post-closure care period of the landfill. Although the Landfill is currently permitted to operate through the construction of Cell 19, which would provide adequate capacity through 2142, Cornerstone limited its financial outlook in this Alternative to 2052 (30 years) to develop more accurate estimates for future financial obligations, which increasingly become less reliable over time due to the possibility of potential regulatory changes, as well as uncertain future inflation rates that can significantly affect closure and post-closure costs.

Cornerstone evaluated the Net Present Value (NPV) cost for future development including liner construction, capping costs, and post-closure assuming the landfill would be developed over a 30-year period. The NPV was evaluated to get a cost in today's dollars (excluding the inflation that will cause increased costs in the future).

The Landfill is currently operating in accordance with the Cell Development Summary Schedule, as depicted on Sheet No. 8 "Subgrade Plan" of the 2006 Permit Drawings. The Landfill currently has approximately three (3) years of capacity left in Cells 8 and 9 before proceeding to Cell 10, anticipated to open in 2024. Based on the Landfill's permitted annual waste acceptance rate of 60,000 tons per year, or 74,074 cubic yards per given a historical average waste density of 0.81 tons per cubic yard, the Landfill will have fully constructed the liner and closed Cells 10 and 11, and for financial modeling purposes (30-year period) we have assumed, 1.5 acres of Cell 12 will be constructed. , This will equate to a total of 11.6 acres to be lined. The NPV of liner construction costs up until this point is approximately $16 million.

The schedule for cap construction does not follow the same schedule as liner construction. As of March 2021, approximately 22.31 acres existing landfill area remain to be capped, based on the "*Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates"* prepared by Barton & Loguidice. Considering the additional 11.6 acres that will be lined in the next 30 years, approximately 33.9 acres will need to be capped in the next 30 years. The proposed cap construction schedule in our Financial Model assumes that a capping event will cover 4.84 acres and occur every 7 years, up until 2052. Based on this cap construction schedule, the NPV of closure costs is approximately $7.4 million.

To model the post-closure costs, it was assumed that the 30-year post-closure period will occur between 2053 and 2082. The costs associated with the post-closure period include but are not limited to maintenance (mowing, etc.), water/gas monitoring, leachate control, and custodial care. It is estimated that by 2052, approximately 64 acres must be maintained during post-closure activities (52 acres of existing landfill, and 11.6 acres of future landfill between Cells 10-12). Based on Table 1A - Financial Assurance Summary Annual Post Closure Costs, of the "*Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates"* prepared by Barton & Loguidice, approximately $1,800 (2022 dollars) to maintain an acre during post-closure, excluding leachate management. Leachate management costs were developed assuming the current rate for treatment ($0.05/gallon) and a generation rate that starts at 500 gallons/acre/day and decreases over time reflecting the reductions that should be seen for a landfill fully capped with geosynthetics. An estimated amount of $10 million was assumed for cover custodial care following the 30-year post closure period, the total cost for post-closure in this Alternative surmounts to $30.4 million, or a NPV of $11 million.

Previous capital expenditures during this 30-year timeframe amount to $7.27 million based on the current repayment schedule including $4.33 million to cover the remaining payments from the landfill expansion and $2.94 million to cover the remaining payments for the sewer line construction. The NPV of previous debt is approximately $6 million.

Cornerstone then incorporated the operating expense to run the landfill, accounting for the cost for disposal of waste at the landfill which includes cost of labor, equipment, fuel, and other operating expenses to calculate the cost per ton to fund exclusively landfill operations. Therefore, while the cost to "utilize" landfill airspace (including debt service) is $14.67 per ton, the cost to "place" a ton of waste in the landfill is $69.21 per ton. Combined, it costs the County approximately $83.88 to manage a ton of waste.

Cornerstone also calculated the cost per ton to subsidize the entire integrated County solid waste system (including the transfer stations and materials recovery facility). The average annual operating cost from 2018 – 2021 was approximately $5.5 million, with an estimated 72% (~$4 million) of the total going towards operating the landfill, 19% (~$1 million) allocated to operate the MRF, and 9% ($500,000) allocated to operate the transfer stations. However, in order to obtain conservative estimates, the financial analysis used the higher of either the 2018-2021 average or the 2021 Actual Budget. Therefore, the total County annual operating cost used in the analysis was approximately $5.9 million, including $4.1 million allocated to the landfill, which is similar to the County's 2022 Requested Budget.

Thus, if the County were to fund the entire County solid waste operations from the landfill tipping fees (including revenue from punch card fees, sale of recyclables, LFG sales), the County should charge approximately $95.85 per ton of waste.

Table 1-1 Financial Model – Baseline (30-Year)

Item	Cost
Cost to Subsidize Landfill Only	
NPV Liner Construction	$15,903,000
NPV Closure Costs	$7,387,000
NPV Post-Closure Maintenance Costs	$10,969,000
Total Development Costs (*through 2082*)	**$34,259,000**
Development Rate (per ton)	$12.49
NPV of Existing Debt	$5,972,000
Debt (per ton)	$2.18

Item	Cost
Annual Permitted Waste Acceptance Rate (tons)	60,000
Annual Operating Expense – Landfill Only (2021 or Average)	$4,153,000
Operating Expense (per ton)	$69.21
Cost (per ton) for Landfilling	**$83.88**
Cost to Subsidize All County Facilities	
Annual Operating Expense – All County Facilities (2021 or Average)	$5,894.000
Annual Revenue (2021 Projected) *(punch card fees, sale of County/ARC recyclables, LFG sales)*	$1,023,000
All County Facilities Net Operating Expense (per ton)	$81.18
Net Cost (per ton) to Cover All Facilities Operations	**$95.85**

In summary, the baseline financial analysis indicates that the landfill tipping fee to pay for its own operation should be on the order of at least $84 per ton, and at least $96 per ton to subsidize the other County solid waste operations (transfer stations and MRF), if the landfill were to close in 30 years, or 2052.

1.4 ALTERNATIVES ANALYSIS

Following the presentation of the financial analysis results to the County, Cornerstone was tasked with analyzing potential alternatives that could improve the long-term financial sustainability of the solid waste management system. A variety of alternatives were proposed to the County for further evaluation, however those that were the lowest out-of-pocket cost to the County and/or required no increase in County staffing were the ones deemed most feasible. Based on discussion with County staff, the three (3) most feasible alternatives are listed in ***Table 1-2***.

Table 1-2 List of Alternatives

Alternative No.	Description
#1	Continue Operations and implement Efficiency Measures (MRF, Transfer Station, Landfill Gas, Landfill)
#2	Develop a Public-Private Partnership for Operation of Solid Waste Program Facilities
#3	Close Landfill

The first alternative evaluated was to keep the facilities operating as existing, while implementing several efficiency measures to increase operational efficiency at the MRF, Transfer Stations, and the Landfill (including LFG beneficial use).

The second alternative evaluated was to form a public-private partnership to operate the landfill, including the residential drop-off area and transfer facility operations for recyclables. This alternative involves establishing a

partnership agreement with a private third-party to be responsible for operating the landfill. As part of the analysis, Cornerstone reviewed the partnership agreements from other counties to observe the financial structure, services provided, length of contract, and other commitments involved in the agreement. This alternative could allow for potential intermunicipal agreements to accept waste from other counties which could act as a selling point to the New York State Department of Environmental Conservation (NYSDEC). However, Cornerstone understands that increasing the waste capacity at the facilities to draw interest from third-party operators would carry potential regulatory implications (e.g., need for permit modifications).

As part of this alternative we evaluated scenarios such as doubling or quadrupling the incoming waste acceptance rate which would shorten the lifespan of the Landfill while still capitalizing on the full remaining airspace volume permitted. However, this alternative would require permit modification and would result in increased operational expenses and additional staffing to manage the increased volumes of waste. Thus, this alternative would be best approached with a public private partnership.

The third alternative evaluated was to close both the Landfill and the remote transfer station facilities. The transfer station located at the Landfill (Buyea Road) would continue to operate and haul waste to an out-of-county MRF/disposal facility. Closing the landfill now involves the capping of Cells 8 and 9, while not moving into the currently proposed footprint of Cell 10. This alternative will not require additional liner construction costs and will decrease the amount of acreage required to be maintained during post-closure.

1.5 POTENTIAL IMPACT OF FUTURE REGULATIONS

1.5.1 Part 360 Regulations

NYSDEC released proposed revisions to the existing solid waste regulations which became effective on November 4, 2017. The proposed revisions were released on May 18, 2022, and the public was invited to submit comments to the NYSDEC through August 24, 2022. It is our current understanding that comments on the draft are being considered and the NYSDEC anticipated making the new regulations effective in the first half of next year. While the full impact of these regulations is still being realized we have identified several potential regulations that could impact the County solid waste management program as follows:

Siting

The proposed regulation reads as follows:

> *(k) School and legal place of residence. A new landfill cannot be located within 1,000 feet of a school or legal place of residence. An existing landfill located within 1,000 feet of a school or legal place of residence is prohibited from expanding either vertically or laterally.*

As written, the regulation would prohibit the Landfill (unless variance was approved) from expansion because there are houses located within a 1000-foot-offset from the existing Landfill limit. We have commented to the NYSDEC to 1) suggest the proposed regulation be eliminated because potential impacts are already addressed by the State Environmental Quality Review (SEQR) process; or, 2) in-lieu of removing this language, it should be revised to clarify NYSDEC's intent as to which limits (e.g., landfill, expansion areas, property lines, etc.) are subject. The definition of legal residence (e.g., measured from the structure or the property line) must also be defined. While not anticipated to significantly impact existing operations, a proposed lateral or vertical expansion, as discussed elsewhere in this report, could be impacted.

Liner Material

The requirements for the double composite liner system are being amended to require an 80-mil HDPE geomembrane in the primary and secondary composite liner systems. This is a thicker geomembrane than the 60-mil HDPE geomembrane currently required. The thicker geomembrane is more robust against damage

resulting from installation of the material and construction of the remaining layers of the liner system. The thicker geomembrane will also have a longer service-life, increasing the longevity of the liner system to ensure added long-term groundwater protection. The 80-mil HDPE geomembrane will also make the baseline landfill liner requirements for all landfills across the state consistent with current Part 363 regulatory requirements for landfills located within the deep flow recharge area in Nassau and Suffolk Counties on Long Island.

This is a potential impact considering a $0.10 to $0.25 per square foot premium for 80 mil liner over 60-mil liner (material, shipping and seaming increases) While this cost should not be incurred for Cell 10 (because the construction documents have been approved by NYSDEC), it would likely result in a cost increase for future cell development.

1.5.2 Climate Leadership and Community Protection Act

In July 2019, the Governor signed the Climate Leadership and Community Protection Act (CLCPA) into law which became effective January 1, 2020. Among other requirements, the CLCPA directs state agencies to determine if the decisions they make are consistent with the Statewide greenhouse gas (GHG) emission limits established by the CLCPA in Environmental Conservation Law (ECL) Article 75. In the case of NYSDEC, this includes determining if the permits issued are consistent with or would interfere with the attainment of the Statewide GHG emission limits in ECL Article 75.

NYSDEC is required to develop the various regulations and guidance necessary to implement the goals and requirements of CLCPA for achieving the Statewide GHG emission limits. While this is ongoing, the CLCPA currently requires NYSDEC to review applications for new state facility permits, new Title V permits, and significant modifications to state facility permits and Title V permits for consistency with the requirements and goals of CLCPA. While CLCPA is not anticipated to impact ongoing operations, future permit modifications (discussed throughout this report) would likely be subject to the law and upcoming regulation. Modifications/additions to the air or solid waste permitting should be assumed to results in the need to a CLCPA analysis at the site.

To address CLCPA, the GHG and carbon dioxide equivalent emissions for the facility and project using the 20—year global warming potentials will need to be determined and mitigated or reduced consistent with the GHG requirements. The CLCPA's Statewide GHG emission limits require a Statewide reduction in GHG emissions from 1990 levels of 40% by 2030 and 85% by 2050. The CLCPA analysis should include calculations showing the project's potential GHG and carbon dioxide equivalent (CO_2e) emissions, particularly in the years 2030 and 2050 if possible. If the proposed project cannot show that the future GHG emissions will not be consistent with the Statewide GHG emission limits of the CLCPA, the project could be denied. In addition to the GHG requirements outlined above, calculations and discussions of mitigation measures for any co-pollutants should also be provided.

1.5.3 Emerging Contaminants

Future regulatory activity can never be certain, but recent USEPA health advisory (HA) for PFAS and perfluorooctanoic acid (PFOA) at parts per quadrillion levels lead Cornerstone to believe that additional regulatory requirements are forthcoming. PFAS is found in every part of landfill operations, as are other chemicals such as benzene and acetone. However, the recent media attention to the USEPA's HA has regulators and landfill operators uncertain on how to manage these chemicals. Further, PFAS is found in leachate and biosolids, thus, PFAS is in leachate sent to the Oneida County POTW. In turn, the Oneida County POTW sends PFAS in biosolids to the Landfill, which may have a compounding effect.

We are aware of several disposal facilities within New York that are anticipating the need to provide pre-treatment of their leachate for PFAS/PFOA-related compounds prior to sending it to their traditional treatment outlets. While the specific technologies are still being tested and are based in part on the specific leachate make-up and the site constraints, preliminary cost information is available. For a similar-sized facility being designed by Tetra Tech in a

different state, the preliminary capital costs are estimated to be on the order of $2 to $2.5 million with annual operating costs on the order of $250,000 to $300,000 per year. The subject facility is being designed with a capacity of 30,000 gallons per day or approximately 10,000,000 gallons per year. This is consistent with the leachate generation rate for the Madison County facility over the last several years. It should be noted that these potential costs would be in addition to the leachate management costs that the County is already experiencing to manage leachate.

Whatever the final regulatory outcome, it is likely that managing leachate and landfill gas will become more costly in the future. This will need to be considered when deciding whether to privatize Landfill operations.

1.5.4 Disadvantaged Communities

Related to the CLCPA legislations, to further the advance Climate Law benefit to all communities and address climate inequities, the State's Climate Justice Working Group (CJWG) is releasing draft criteria to identify disadvantaged communities (DACs). DACs are those that bear the burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high concentrations of low- and moderate-income households. The CLCPA requires the CJWG to establish criteria to identify disadvantaged communities statewide. Currently, the Madison County Landfill may be located within a draft DAC. If confirmed by NYSDEC, it is our understanding that the GHG analysis required as part of the CLCPA process (i.e., for facilities within DACs) will become more complex and will require a larger group of constituents to be analyzed.

2.0 ALTERNATIVE #1 – EFFICIENCY MEASURES

Description of Alternative #1: Maintain overall integrated system capabilities, with efficiencies identified in the individual facilities and processes to reduce costs. This includes evaluating options to modify and improve the operation of the residential Transfer Stations, the MRF, as well as the overall landfill operations.

2.1 TRANSFER STATION OPTIONS

2.1.1 Transfer Station Operations and Data Review

County residents not served by a municipal or private hauler benefit from the County's operation of the four transfer stations (i.e., Buyea Road, Cazenovia, Sullivan and Hamilton). However, these transfer stations typically operate at an annual net financial deficit. In this section, data specific to the transfer stations is reviewed to evaluate options to increase financial sustainability of these operations, including consideration of ownership/operations transfer (to the corresponding host towns) or closure of select facilities. The goal of this section is to provide a recommendation to the County that enables financially sustainable (i.e., break-even) operation of the transfer stations, thus reducing the financial load on the County's solid waste program.

Table 2-1 summarizes the major material throughput at each transfer station between 2019 and 2021:

Table 2-1. Annual Material Throughput by Transfer Station (tons).

Material	Year	Buyea Road	Cazenovia	Sullivan	Hamilton
MSW	2019	635	651	402	513
	2020	666	698	326	552
	2021	595	658	299	498
C&D	2019	1046	413	424	197
	2020	1195	533	476	272
	2021	1080	486	409	260
Commingled Containers	2019	122	128	70	68
	2020	129	133	64	77
	2021	115	116	57	74
Commingled Paper	2019	254	258	125	117
	2020	235	242	115	103
	2021	212	217	107	108
Bulk Metal	2019	131	113	84	76
	2020	128	156	105	99
	2021	112	127	76	86

Material	Year	Buyea Road	Cazenovia	Sullivan	Hamilton
Total	2019	2205	1575	1117	977
	2020	2547	1852	1272	1126
	2021	2297	1854	1051	1049

Material throughput fractions by transfer station are summarized in ***Table 2-2*** below:

Table 2-2. Annual Material Throughput Fraction by Transfer Station

Material	Year	Buyea Road	Cazenovia	Sullivan	Hamilton
Waste (MSW+C&D)	2019	39%	25%	19%	17%
	2020	39%	26%	17%	17%
	2021	39%	27%	17%	18%
Recyclables (Containers, Paper + Scrap Metal)	2019	33%	32%	18%	17%
	2020	31%	33%	18%	18%
	2021	31%	33%	17%	19%
Total	2019	38%	27%	19%	17%
	2020	37%	27%	19%	17%
	2021	37%	30%	17%	17%

Table 2-1 and ***Table 2-2*** indicate that material throughput at the transfer stations is highest at Buyea Road, followed by Cazenovia, Sullivan and Hamilton in order of decreasing throughput.

A summary of annual revenues and operating costs for each transfer station (historical for 2020 and 2021, and projected for 2022 and 2023) is provided below:

Table 2-3. Annual Financial Performance Analysis by Transfer Station.

Revenue/Cost Category	Year[1]	Buyea Road	Cazenovia	Sullivan	Hamilton
Revenues:					
Punch card Sales[2]	2020	$164,985	$150,480	$89,670	$60,030
	2021	$176,000	$208,080	$94,368	$81,456
	2022	$221,500	$201,600	$120,400	$80,500
	2023	$221,500	$201,600	$120,400	$80,500
Scrap Metal Sales	2020	$14,192	$17,355	$11,636	$10,993
	2021	$22,218	$25,237	$15,143	$16,939
	2022	$22,218	$25,237	$15,143	$16,939
	2023	$22,218	$25,237	$15,143	$16,939

Revenue/Cost Category	Year[1]	Buyea Road	Cazenovia	Sullivan	Hamilton
Total Revenues	**2020**	**$179,177**	**$167,835**	**$101,306**	**$71,023**
	2021	**$198,218**	**$233,317**	**$109,511**	**$98,395**
	2022	**$243,718**	**$226,837**	**$135,543**	**$97,439**
	2023	**$243,718**	**$226,837**	**$135,543**	**$97,439**
Operating Costs:					
Waste/Tire Tip Fees[3]	2020	$153,572	$102,234	$68,479	$69,941
	2021	$141,968	$98,097	$62,410	$65,472
	2022	$145,320	$100,386	$63,827	$66,989
	2023	$150,347	$103,819	$65,953	$69,265
Utilities/Phone/Ins.	2020	$2,911	$3,171	$2,590	$3,576
	2021	$2,911	$3,171	$2,590	$3,576
	2022	$2,911	$3,171	$2,590	$3,576
	2023	$2,911	$3,171	$2,590	$3,576
Maintenance & Repairs	2020	$3,000	$3,000	$3,000	$3,000
	2021	$3,000	$3,000	$3,000	$3,000
	2022	$3,000	$3,000	$3,000	$3,000
	2023	$3,000	$3,000	$3,000	$3,000
Labor	2020	$83,500	$47,500	$47,500	$38,000
	2021	$100,142	$55,585	$47,500	$41,441
	2022	$100,142	$55,585	$47,500	$41,441
	2023	$100,142	$55,585	$47,500	$41,441
Waste Pickup/Hauling[4]	2020	$36,850	$43,000	$36,107	$48,910
	2021	$34,200	$49,728	$36,504	$53,436
	2022	$34,200	$49,728	$36,504	$53,436
	2023	$34,200	$49,728	$36,504	$53,436
Depreciation	2020	$13,500	$13,500	$13,500	$9,500
	2021	$13,500	$13,500	$13,500	$9,500
	2022	$13,500	$13,500	$13,500	$9,500
	2023	$13,500	$13,500	$13,500	$9,500

Revenue/Cost Category	Year[1]	Buyea Road	Cazenovia	Sullivan	Hamilton
Total Operating Costs	2020	$293,333	$212,404	$171,175	$172,927
	2021	$295,721	$223,081	$165,504	$176,425
	2022	$299,073	$225,370	$166,921	$177,942
	2023	$304,100	$228,803	$168,687	$180,218
Net Revenue:	2020	($114,156)	($44,569)	($69,869)	($101,904)
	2021	($97,503)	($10,236)	($55,993)	($78,030)
	2022	($55,355)	$1,467	($31,378)	($80,503)
	2023	($60,382)	($1,966)	($33,144)	($82,779)

Notes: [1] 2020 and 2021 financial performance based on analyses performed by County staff. 2022 and 2023 financial performance are projections based on 2020/2021 County financial performance analyses with updated Landfill tipping fees (see Note 3).

[2] Punch card prices were $15 in 2020, $16 in 2021 and $20 in 2022; for purpose of projection, held at $20 in 2023. Projected quantity of 2022 and 2023 punch card sales based on 2019 sales (i.e., 31,200 punch cards; see discussion below), prorated to each facility based on 2020 sales.

[3] Waste/tire tip fees include MSW, C&D, tires, batteries and bulbs. MSW and C&D tipping fees are assessed at the prevailing Landfill tipping fee of $80/ton in 2020, $82/ton in 2021, $84/ton in 2022 and $87 (projected) in 2023. Values for 2022 and 2023 based on 2021 material throughput and increasing prevailing Landfill tipping fee for each corresponding year. Tire tip fees are assessed at $200/ton. Batteries and bulbs are assessed at each transfer station as 25% of the annual County contract amount with vendor E-Waste+ (i.e., $9,600 total).

[4] Waste pickup/hauling cost is estimated based on a cost of $3.48/mile, except for Buyea Road, which is based on a flat rate of $50/load. Round-trip haul distances are 32 miles for Cazenovia, 30 miles for Sullivan and 47 miles for Hamilton.

As indicated in ***Table 2-3***, the four transfer stations cost more to operate than they generate in revenue (other than Cazenovia facility as projected for 2022). The most significant transfer station operating costs are, in decreasing order, waste tipping fees, labor and waste pickup/hauling. Waste tipping fees are an imputed cost (reflecting Landfill tipping fees of $80/ton in 2020 through $84/ton in 2022) which are not directly realized by the transfer stations, but otherwise absorbed by the solid waste program. The only means to decrease this cost to the solid waste program would be to encourage further waste diversion by residents. As this effort is unlikely to yield significant reduction in cost, particularly in the short term, it is assumed that the cost of waste tipping fees will follow projected waste disposal trends, absent reductions to Landfill tipping fees by the County (which would have more significant negative impacts on overall solid waste program financial performance, outside of the transfer stations). Further, as discussed throughout this report, we estimate that Landfill tipping fees should be increased beyond $84/ton to reflect the actual costs of owning and operating the Landfill, which would serve to further increase the waste tip fees cost item for the transfer station.

Due to the significant punch card sale price increase in 2022, total 2021 punch card sales were likely inflated due to resident “advance purchases” to avoid the price increase, likely leading to lower punch card sales in 2022 as

compared to 2021. Additionally, 2020 punch card sales may be disproportionate due to impacts related to the COVID-19 pandemic. As such, 2019 punch card sales (i.e., $468,500 at $15 per punch card, or approximately 31,200 punch cards) are considered typical for this analysis at 2019 County-wide solid waste disposal rates. Based on 2022 punch card pricing (i.e., $20/punch card) and 2019 punch card sales, the projected total 2022 punch card revenue is approximately $624,000.

2.1.2 Option A: Continued TS Operations with New Efficiency Measures

2.1.2.1 Identification of Potential Efficiency Measures and Cost Impacts

Labor and waste pickup/hauling costs (along with several minor operating cost line items) can be reduced by changes to transfer station operating days/hours without considering facility closures. The County could consider the following:

1. Eliminate the extra aide/attendant at the Sullivan transfer station. The material throughput at this site is similar to the Hamilton transfer station which does not employ a second aide/attendant. As such, the extra laborer at the Sullivan transfer station may be redundant and represents a cost of approximately $8,000/year.

2. Reduce weekly operating days at the Hamilton, Sullivan and/or Cazenovia transfer stations to one day per week, or 3 days per week at the Buyea Road transfer station. Further, the selected operating days for these facilities could be coordinated to utilize fewer staff members on a regular basis for attending facility operations, thus potentially reducing annual training and administration costs (though such potential efficiencies were not included in this analysis). The selected operating days for each facility could vary by week to allow each facility to have a Saturday operating day (e.g., alternating weeks). Increased facility utilization during this reduced operating schedule will likely require an extra aide/attendant at each facility (i.e., status quo for Sullivan, additional person for Hamilton).

   It is estimated that this measure could reduce operating costs as follows:

   1. Buyea Road: $38,000/year
   2. Sullivan: $25,000/year
   3. Hamilton: $18,000/year

   The County has indicated that the increased traffic due to reduced weekly operating days for Buyea Road, Hamilton and Sullivan facilities could be accommodated by the existing facilities. However, the Cazenovia facility is already very busy on its existing two operating days per week, so a reduction of operating days at this facility would either be infeasible or would require major improvements to the facility. As such, reduction of weekly operating days at the Cazenovia facility is not considered an option.

3. Reduce daily operating hours at some or all of the transfer stations to 3-4 hours per operating day. Selected operating hours could be tailored to the busiest times for each facility. Where two facilities with reduced operating hours have the same busiest times, operating hours could be varied on alternating weeks to allow each facility to operate during busiest times. As with the reduced operating days measure above, increased facility utilization during the reduced daily operating hours would likely require an extra aide/attendant at each facility (i.e., additional person for Hamilton). Reduction of daily operating hours may also allow one staff member to attend operations for two facilities in one day, further increasing efficiencies.

   The County has Indicated that operations of two facilities (i.e., Hamilton and Sullivan) by one operator in a

single day may not be practical due to facility startup/shutdown work required before/after public usage hours and travel requirements between facilities, in addition to requiring the County to provide a pickup truck for the operator to travel between locations (at a total cost of about $8,400/year, evenly split between the Hamilton and Sullivan facilities). Reduced daily operating hours would reduce facility availability beyond 3-4 hours/day to about 2-2.5 hours/day (due to facility opening/closing time requirements), thus making it difficult for County residents to utilize the facility in the reduced time. This will result in additional losses of punch card sales (and thus, revenue) to the subject facility(ies) as residents decide that it will be more convenient for them to contract with a hauler. It is estimated that as much as 25 percent of punch card revenue for each affected facility would be lost if daily operating hours were reduced. Countering this reduction in revenue would be a reduction in the imputed cost to the transfer stations for solid waste disposal at the Landfill, and the direct cost of hauling to the Landfill, due to increased hauler contracting with affected residents.

As indicated above, the Cazenovia facility is already very busy on its existing two operating days per week, so a reduction of operating hours at this facility would either be infeasible or would require major improvements to the facility. As such, reduction of weekly operating hours at the Cazenovia facility is not considered an option.

It Is estimated that reduction of operating hours from current operations could reduce ***net*** operating costs as follows:

- Buyea Road: $47,000/year
- Sullivan: $(9,000)/year
- Hamilton: $(6,000)/year

As reducing operating hours at the Sullivan and Hamilton transfer stations is estimated to result in additional net costs (due to expected reduced punch card sales for those facilities), operating hour reductions at these two facilities is considered economically infeasible. However, it is noted that reductions for solid waste throughput at the transfer stations were not estimated, as such, the actual net cost of reducing operating hours may be somewhat overstated.

4. Increased revenues via increased punch card fees or subsidies from transfer station host towns could allow the transfer station revenues to approach or equal operating costs. Increased Landfill tipping fees (with a portion of the revenues from this increase to subsidize transfer station costs) could also assist in achieving this outcome, however, this option is further considered under Section 2.4 below. Not including the measures described above and based on the projected 2023 financial performance in ***Table 2-3***, the County would require approximately $180,000 in increased revenues in 2023.
    - Assuming 2019 punch card sales (i.e., 31,200 punch cards) are typical, this would represent an increase of approximately $6 per punch card. The 2022 punch card price is $20/punch card. As such, the County would need to increase prices to $26/punch card to allow transfer station revenues to approach/equal operating costs, absent other changes. Regular (e.g., annual) punch card cost increases would also be required in the future to cover inflation.
    - Towns may be willing to subsidize transfer station operations in lieu of assuming facility ownership/operations or facility closure (as discussed below), or punch card price increases. The towns would be responsible for allocating this money from their operating budget and provision to the County.

The following summarizes the above identified efficiency measures and estimated annual cost savings/revenue:

1. Eliminate extra aide/attendant at Sullivan: $8,000/year

2. Reduction of weekly operating days at Sullivan and Hamilton: $43,000/year
3. Reduction of daily operating hours at any or all facilities: $18,000-$117,000/year
4. Increase revenues (increased punch card fees, Town subsidies): As needed.

It would not be feasible to combine #2 and #3 above, however, #1 and #4 could be combined with any of these measures to improve financial performance. Implementing either #2 or #3 would likely result in some negative feedback from residents, whereas implementing #1 would likely result in limited to no negative feedback. Implementing #4 in absence of other efficiency measures would result in significant negative feedback, largely due to the recent 25% increase in punch card prices. However, this could be mitigated by implementing #4 in concert with another efficiency measure to reduce the impact on punch card prices. Further, some of the efficiency measures above could potentially be combined with facility transfers/closures as discussed below.

Based on reviewing potential cost savings and feasibility of the measures discussed above, we would recommend further consideration of #4 in combination with #2 or #3, in absence of facility transfers/closures (discussed below). Operating Sullivan and Hamilton only one day per week would require the County to increase punch card prices to approximately $25/punch card, representing another 25% increase in punch card prices. However, this increase would then allow the County to operate transfer stations without a net cost, reducing the financial load on the solid waste program. Future punch card price increases would generally only be required to account only for inflation and would thus be relatively small.

2.1.3 Option B: Selective TS Closure

Beyond implementation of efficiency measures or transfer of facilities to host towns, the only other measure that could reduce transfer station operating costs is to close select facilities. It is understood that closure of any of the transfer stations is not a desirable option for a number of reasons. However, this option was evaluated from a cost perspective to provide as comprehensive of an evaluation as possible of the solid waste program alternatives.

While some of the operating costs associated with the closed facilities would be saved (i.e., labor, utilities/phones/insurance and the differential of waste hauling between the closed facility and the Buyea Road facility), the majority of the costs (particularly tipping fees) would be maintained because residents would still need to dispose of waste. Facilities closure would require affected residents to either contract with a private hauler (who would take waste to the Landfill) or to self-haul waste to a more distant facility.

Following closure, the County could either consider re-purposing the facility for other County usage or return the property and buildings to the towns for their usage, as the facilities are all adjacent to the corresponding Department of Public Works yard for each town.

As with considered facility transfers above, it would not be reasonable for the County to close the Buyea Road transfer station as this facility is integral to the Landfill operations.

Closure of any of the facilities is likely to be met with significant negative feedback from residents. The facility for which such negative feedback would be most significant is the Cazenovia facility (due to its location proximate to the significant urban center of Cazenovia and relatively heavy utilization), followed by the Sullivan and Hamilton facilities (at approximately equal levels). Still, Cazenovia residents are relatively local to the Buyea Road facility. By closing the Cazenovia facility and requiring disposal at the Buyea Road facility, the travel distance would be increased by approximately 10 miles (measured from the center of Cazenovia). Some residents who live in the southwest corner of the County may instead opt to utilize the Hamilton facility due to its relative proximity (assuming that facility is not also closed).

Closure of the Hamilton facility would most significantly increase drive distances for affected residents. Considering closure of the Hamilton facility and change of disposal location to Buyea Road, the drive distance would be increased by approximately 14 miles (as measured from the center of Hamilton). Considering closure of

the Sullivan facility and change of disposal location to Buyea Road, the drive distance would be increased by approximately 6 miles (as measured from the center of Chittenango).

2.1.3.1 Technical and Regulatory Requirements for TS Closure

Similar to facility transfers, before closure of a facility, the County would need to confirm that there are no significant outstanding environmental or engineering (e.g., structural) issues with the facility. As discussed above, according to the County, there are no such environmental or engineering issues at the facilities which would serve to hinder facility closures.

As discussed above, the Sullivan, Hamilton and Cazenovia transfer stations are each registered with NYSDEC as a transfer facility. From a regulatory perspective, closure of these facilities should be a simple matter of notifying NYSDEC of the facility closure, thus soliciting NYSDEC to cancel the registration.

2.1.3.2 Operating Costs Analysis

Closure of the facilities is estimated to result in the following annual operating cost savings, based on elimination of labor, utilities/phones/insurance and waste hauling cost differential based on ***Table 2-3***:

- Sullivan: $69,000
- Hamilton: $82,000
- Cazenovia: $86,000

While the potential operating cost savings at Cazenovia are substantial, it is noted that utilization and related punch card revenues of this facility are higher than that at Sullivan and Hamilton facilities, which offsets the net impact of these costs. Closure of any of these facilities would likely not significantly impact overall waste disposal in the County but may reduce resident waste self-hauling to the remaining transfer station(s) as some residents will likely consider contracting with a waste hauler rather than continue using the transfer stations. While this could reduce overall transfer station revenue, it would also result in reduced solid waste throughput, which is the major operational cost for each facility. Potential changes in transfer station utilization due to facility closures is not quantitatively evaluated in this report.

2.1.3.3 Identification of TSs to Close

From an aerial coverage perspective, it is most advantageous for the County to continue operations of the Buyea Road and Hamilton facilities to minimize drive distances for residents. Closure of the Cazenovia and Sullivan facilities will have the least impact on drive distances for each affected resident. However, as indicated above, closure of the Cazenovia facility will result in the most significant impact due to the current heavy utilization of this facility and its proximity to the significant population center of Cazenovia.

If the County is unable to negotiate with the host towns to take on ownership and operations of any of the transfer stations, closure of any or all of the transfer stations would reduce transfer station system operating costs within the solid waste program. Based on the above discussion, within this option, the recommended preference for consideration of facility closure (from most to least preferable) is as follows:

- Sullivan
- Hamilton
- Cazenovia

2.1.4 Options Comparison

A tabular summary of the options described above is included below:

Table 2-4. Transfer Stations Options Summary

Option	Option Variant	Strengths and Weaknesses	Estimated Annual Cost Savings by Facility			
			Buyea Road	Cazenovia	Sullivan	Hamilton
A. Efficiency Measures	Eliminate extra aide/ attendant	**Strength:** Simple to implement and allows operations similar to Hamilton. **Weakness:** Small cost savings.	n/a	n/a	$8,000	n/a
	Reduce operating days/hours	**Strength**: Significant cost savings. **Weaknesses**: Increased traffic on remaining operating days/hours; possible negative resident feedback.	$38,000-$47,000	n/a	$(9,000)	$(6,000)
	Increase revenues (punch card fees, Town subsidies)	**Strength**: Simple to implement, relatively unlimited additional money available. **Weaknesses**: Significant negative resident feedback due to recent punch card price increase; likelihood that County would pay for Town subsidies or would incur negative feedback due to required tax assessment.	Additional revenue as needed.			
B. Facility Closures		**Strengths:** Significant operating cost reduction; reduction in County labor and administrative requirements; simple registration cancelation. **Weaknesses:** Significant negative feedback for facility closure (particularly Cazenovia facility); increased traffic at remaining facilities.	n/a	$86,000	$69,000	$82,000

2.1.5 Recommendations

Based on the above options analysis, we recommend that the County:

- Close the Sullivan and Hamilton facilities.
- Consider reduction of operating days/hours of the Buyea Road facility (3 days/week or 3-4 hours/day).
- Raise punch card price as necessary to cover remaining financial shortfall and increase annually/bi-annually as necessary to cover inflation.

We recommend that the County consider closing the Sullivan and Hamilton facilities, continue operations of the Cazenovia and Buyea Road facilities and reduce operating days/hours for the Buyea Road facility. Under this scenario, no punch card price adjustment in 2023 is estimated to be required. This would allow County transfer station operations to break-even financially. This recommendation is reflected in our financial model in Section 2.5.2.

2.2 MATERIALS RECOVERY FACILITY OPTIONS

ARC has operated the County's MRF for almost 30 years, under an agreement that has been mutually beneficial to both ARC and the County. However, with the changing recyclables market as well as rising labor rates and efficiencies from automation, the net costs to the County have significantly increased and the overall MRF model may not be the best option for continued management of recyclables. This analysis is being performed to determine the viability of other options for managing the County's recyclables, including considering a recyclables tipping fee or converting the existing MRF building for the receipt and transfer of dual- or single-stream recyclables for processing at a third-party recycling facility.

2.2.1 MRF Operations and Data Review

The existing MRF has two independent sorting processes that primarily rely on manual sorting stations to separate containers by material type and clean the fiber stream prior to baling. Based on feedback from County personnel, the materials recovered from the MRF are of generally high quality and County recyclables markets have remained available even when markets dried up regionally following China's "National Sword" policy in 2018.

In 2021, materials recovered from the inbound recyclables include: Cardboard/Hard Pack Mix (125 tons); Plastic Containers HDPE/PET (126 tons); Plastic (Film) (536 tons); Tin Cans (129 tons); Aluminum Cans & Foil (128 tons); Aggregate Glass (130 tons); Clear Glass (127 tons); Deposit Containers (131 tons); and St. Pauly Textiles (558 tons). Approximately one third of the total tonnage processed through the MRF is collected at the County-run transfer stations and transported by County personnel to the MRF, and the remainder is delivered directly by haulers contracted to residents or commercial entities.

The MRF is regulated by NYSDEC under a registration for a Recyclables Handling and Recovery Facility (RHRF) operating at greater than 5 tons per day (Authorization No. 09R20001).

2.2.1.1 ARC Operation Agreement and Ground Lease

The ARC operation agreement and ground lease has been in place in its current form since 2013, with minor updates incorporated during term renewals.

ARC is responsible for operating the MRF in compliance with Federal, State, and Local regulatory requirements, and processing recyclable material into marketable form. While the definition and enforcement of this quality requirement is not well-established in the agreement, material quality has generally not been an issue that impacts marketability as stated above and relayed by County personnel.

All recyclable materials processed at the MRF remain the property of the County, and the County remains responsible for marketing the recovered, baled materials. The County retains all revenue from the sale of the recovered recyclables, which means that all risk relating to the fluctuating value of recycled commodities falls on the County.

The operations agreement stipulates a full reimbursement to ARC for all salaries, fringe benefits, maintenance and supplies (including office and MRF equipment reimbursement), utilities and other overhead expenses (e.g., insurance), plus a 15% overhead administration fee.

Based on conversations with ARC operational staff and County personnel, ARC has had challenges finding and retaining staff for the manual sorting activities. This is indicative of greater trends in the regional economy which are especially evident in lower-skill/wage positions.

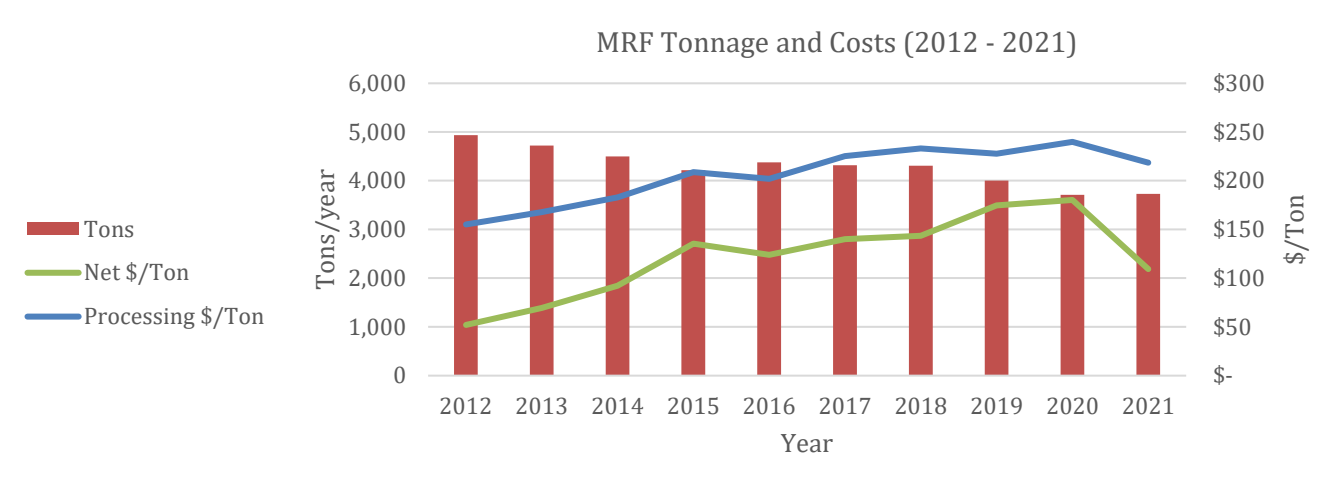
2.2.1.2 Recyclables Quantities and Value

Based on records obtained from the County and ARC, ***Table 2-5*** below provides the approximate tonnages, expenses and revenue associated with the MRF operations between 2012 and 2021 that is also depicted graphically in Figure 2-1:

Table 2-5 MRF Tonnages and Operating Costs

Year	Total Recovered Recyclables Tonnage	Revenue from Marketing Recyclables	ARC MRF Operating Reimbursement	ARC MRF Processing Cost per Ton	Net Annual Cost	Net Cost per Ton
2021	3,729	$407,303.54	$814,655.00	$218.46	$407,351.46	$109.24
2020	3,709	$221,104.80	$889,530.80	$239.83	$668,426.00	$180.22
2019	4,001	$212,648.03	$910,974.00	$227.69	$698,325.97	$174.54
2018	4,307	$386,135.93	$1,003,617.00	$233.02	$617,481.07	$143.37
2017	4,316	$367,469.70	$971,647.72	$225.13	$604,178.02	$139.99
2016	4,376	$341,618.81	$883,413.98	$201.88	$541,795.17	$123.81
2015	4,215	$309,428.38	$879,775.02	$208.72	$570,346.64	$135.31
2014	4,496	$407,543.15	$821,727.04	$182.77	$414,183.89	$92.12
2013	4,719	$463,974.64	$791,495.49	$167.73	$327,520.85	$69.40
2012	4,935	$508,369.05	$765,471.00	$155.11	$257,101.95	$52.10

Figure 5 - MRF Tonnages and Operating Costs



As shown in ***Figure 5***, the MRF processing cost has been $155 to $240 per ton of recyclables. With $210,000 to $510,000/year in revenue from marketing recyclables, the overall net cost has ranged between $52 to $180 per ton of recyclables and has generally become more costly over the 10-year period. With the quantity of

recyclables that moved through the MRF, the overall MRF has an annual net cost of $260,000 to $700,000. The County's additional expense to oversee and manage the MRF operations are not accounted for within the above table but are estimated in this report's financial modeling.

In mid-2020, a survey of municipal recycling entities across New York State was performed to evaluate the impacts of reduced recyclable markets on municipal recycling programs. Based on this, other municipalities/counties that operate (or contract operations for) municipally owned MRFs reported a cost to process residential recyclables between approximately $65 and $115/ton, excluding transportation costs. As noted in ***Table 2-5***, in this same 10-year period, the County MRF's average net operating cost was more than $170/ton.

Due to the small scale of operations at the MRF and the subsequent manual sorting techniques that are employed, the County has consistently experienced a net cost and processing cost that are higher than other sources. This difference was only amplified by the decreasing value of recovered recyclables and rising labor costs. However, even in 2012 when many generators were realizing revenue from their recyclables, the County still saw a net cost of over $50/ton, evidencing that the overall process is not financially viable in the long term without significant subsidies from other parts of the County's solid waste management system (e.g., landfill tipping fees and residential punch card revenue).

2.2.2 Option A: Continued MRF Operations with New Efficiency Measures

2.2.2.1 Identification of Potential Efficiency Measures and Cost Impacts

ARC contract terms: With the reimbursement model described above, there is no built-in incentive for operational efficiency. As the labor rates increase, the cost for processing will increase without a direct correlation to the quantity of inbound recyclables. The recent decreases in ARC annual payments are due primarily to staffing shortages as well as the repayment of the previously included replacement baler loan. Given the constraints of the current recycling system, including the limited throughput quantity, it is not anticipated that revisions to the current contract will have a significant impact on the per-ton cost to process recyclables through the existing MRF.

Increase throughput: An option to increase MRF efficiency may be to increase the scale of the MRF operation by broadening the service area or potentially expanding recycling education efforts in the County. However, based on the feedback from ARC staff, ARC does not feel that the MRF could reasonably increase throughput at this time.

Recovery processes and equipment: Based on the ARC annual reports submitted to NYSDEC, almost all the fiber stream was directed to the Casella recycling facility in Scarborough, Maine as a "commingled paper." As such, the fiber processing currently being performed primarily serves to remove contamination but does not produce a highly valuable product. However, based on the scale of the MRF operations, further processing through an automated system would not be feasible based on the high initial investment in this equipment compared to the potential return from higher value recovered commodities (e.g., corrugated cardboard, office paper).

Recyclables tipping fee: Previously, recycling had been presented as a business model that would fund itself. However, with the fluctuations in market value and market saturation, recycling has increasingly become a method of material management that bears its own costs. As discussed above, the 2020 municipal recycling program surveys showed that the net cost to process recyclables is comparable to waste management. As the owner/operator of its own landfill, the County financially benefits from removing these materials from the waste stream via preservation of landfill airspace and the associated operating costs (approximately $75/ton). However, there is a growing consensus in the recycling community that there is a cost associated with recycling. This is reflected in the imposition of tipping fees within some New York State communities, and private MRFs charge tipping fees (sometimes substantially high) to cover the costs of processing and marketing the material.

As a local example, in January 2021, the Onondaga County Resource Recovery Agency (OCRRA) began charging $35/ton for residential recyclables delivered to Waste Management Recycle America (WM-RA) as part of their agreement with WM-RA. OCRRA then subsidises the difference, if any, between this $35/ton fee and the tipping fee incurred at WM-RA. Based on communications with OCRRA staff, there has not been significant negative feedback from residents or businesses relating to the charge for recyclables processing. Given that the tipping fee for recyclables is recommended to remain lower than waste disposal fees to encourage recycling, it may not be feasible to cover all recycling costs with a tipping fee but could reduce the overall cost of recycling. In almost any scenario, some risk would still be placed on the County, dependent on the market for recyclables.

Permitting: Under this Option, no permitting impacts are anticipated, as ARC would continue operations under the current NYSDEC Registration held by ARC.

2.2.2.2 Recyclables Tipping Fee Cost Impacts

With a landfill tipping fee of approximately $85/ton, without subsidizing other County facilities, the County could consider a recyclables tipping fee of $35 to $50/ton. The fee would be charged to contract haulers tipping at the MRF as well as to residents through the punch card process.

Following the commodity value crashes in 2018 due to the China Sword policy, the recycling industry has recognized that there is a cost associated with recycling. While there is a social and financial benefit to removing this material from the waste stream and preserving landfill airspace, there is also a cost to transport and process this material and we can no longer count on revenue from the marketing of this recyclables to offset some or all this expense. Other local governments have implemented similar fees for recycling. Otsego County has a recycling tipping fee of $75/ton at stations. OCRRA recently implemented a $35/ton tipping fee for recyclables and a nominal per bag fee at their residential drop off locations. In addition, third party MRFs generally have a tipping fee accompanied by a revenue sharing agreement that varies with the commodity market. The intent of this recyclables tipping fee is to cover some or all the recycling handling/processing costs, while keeping the fee low enough to continue to encourage businesses and residents to separate recyclables from the waste stream.

With the rebound of commodity pricing in 2021, the proposed recyclables tipping fee of $35 to $50/ton would have resulted in approximately $130,500 to $186,500 in 2021 revenue (resulting in an overall MRF net operational cost of approximately $60 to $75 per ton of recyclables). This would have translated into an overall net MRF operational cost between $220,500 and $275,500, compared to the actual 2021 net MRF operational cost of over $407,000. This also does not account for the fluctuations in the revenue from marketing recyclables which resulted in net costs of over $180/ton in prior years.

Note that the above discussion regarding the implementation of a recyclables tipping fee applies to all three (3) Options proposed under this Section.

2.2.2.3 Summary

With the current recycling system in the County, the net cost of MRF operations has remained well above $100/ton since 2015. Given that this net cost per ton of recyclables is higher than the Landfill tipping fee for waste disposal, it would not be feasible to impose a processing fee on recyclables that would enable the ARC operated MRF to proceed with a net-zero operating budget while still encouraging source separation of recyclables from waste. To maintain the current operations, even with proposed implementation of a recyclables tipping fee, the Landfill tipping fee would need to be raised to subsidize MRF operations on the order of at least $200,000-$300,000 annually.

2.2.3 Option B: MRF Conversion to Recyclables Transfer Facility (RTF)

Due to the constraints and expenses associated with ARC operations, another option to manage the County's recyclables is to terminate the ARC agreement and modify the MRF building to operate a single- or dual-stream

recyclables transfer facility (RTF). The RTF will continue to accept recyclables from private haulers as well as the recyclable materials received from the transfer stations and the recyclable materials will be hauled to an out-of-county MRF either by County staff or a third-party contracted hauler.

The larger out-of-county regional MRFs allow for efficiencies in processing costs as well as higher market sales rates due to the large outbound commodity quantities. In 2020, where the County was incurring a net MRF operating cost close to $180/ton, OCRRA was paying WM-RA a net of approximately $58/ton (not accounting for any revenue from the $35/ton fee implemented in January 2021), with a contractual not-to-exceed tipping fee of $65/ton. While OCRRA is a substantially larger generator than the County (approximately 40,000 tons/year of residential recyclables) and will thus have more favorable contract terms with WM-RA, the overall scale of utilizing a facility such as WM-RA would allow lower processing costs as well as some insulation from fluctuating commodity pricing.

To add the RTF to the existing landfill permit, additional requirements may be imposed by NYSDEC. In accordance with Part 360.15(a)(3)(ii), “for two or more solid waste management activities registered or eligible for registration pursuant to Part 361 and 362 of this Part, the Department may, in lieu of a registration, require a permit if the combined activities on-site have the potential to cause a significant adverse impact on the environment.” While a permitted MRF must comply with the same operating requirements as a registered MRF, the permit application process is more complex, including preparation and submission of detailed engineering drawings and reports.

Under the proposed Part 360 regulations (discussed in Section 1.5.1 above), facilities that receive source-separated recyclables exclusively for transfer with no processing involved are considered an RTF, not a MRF. A registered RTF must comply with the requirements under Part 362-3 instead of 361-1. These requirements include, but are not limited to, storing all recyclable materials separately from any other waste that is accepted at the facility (or Landfill) for periods not to exceed 180 calendar days on-site unless certain criteria are satisfied to justify a longer storage period.

2.2.3.1 MRF Conversion and Operations Costs

To manage the transfer of the in-county recyclables to a third party MRF, the County can convert the existing MRF to and RTF to enable the transfer of recyclables. The RTF will receive the recyclable material collected at the transfer stations as well as direct loads of recyclables delivered by private haulers. Some considerations for conversion of the MRF to an RTF include:

Remove Existing Sorting Equipment: possibility for resale value, but an appraisal would be necessary. Due to the age of the equipment, it is assumed for the purposes of this report that the scrap value to be recouped from the marketing of this equipment is of minimal impact to this evaluation. Therefore, the overall cost to remove the existing equipment is conservatively calculated based on the labor to disassemble and remove the two (2) sorting lines and transportation approximately 30 miles away (MS Means Crew A-5 for approximately 1 week).

Building Refurbishment: With the removal of the equipment and modifications to the building floorplan, the tipping floor will likely require replacement (approximately 10,000 SF, 12” thick, 6,000 PSI). As the building was constructed in approximately 1984, it is expected that a general refurbishment will be required to upgrade building system components such as the mechanical and electrical systems and approximately $25,000-$50,000 contingency should be reserved for this purpose. Based on communication with County personnel, the building has been well maintained so ancillary items that are not impacted by the modification are not expected to require investment.

Transfer Infrastructure: Currently, the building is configured for manual/hand loading into the sorting equipment. To support the bulk transfer of recyclables, the building would need to be modified to handle material management with heavy equipment, including installation of push walls (approximately 100 linear feet (LF) of

steel push walls at $200/LF) and modifications to the southern building face to enable loadout capabilities (i.e., pavilion over loadout and modifications to the south wall).

New Equipment: To optimize the offsite transportation of recyclables to a third party MRF, Cornerstone assumed that a compactor would be utilized to consolidate single stream recyclables to decrease the number of truck trips to a third party MRF up to approximately 35 miles away.

Table 2-6 MRF Conversion to RTF Cost Analysis (Option B)

Cost Component		Cost
Capital Costs to Develop RTF Building		
	Remove Existing Equipment	$8,000
	Building Refurbishment (tipping floor, general building refurbishment)	$150,000
	Transfer Infrastructure (push walls, loadout)	$700,000
Capital Equipment Purchases (capital)		
	Compactor for rear load trailers (including equipment, freight, and installation. Possibility to relocate compactors from transfer stations)	$75,000-$100,000
	Material Hander and Loader (manage loose material, loadout)	$600,000
Operating Expenses (annual)		
	Equipment operator for material receipt, loadout (assume 2 HEOs operating 2-3 days/week)	$100,000
	Annual maintenance and estimated capital funding for infrastructure repair/replacement	$30,000
	Annual utilities	$20,000

The above summary table provides conceptual estimates for the components needed to convert and operate the proposed RTF at a capacity of approximately 4,000 tons per year. Based on this conceptual estimate, the initial capital expense to convert the existing MRF to an RTF is approximately $1.5 million.

In addition, the annual operations for an RTF, including part-time operators and facility upkeep, is estimated to be approximately $150,000/year (or approximately $35/ton). It should be noted that the calculated per ton operating expense for the MRF is greater than the per ton operating expense for a municipal solid waste transfer station estimated elsewhere in this report. The difference is primarily due to the comparatively light weight of the recyclables and the small scale of the proposed RTF.

2.2.3.2 Material Marketing and Transportation Costs

Once consolidated, the single stream recyclables will need to be transported to a regional MRF for further processing. The primary local options include WM Recycle America (Syracuse) or the Oneida-Herkimer MRF. However, at the time of this Report, the Oneida-Herkimer MRF was operating at full capacity and not able to accept additional recyclables.

For conceptual budgeting purposes, Cornerstone has assumed that the County will pay a recyclables tipping fee of approximately $100/ton to the third party MRF. However, in the current market (mid-2022), the revenue sharing offset from the sale of recyclable commodities being seen by the large regional MRFs is approaching $95-$100 per ton, making the net tipping fee cost approximately $0-$5 per ton. To be conservative, this evaluation assumes a $0/ton net tipping fee.

An additional cost to manage the recyclables includes transportation from the RTF to the third-party MRF. The recyclables can be hauled by a third-party transporter, or by County staff and vehicles. The contract for this material can be advertised for a competitive bid for the selected third-party MRF, but based on current County transportation costs, it is estimated at approximately $30/ton of recyclables to go to either the WM Recycle America or Oneida-Herkimer facility.

For benchmarking, the 2020 municipal recycling survey also provided examples of municipalities that contract with a private sector MRF to process residential recyclables. These entities, including Fulton, Otsego, and Columbia Counties, reported paying between approximately $65 and $105/ton of recyclables (excluding transportation costs which were reported to be approximately $25-$40/ton).

During this evaluation, there was discussion of utilizing the empty recycling trailers to haul waste back from the Albany or Boston markets (i.e. “back-haul). However, the back haul will reduce the ability to compact the recyclables and also will increase the potential for contamination of recyclables due to sharing a vehicle with waste materials. Due to these issues, the costing and further logistics for this option was not included in the analysis.

2.2.3.3 Summary

It is estimated for the purpose of this report that the average cost to deliver recyclables to a third-party MRF will net to $0/ton. As noted above, the recyclables tipping fee at third-party MRFs is approximately equivalent to the revenue sharing agreements that will result from sale of the commodities.

However, the cost to transport recyclables to the third party MRF will need to be covered by the County and are estimated to be approximately $30/ton of recyclables ($120,000 per year at 4,000 tons per year).

For the continued in-county operation of the converted facility for recyclables transfer, the initial capital expense was estimated to be approximately $1.5 million, plus transfer operating costs of approximately $35/ton ($150,000 annually).

This Option will require a recyclables tipping fee at the RTF of $35 to $50 per ton to recoup some of the recyclables handling costs. For the purposes of the financial model, a fee of $35/ton at 4,000 tons per year is assumed ($140,000).

2.2.4 Option C: Residential Recyclables Drop-Off Only

To limit the County’s responsibility and scale of recyclables management, the other option that was considered for this study is to only manage the quantity of recyclables that are delivered by residents to the transfer stations. Under this scenario, private haulers will be required to haul recyclables to other regional MRFs at their discretion. Other local counties operate under this model and do not provide MRF/recyclables services beyond a residential drop off location. This model assumes that there is a sufficient quantity of private haulers to provide collection at the transfer stations and also sufficient options (e.g., other MRFs or end-use processors) to accept recyclables not collected at the transfer stations.

This scenario assumes that at least some of the County transfer stations remain operational, but the remaining two-thirds of recyclables that are currently delivered by private haulers will be taken out of the County’s consideration.

Depending on the quantity of recyclables collected at the transfer stations and the distance to the selected MRF, it is assumed to be most viable to transfer these recyclables directly from the respective transfer station, allowing the MRF building to be decommissioned or reconfigured for other County/rented use.

If the MRF is decommissioned, the NYSDEC registration for this facility will be surrendered.

Releasing control of the collection and marketing of recyclables (other than those collected at the remaining transfer stations) places sole control of services/pricing with private haulers, with unknown and potentially significant impacts to residents and businesses.

2.2.4.1 MRF Conversion and Operations Costs

In the event that no recyclables are managed by the County except the recyclable material accepted at the transfer stations, the MRF can be decommissioned or repurposed. The County could consider adding compactors to the transfer stations to move single stream recyclables more efficiently directly from the transfer stations to market.

Table 2-7 MRF Conversion Cost Analysis (Option C)

Cost Component		Cost
Capital Costs to Modify MRF Building		
	Remove Existing Equipment	$8,000
	Demolish or repurpose existing MRF	(varies, with possible third-party revenue from rent)
Capital Equipment Purchases		
	Additional compactor at 1-4 transfer stations (price varies based on relocation from other facilities or new purchase)	$20,000 - $400,000
Operating Expenses		
	Minimal addition to transfer station staffing	(minimal)

2.2.4.2 Material Marketing and Transportation Costs

The overall costs to manage the small quantity of recyclables collected at the transfer stations will be largely consistent with the third-party MRF acceptance fee, revenue sharing, and transportation costs discussed under Option B (Section 2.2.3.2). With the per ton cost to haul recyclables at approximately $30 and a reduced volume of up to approximately 1,300 tons per year, the overall annual transportation expense will be approximately $39,000.

2.2.4.3 Summary

Overall, releasing control of contract-hauled recyclables, representing approximately two-thirds of the current MRF tonnage would lower the overall recycling program cost significantly, with approximately $40,000 for recyclables hauling to a third-party MRF and capital expenses of up to $400,000 at the transfer stations. However, in the context of the County's overall solid waste system costs, this relatively small cost savings would result in a disruption of, or unknown cost impact to, this service to County residents and businesses. The loss of a convenient local recyclables delivery location also may impact the landfill utilization rate and composition, if users separate fewer materials for recycling.

2.2.5 Recommendations

Should the County elect to initiate Alternative #1, Cornerstone recommends including the Option B efficiency for the MRF. The conversion of the MRF to a Recyclables Transfer Facility (RTF) will produce the most cost-effective solution for managing the approximately 4,000 tpy of recyclables collected curbside by private collection companies and collected at the four County operated transfer stations.

Cornerstone also recommends that if the County initiates Option B, that a $35/ton to $50/ton tipping fee be charged to private curbside haulers utilizing the RTF. This will help offset the cost of operating the RTF.

Option B provides the most efficient and cost-effective measures for the county and provided the greatest flexibility for the future both in terms of transfer, but also provides future flexibility for processing, when and if the recyclable commodities markets recover.

2.3 LANDFILL GAS BENEFICIAL USE ALTERNATIVES

The Alternative Analysis used the LFG production estimate and energy available to prepare a budgetary cost estimate including capital expenses, operating and maintenance costs, and potential revenue generated by the project. This work is detailed in Cornerstone's report entitled "Landfill Gas Beneficial Use Study" (LFG Study Report). Cornerstone utilized the information from the LFG modeling and review of the facility information provided in the LFG Study Report along with our knowledge of LFG and renewable gas technology to provide the County with an assessment of options for utilizing the collected LFG.

The following sections provide summary of certain key information contained in the LFG Study Report.

2.3.1 Landfill Gas Recovery

Cornerstone reviewed previously prepared LandGEM gas generation models for the Madison County Landfill. Cornerstone then prepared an independent model of the Section II landfill. Waste rates were obtained from available greenhouse gas (GHG) reports, utilizing the putrescible portion of the waste stream for input into the LandGEM Model. The model indicates that LFG is currently being generated (from the Section III landfill) at a rate of approximately 280 standard cubic feet per minute (scfm). Cornerstone has assumed an LFG collection system efficiency of 75% with the existing GCCS which nets an anticipated LFG recovery rate of approximately 210 scfm in 2022, then increasing for the remaining life of the landfill. Further, based on the model, Cornerstone has determined that the anticipated LFG recovery from Section III will average approximately 240 scfm for the next 10 years.

2.3.2 Utilization Alternatives Analysis

Cornerstone evaluated several options for beneficial use of collected LFG. The options were selected based on discussions with Madison County staff and through Cornerstone's industry knowledge of the LFG/RNG industry. Considering the removal of the genset from the LFGTE facility, the remaining alternatives from the LFG Study Report include:

1. Renewable Natural Gas (RNG) conversion technology for pipeline injection (through either installed pipeline or trucking to an injection point);
2. Evaluate the potential for on-site leachate evaporation and/or selling the LFG to local partners for direct use in a boiler heating system.
3. Continue combustion of LFG in the flare.

For the options, it is assumed that the cost for the construction, operation and maintenance of the LFG wellfield and collection and control features would continue to be the responsibility of the County and are therefore are not considered in this evaluation. This evaluation considers the expenses and revenues beyond a delivery point to a new beneficial use project.

LFG is considered to have an energy content of approximately 500 Btu/cubic foot, based on a typical 50% methane content. Therefore, at the estimated gas collection efficiency of 75%, approximately 240 scfm of LFG collected over the next 10 years, times 500 Btu/cubic foot yields approximately 120,000 Btu/minute, or 7.2 million Btu/hour (MMBtu/hour).

2.3.3 Recommendations

The County should issue an RFP (or include as an element of the public-private partnership RFP; see Section 3.0) for use of collected LFG. While a number of options were evaluated, many would require significant investment by the County. It is expected that the issuance of an RFP would result in the least out-of-pocket cost to the County. There are two (2) targets for issuance of an RFP, which are as follows:

- Focused on a localized project with a local partner as a medium BTU fuel:
    - Obtaining an agreement with a local partner to use the LFG on a localized project would bring additional revenue from the sale of medium BTU fuel and require little to no out-of-pocket (dependent on contract negotiations) expense to the County to construct the necessary piping, compressor, blower, and appurtenances to effectively transport LFG to the project.
- Generic RFP open to respondents to propose a project:
    - Such a RFP would be written to attract interest from private parties that would use the LFG for their own projects. The County would receive revenue from the sale of LFG as a medium BTU fuel, as well as lease the landfill footprint the project occupies.

Ultimately, the other options presented in the LFG Study Report are not recommended because they require operation of a genset (which was removed by WM), would require a significant out-of-pocket near-term expense to the County or would generate no revenue (or a loss thereof) for the County. The options that are not recommended include the following:

Option 1A/1B – Existing Equipment Maintained and Operated by County – Due to the cost associated with hiring an experienced plant operator and anticipated service costs exceeding estimated revenue at the most recently recorded LFG flow levels, as well as the recent removal of the genset (see Option 5 below), this option is deemed infeasible and not recommended.

Option 3 – Conversion to RNG (Truck Fueling or Pipeline Injection) - Conversion to RNG presents the greatest potential for revenue generation but may only be viable if a fleet of vehicles is either existing or proposed to operate on the RNG fuel produced from the collected LFG or require the installation of infrastructure for pipeline injection. This option would require significant out-of-pocket costs to the County to construct the infrastructure required to convert to RNG. Therefore, this option is deemed infeasible and not recommended.

Option 4A – Leachate Evaporation – Leachate evaporation could reduce the County's anticipated cost for disposal. Based on preliminary evaluation, leachate evaporation could consume the available LFG and evaporate up to 20,000 gallons of leachate per day. However, purchasing a leachate evaporator would also require a significant out-of-pocket cost to the County. Air emissions and other impacts associated with this option would need to be further evaluated. Given an existing arrangement for leachate disposal, this option is not preferable based on discussions with the County.

Option 5 – Decommission Engine – The LFG Study Report considered decommissioning of the genset as an option. At WM's initiation, the County and WM have come to agreement for lease termination. As

part of the agreement, the genset was removed by WM from the facility. As such, this option was effectively selected. Without the genset, the only LFG control device remaining is the flare, and as such, all collected LFG is and will be combusted in the flare, unless another beneficial use project is developed.

2.4 LANDFILL EFFICIENCIES

2.4.1 Reduce Landfill Days/Hours

The landfill operation is currently using two separate weekly labor schedules, a Monday through Friday schedule and a Tuesday through Saturday schedule. Both schedules are supplemented with part-time staff. One option is to close the landfill (not the transfer stations) on Saturday. By doing this, approximately four (4) full-time employees can be reassigned to the Monday through Friday schedule allowing for increased efficiencies throughout the solid waste operation and possibly reducing overtime hours. Those employees remaining on the Tuesday through Saturday schedule will operate the transfer stations on Saturdays.

Closing transfer stations on Saturdays is not considered an option. While the landfill tonnages are low on Saturday, around 50 tons total, it is the transfer station's busiest day. If the County closes the landfill on Saturday and continues to operate the transfer stations on Saturdays, it is critical that the transfer station compactor containers be emptied on Thursday or Friday. Based on conversations with the County, if the County closed the landfill on Saturdays, the compactors could not be unloaded until Monday.

If four (4) equipment operators get reassigned to Monday through Friday schedules, it is assumed that an equal number of part-time or overtime hours will be reduced from the schedule. Assuming four (4) full-time equipment operators for eight (8) hours at $45/hours each are re-scheduled, the savings could be up to 32 hours per week or $1,440 per week; or $74,880/year.

2.4.2 Optimize Equipment

Cornerstone completed a high-level review of the equipment that the County is using to operate the landfill and transfer stations. It is difficult to isolate all the scenarios that effect how equipment is used, but in general, much of the large equipment seems to have a good deal of downtime. In fact, based on the hour meters and odometers readings provided, there are only 3 pieces of equipment that operate over 3 hours per day – the CAT 950 Loader on the landfill working face; the Mack Roll-off Truck; and the Western Star Roll-off Truck both transport waste and recyclables from the transfer stations to the landfill.

There are a minimum number of employees and a minimum amount of equipment required to operate any landfill. The County is currently operating at that minimum. Unfortunately, having the minimum amount of labor and equipment for an operation that only receives 200-250 tons per day is an inefficient use of that labor and equipment.

The County could explore opportunities to increase tonnage Monday through Friday by accepting out-of-county waste. This would help offset the cost of the operation and capitalize on the economies of scale in the use of the labor, equipment, standard operating procedures (SOPs), training, and general administration and management.

At this time the County is doing everything it can to reduce excess redundancies in equipment and is already utilizing semi-retired equipment with little residual value as for back-up machines. The County also makes a practice of evaluating their needs and adjusting their equipment purchases to reflect those needs. For example, the County has recently cancelled its order for a new CAT 816 Compactor as the 2019 Compactor has been repaired and the 1997 Compactor is still available as a back-up. Those funds will be redirected to purchase other necessary equipment.

2.4.3 Increase Compaction

Cornerstone discussed the use of the landfill compactors with the operators. In 2021-2022, the 2019 Compactor was down for repairs for 8-months due to issues with the engine which was compounded by supply chain issues with parts. Fortunately, the 1997 Compactor (rebuilt in 2011) was available to use as a back-up. Cornerstone asked if a dozer could be used as a back-up for a compactor. The County said that the dozers can be used in temporary or emergency situations, but their dozers will not provide enough waste compaction because the County dozers are wide-tracked, low ground pressure (LGP) machines. These machines are needed because the wastewater treatment sludge that is accepted can make the landfill face "soupy." That said, the landfill has capacity for 120 years, the short-term loss of compaction is not a concern. As indicated above, the County is doing an excellent job in managing its equipment and the extended downtime of this compactor is not likely to occur again.

2.4.4 Recommendations

Cornerstone's recommendation is that the County consider closing the landfill on Saturdays and shifting all of the operators all to a Monday – Friday schedule. The idea is that the staffing changes will create efficiencies during the week and will reduce the number of overtime hours on other shifts. The estimated reduction in hours is 32 hours per week for an annual savings of $74,880/year.

2.5 FINANCIAL MODEL WITH EFFICIENCIES

2.5.1 Landfill

To assess the financial impact of the implementation of the efficiencies described in Section 2.0, Cornerstone has incorporated several of the efficiencies listed above into the financial model described in Section 1.3.4. Because the combination of efficiencies selected is voluminous, we have evaluated the financial implications of the more significant efficiencies. These include:

- Closing the Landfill on Saturdays – as indicated above, closing the landfill on Saturday's would allow the County to shift four (4) equipment operators to a Monday through Friday schedule. This shift may allow the County to reduce part-time staff and or overtime staff during that shift. Assuming four (4) full-time equipment operators for eight (8) hours at $45/hours each, the savings could be up to 32 hours per week or $1,440 per week; or $74,880/year.

2.5.2 Transfer Stations

Financial modeling of the transfer stations operations, as discussed in Section 2.1, includes closure of the Sullivan and Hamilton transfer station facilities and reduction of operating days/hours for the Buyea Road facility. This would allow County transfer station operations to break-even financially. This recommendation was incorporated into the financial model included in Appendix B as follows:

- The total projected 2023 operating costs for the transfer station system were based on the total projected 2023 operating costs for the four transfer facilities as shown in ***Table 2-3*** (i.e., approximately $882,000/year), less the estimated savings due to Sullivan and Hamilton facility closures (i.e., $151,000/year) as shown in Section 2.1.3.2 and ***Table 2-4***, and reduced Buyea Road operating time as shown in Section 2.1.2.1 and ***Table 2-4*** (i.e., $47,000/year). The resulting operating cost was estimated at $684,000/year resulting in a total operating cost saving of nearly $200,000 per year.
- To break-even financially, the total revenues for the Cazenovia and Buyea Road facilities were set to be equal to the operating costs (i.e., $684,000/year). Total facility revenues include scrap metal sales (estimated in ***Table 2-4*** at approximately $47,000/year) and punch-card sales. Approximately 31,200 punch-cards were sold in 2019, which is also the total estimated punch-card sale volume for 2023. To

provide sufficient revenue for break-even financial operation, the estimated 2023 punch-card sales must equal or exceed $637,000/year. Thus, the required punch-card price would be approximately $20 (i.e., no change from 2022 punch-card price).

As indicated in Section 2.1, the transfers station efficiencies described above have been developed to establish a scenario where operational costs are paid for by incoming revenue. It is understood that significant change to the operation and/or level of service offered at the transfer stations is not a desirable option for a number of reasons. However, these options were evaluated in this report in the interest of a comprehensive evaluation of possible solid waste program alternatives.

2.5.3 Materials Recovery Facility

For the purposes of this financial analysis, Option B of the MRF review (Section **Error! Reference source not found.**) was incorporated into the Financial Model with Efficiencies.

It is estimated that the capital cost to convert the MRF to an RFT transfer station is $1.5M. It is assumed that recyclables can be tipped at a third party MRF for a net $0/ton fee. The operation of the RTF is estimated to be $35/ton for transfer and hauling the recyclables to a third party MRF is estimated to be $30/ton. It is recommended that the County develop a recyclables tipping fee of $35/ton to $50/ton to recoup some of the cost of operating the recyclables transfer station.

2.5.4 Baseline Financial Analysis with Efficiencies

Cornerstone evaluated the cost savings to the County if all the efficiencies mentioned in Section 2.5 were implemented collectively into the Financial Analysis. The efficiencies analyzed that would contribute to cost savings are listed in ***Table 2-8*** below.

Table 2-8 List of Efficiencies

Efficiency	Description
Landfill	Close on Saturdays and shift labor schedules to optimize minimum labor force
Transfer Station	Close the Sullivan and Hamilton Transfer Stations, and operate the Buyea Road Transfer Station at reduced days/hours.
MRF	MRF Conversion to Recyclables Transfer Facility

In addition to the efficiencies the financial impacts anticipated with the known regulatory changes (more robust liner system and leachate treatment) were added to the model at the costs estimated in Section 1.4.

Ultimately, if all of the efficiencies listed in the table are implemented into the landfill, transfer station(s), and MRF, then the Financial Model reveals a net cost of approximately $91/ton to subsidize all of the County's solid waste operations. This net cost will vary depending on several factors including but not limited to the result of the RFP for the landfill gas beneficial use alternative, labor supply to operate the County facilities, as well as the scalability of the Host Towns and/or Third-Party to operate some of the County's existing solid waste services.

Table 2-9 Financial Model – Baseline (30-Year) with Efficiencies

Item	Cost
Cost to Subsidize Landfill Only	
NPV Liner Construction	$16,229,000
NPV Closure Costs	$7,387,000
NPV Post-Closure Maintenance Costs	$10,969,000
CAPEX to Build Leachate Treatment	**$3,000,000**
CAPEX to Convert MRF to TS	**$1,500,000**
Total Development Costs (*through 2082*)	**$39,085,000**
Development Rate (per ton)	$14.25
NPV of Existing Debt	$5,972,000
Debt (per ton)	$2.18
Annual Permitted Waste Acceptance Rate (tons)	60,000
Annual Operating Expense – Landfill Only (2021 or Average)	$4,378,000
Operating Expense (per ton)	$72.96
Cost (per ton) for Landfilling	**$89.39**
Cost to Subsidize All County Facilities	
Annual Operating Expense – All County Facilities	$5,376,000
Annual Revenue *(punch card fees, sale of County/ARC recyclables, LFG sales)*	$899,000
All County Facilities Net Operating Expense (per ton)	$74.62
Net Cost (per ton) to Cover All Facilities Operations	**$91.05**

3.0 ALTERNATIVE #2 – LANDFILL PUBLIC/PRIVATE PARTNERSHIP

3.1 ANALYSIS OF PUBLIC/PRIVATE PARTNERSHIPS

To better understand the implications of a potential public/private partnership of the Madison County Landfill, Cornerstone conducted a high-level review of available information about other landfills operated under public/private partnerships in New York State. Available information from Chemung County Landfill, Ontario County Landfill, Monroe County Landfill and the Town of Colonie Landfill were reviewed. A summary of our findings is provided below.

3.1.1 Duration of Agreements

All of the agreements reviewed were long-term contracts. Ontario County holds a 25-year agreement with Casella/NEWSNY that runs from 2003 through 2028. Chemung County has an agreement with Casella that will run from 2005 through 2030. Monroe County originally signed their agreement with Waste Management Inc. in 2001 and in 2015 amended the agreement to extend the landfill agreement to 49 years (2050) and extended the ECOPark agreement by 13 years to 2028. Most recently the Town of Colonie signed a 25-year agreement with Waste Connections Inc. that will span 2011 to 2036 and has clauses for 5-year voluntary terminations as well as 5-year add-on options.

3.1.2 Typical Agreement Content

In additional to requiring the waste company to pay for operation, maintenance, expansion, closure, and long-term post-closure maintenance and monitoring costs, each agreement had a host of unique requirements, but there are a few common elements including:

- Up-front lump sum payments followed by annual payments;
- Up-front payments were typically contingent upon permit modifications or approvals;
- Graduated payment schedule, i.e. years 1-5 annual payment of $2.3 million/year; years 6-10 annual payments of $1.1 million/year;
- Additional payments based on expansion volumes, i.e. $1.00/CY for the first 5,000,000 CY developed and $2.00/CY for every CY developed thereafter. Payments were typically due at the time of NYSDEC approval, not after landfill expansion construction or on a pay-as-you-go schedule;
- Additional payments for each ton of waste accepted over a base annual amount, i.e. $6.00/ton for tonnage received over 170,500 tons/year; or a payment of a certain percent of tip fees over a certain amount, i.e. 25% of tipping fees over $48/ton;
- Potential renegotiation or fee adjustment periods after 10 or 15 years;
- Negotiated tipping fees for in-county waste or for certain customers or host communities;
- Mandatory capital improvements, payments, or charitable contributions. The Ontario County agreement contained $16.1M in such payments and capital projects.

3.1.3 Potential Services Provided

The services included in a negotiated landfill partnership agreement vary widely. For example, the Monroe County agreement with WM required the development of an EcoPark as well as free curbside waste and recyclables collection and disposal for the host Town of Riga. Most agreements had reduced tipping fees for in-county businesses and residents. The Colonie agreement call for 350 tons/year of free disposal for the Maplewood

Collection District; 1,000 tons/year of free disposal for the DPW; and 25,000 tons/year of free disposal of green waste and a $48/ton tip fee for any green waste over 25,000 tons/year.

Negotiated services are not limited to solid waste services. The Chemung agreement requires a $25,000/year in support of their Career Development Center. The Ontario agreement calls for $1.6M of infrastructure improvements and support of local groups and organizations.

The County might consider negotiating for the following additional services to be included in a partnership agreement:

- Operation of some, or all four (4), Transfer Stations
- Management of County recyclables
- Beneficial utilization of collected LFG
- Discounted tipping fees for County residents and businesses
- Reserved free capacity for natural disaster debris
- Continuation of an organics management program (e.g., composting)

3.1.4 Financial Compensation

Because of varying payment schedules, incentives, expansion payments, discounted tip fees, capital improvements, etc., annual payments will vary widely from year to year. Tetra Tech tried to normalize this by estimating the total potential value of each agreement and divided by the duration of the agreement to get an average estimated payment per year. In some cases, the exact payments were not readily extractable. Our estimated annual payments for the four agreement reviews are as follows:

County/Town	Est. Contract Value	Avg. Annual Payment
Chemung	$73M	$2.9 M/Yr
Ontario	$100M	$4.0 M/Yr
Monroe	$44M (2001 to 2016)	$2.9 M/Yr
Colonie	$70M	$2.8 M/Yr

Overall, the reviewed data suggests that if Madison County were to engage in a partnership, they could expect to negotiate an agreement that yields an average of $3M to $4M per year over a 25-year period. This would likely be contingent upon an increase in the permitted annual tonnage limit from 60,000 TPY to about 240,000 TPY; from 200 tpd to 800 tpd. This would reduce the estimated overall remaining lifespan from 120 years to about 30 years.

3.2 PERMIT IMPLICATIONS AND REQUIREMENTS

In addition to needing to negotiate an acceptable agreement in the case of privatizing some/all of the County's solid waste management system, permit modifications would be required to accommodate an increased annual tonnage limit (suggested increase to 240,000 tpy). The private operator could be expected to lead that effort – and that could be written into the agreement as a requirement. But conversely, the private operator will most certainly require that the County, and possibly the host community, support a permit modification for increased tonnage. This support will likely be written into any agreement and will require the County to be involved in, and support, identifying the potential impacts and implementing mitigation measures associated with increased tonnage (e.g., increase traffic, increase air emissions, potential visual impacts, and others).

Additionally, a landfill operator would likely pursue options to expand the landfill beyond the 30-year horizon discussed in the previous section. This could be in the form of overfills, lateral expansions, or new cell footprints on County owner property.

3.3 POTENTIAL INTERMUNICIPAL AGREEMENTS

Madison County is comprised of 15 towns, 10 villages and the City of Oneida. According to the 2010 US Census, Madison County has a total population of 73,442 people and 26,026 occupied households. As per the Local Law No. 4 for 2001 with revisions made in 2004 (refer to Appendix A), the County reinstated flow control meaning non-hazardous waste generated within the County must be brought to the Town of Lincoln Landfill (Madison County Landfill) for disposal.

Flow control of generated solid waste is crucial to maintaining the self-supporting financial structure of the County's solid waste management system. The County's program relies solely on revenue from tipping fees on non-recyclable wastes and the sale of recyclable materials. These revenues pay for operating and debt service costs, costs of future landfill development and fund the landfill closure/post-closure reserve costs. The County does not use tax money to subsidize its waste management and recycling program costs. While generated solid waste is bound by the flow control law, the same is not true for recyclables, which can be taken out of the county.

Madison County borders six (6) other counties. To help fortify revenues, the County could explore inviting other counties to join an intermunicipal agreement with the idea that they would dispose their waste at the Madison County LF. There is a minimum level of equipment and personnel required to operate a landfill and this level is not always the most efficient. Madison County may be able to accept more tonnage without increasing personnel or equipment, i.e., increase revenue with no appreciable increase to expenses. This would increase revenues in relation to operating expenses and further help reduce costs for Madison County residents. However, this would require a modification to the current NYSDEC permit to increase annual tonnage.

It is also not clear if entering an intermunicipal agreement with Madison County would invoke the non-owning county's rights for flow control. A legal opinion will be required to determine if an intermunicipal agreement or co-ownership will be required for flow control.

3.4 POTENTIAL FINANCIAL IMPACTS TO COUNTY TRASH FEES

As noted above, some partnership agreements contain clauses that allow for discounted in-county disposal fees. Cornerstone reviewed readily available tipping fee information for other counties.

One example is Otsego County which has an agreement with Casella to operate the county's two (2) transfer stations (Oneonta and Cooperstown) and haul waste and recyclables to a landfill or processor. The current 2022 rate for in-county waste is $95/ton; the out-of-county waste rate is $98.50/ton. Recyclables are $75/ton for all. Rates are adjusted annually and approved by the County.

Otsego County does not have a landfill, so all materials must be hauled to a landfill for disposal or to a recycling facility for processing and marketing. Casella probably hauls the waste to the Ontario County Landfill approximately 140 miles away. Cornerstone estimates the $95/ton fee breakdown to be $25/ton for hauling; $45/ton for disposal fees, $15/ton for transfer station operation; and $10/ton profit.

Another comparison for tip fees is the municipally run Broome County Landfill which charges an in-county rate of $55/ton. Broome County is a large operation (232,000 tons/year) that benefits from economies of scale that are similar to what a private operator might encounter at Madison County after an expansion.

At Colonie, in-county residents pay a gate rate of $73.34/ton while out-of-county residents pay $176.88/ton.

In Fulton County, another County operated landfill, in-county commercial haulers are charge $60/ton for while out-of-county commercial is charged $66/ton.

In Ontario County, Casella confirmed that there is a difference in tipping fees for in-county and out-of-county but did not want to share the actual tipping fees.

Overall, these agreements typically have discounted rates for in-county residents. Irrespective of other counties agreements, Madison County will be able to negotiate their own agreement based on the needs and values of your residents. Using these estimates as a guide, Madison County may be able to negotiate an in-county disposal fee in the $45/ton to $55/ton range.

3.5 RECOMMENDATIONS

Due to the complexity of understanding how different qualified operators would value a partnership, it is not possible to know the detailed financial implications and benefits that would be available to the county. Therefore, it is recommended that the County issue an RFP and negotiate an agreement that provides the same or an increased level of services to Madison County residents and businesses.

3.5.1 Public/Private Partnership

It is recommended that the County issue an RFP to enter into a public/private partnership with a solid waste management firm and negotiate an agreement that provides the same or an increased level of services to Madison County residents and businesses, with a term length of at least 20 years.

Developing a public/private partnership has both strengths and weaknesses.

- The main strength is financial. Proceeding with a partnership will monetize the future permitted capacity of the landfill. The County will get compensated for their asset, the landfill. In 25-30 years, the value of landfill capacity might be higher, or it might be lower. Currently, the estimated value of the landfill capacity is estimated at $5M to $6M a year for the next 25-30 years.
- The main weakness of the public/private partnership model is that the County will give up the long-term security of permitted landfill capacity. As indicated above, the future of solid waste management is uncertain, and by agreeing to a partnership that will exhaust the future landfill capacity over next 25-30 years, as opposed to 120-years, is a weakness. If the County moves forward with the public/private partnership, it must develop a new long-term waste management strategy for the years after the partnership (2053 and beyond). Without a plan, after the partnership expires, the County will be subjected to the market rates and trends.

3.5.2 Procurement Process

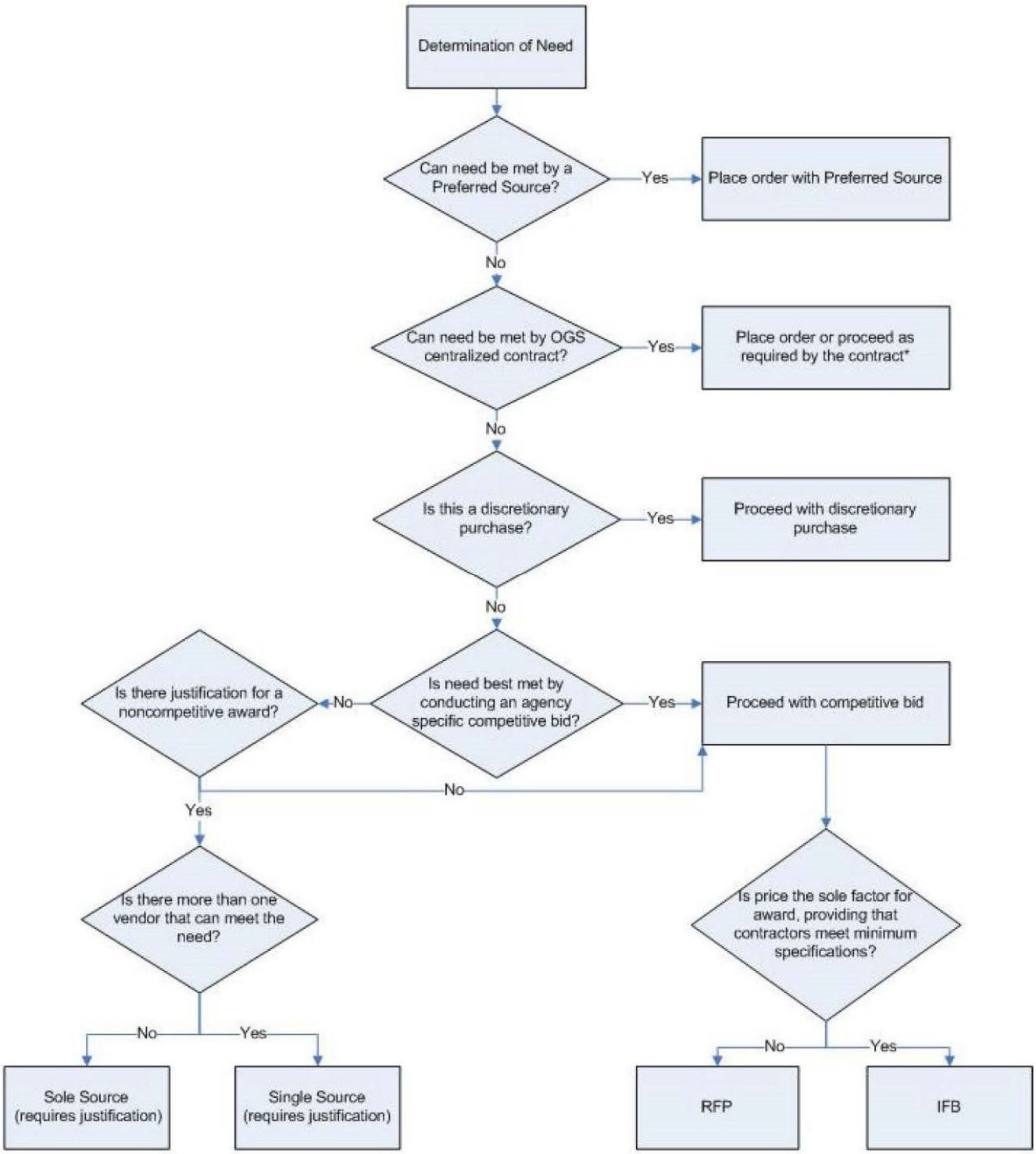
Based on the New York State Procurement Guidelines, if the County decides to develop a public/private partnership for solid waste operations, the first step will be to select a procurement method.

Based on Cornerstone's understanding, we presume that an RFP is the preferred method of procurement as price is not the sole factor for award, level of service is another critical factor. The RFP will detail the current solid waste operations and detail the base bid requirements for bidders (presumably Waste Management, Waste Connections, WIN Waste, and Casella). The RFP can also contain a series of add alternate items and can be structured to be a starting point for advanced negotiations. For example, a base bid may be to operate the landfill, MRF and Buyea Road Transfer Station. Separate add alternates may include operation of the Cazenovia,

Hamilton and Sullivan Transfer Stations. This way the Contractor will assign a value to operate those transfer stations and the County can decide if they want to continue to support those facilities given the cost.

The RFP is typically developed with input from both County counsel and a solid waste management consultant. Once developed, the County will advertise for bidders, provide the RFP to potential bidders, provide an opportunity for bidders to see the site and ask questions, respond to questions via addendum, and finally, open sealed bids. After opening the bids, the County can either accept a bid or begin negotiations with a preferred qualified bidder. Unlike construction bids, the County is seeking the highest total compensation for a suite of solid waste services to be provided by a qualified bidder.

Figure 6 - New York State Procurement Guideline – Procurement Method Flow Diagram



4.0 ALTERNATIVE #3 – LANDFILL CLOSURE

4.1 FINANCIAL IMPLICATIONS

Cornerstone evaluated the costs associated with closing the landfill now and stopping waste acceptance after Cells 8 and 9 reach capacity, which is anticipated to occur in 2025. In this Alternative, there will be no liner construction costs as Cells 8 and 9 already have a fully constructed liner. The only costs that the County will continue to bear is the capping costs for Cells 8 & 9, post-closure costs, as well as the debt repayment for the previous capital expenditures taken to fund the landfill expansion and sewer line construction.

The remaining acreage to be capped between Cells 8 and 9 is approximately 22.31 acres according to based Table 1A "Financial Assurance Summary Closure Cost Breakdown" of the "Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates" prepared by Barton & Loguidice. Based on an estimated cost to cap an acre at $291,585 (2022 dollars), the NPV cost associated with capping Cells 8 & 9 in 2025 will be approximately $7.44 million.

The Post-Closure period in this Alternative will consist of maintaining 52-acres if the Landfill were to close now, instead of 64 acres if the Landfill were to close in 30 years. Additionally, the post-closure costs will be less in this Alternative due to less inflation accumulated since the post-closure period is being moved up to start in 2026, less leachate generated from fewer acreage of landfill constructed, less acreage to be mowed, and less water & gas monitoring to sample. While incorporating $10 million to cover custodial care following the 30-year post closure period, the total NPV cost for post-closure in this Alternative amounts to $12 million.

In this Alternative, the County is still responsible for the repayments for previous capital expenditures for the landfill expansion and previous sewer line construction which amounts to $7.27 million if the County were to continue the current repayment schedule which includes $4.33 million to cover the remaining payments from the landfill expansion and $2.94 million to cover the remaining payments for the sewer line construction.

Table 4-1 Financial Implications – Close Now

Item	Cost
Liner Construction	$0
NPV Closure Costs	$7,436,380
NPV Post-Closure Maintenance Costs	$12,002,337
Remaining Debt Payments for Previous LF Expansion	$4.325,123
Remaining Payments from Sewer Line Construction	$2,943,000
TOTAL	$26,706,840

4.1.1 Future Disposal Costs

MSW Transfer Station Costs – Once the landfill is closed, it is expected that the County will develop a municipal solid waste transfer station on the landfill property to transfer the waste that would normally be disposed of at the landfill. While it is likely that some waste will bypass the County's transfer station if flow control were eliminated, a

transfer station able to accommodate approximately 400 tons/day is recommended to displace the full permitted landfill tonnage.

For conceptual planning purposes, a similarly sized transfer station was costed in Westchester County, NY in September 2021 for approximately $9.5 million and bids were received for a larger transfer station in Orange County, NY including significant earthwork that averaged over $15 million. For the purposes of this report, a conceptual value to develop a new transfer station to manage approximately 400 tons per day is assumed to have a capital construction cost of approximately $10 million (2022 dollars). Including permitting and preparation of construction documents, the capital investment is modeled at approximately $12 million. Operating costs for a MSW transfer station are estimated at $15/ton or $900,000/year for 60,000 tons.

Hauling Costs MSW – If the County closes their landfill and develops an MSW transfer station, the waste collected and processed will need to be hauled to a disposal site or to a recycling plant for further processing. Appendix D contains a spreadsheet that estimates the cost per ton and the cost per mile ($/ton and $/mile) to haul MSW. Assuming an average one-way haul to a disposal or processing facility of 70 miles, the cost per ton is $25.00/ton or $6.64 per mile. This assumes a transfer trailer hauling a 39-ton load with proper overweight permits.

MSW Tipping Fee – Cornerstone reviewed tipping fees across the state and if the landfill is closed, the County will be paying the market rate to dispose of their waste. In an open market, a negotiated tipping fee for a guaranteed 60,000 tons/year of waste will likely fall in the $65 to $75/ton range.

Total per Ton Cost for MSW Disposal – Based on a transfer station operation cost of approximately $15.00/ton; a hauling cost of about $25.00/ton; and a tipping fee of $65/ton to $75/ton the County should be prepared to pay between $105 and $115/ton to manage their MSW should the landfill be closed.

MRF Costs – Under the Landfill Closure Alternative (Alternative #3), it is expected that the MRF Efficiencies (Alternative #1) Option B will be implemented and the existing MRF building will be converted to an RTF for the receipt and transfer of single stream recyclables to a third-party MRF at a capital cost of $1.5M. The operations of this converted recyclables transfer facility will be approximately $150,000 annually ($35/ton of recyclables).

Hauling Costs Recyclables – If the County converts the MRF to an RTF, the approximate 4,000 tons of recyclables collected will be transferred at a cost of $35/ton and hauled to a processing facility at an approximate cost of $30/ton of recyclables. The resulting RTF cost is approximately $65/ton or approximately $260,000 annually).

Recyclables Revenue – Cornerstone has assumed that the RTF's source separated single stream recyclables will be accepted at third party MRFs at a net cost of $0/ton. To offset the cost of the MRF operation, the County can impose a $35/ton to $50/ton tip fee on incoming single stream recyclables. This tip fee would generate $140,000 to $200,000 in revenues to offset the cost of the RTF and hauling.

Total per Ton Cost Recyclables – Based on a recyclables transfer facility operation cost of approximately $35/ton; a hauling cost of $30/ton; and revenue from a tipping fee of between $35/ton to $50/ton, the County should be prepared to pay an net cost in the range of $60,000 to $120,000 per year to manage their recyclables should the landfill be closed (net program cost of $60,000 t0 $120,000 per year, plus $1.5M capital cost for RTF conversion).

Total Solid Waste Management Cost MSW and Recyclables – Based on the analysis above, the County should expect to pay $60,000 to 120,000 for recyclables management (plus capital investment debt service) and between $6,300,000 and $6,900,000 for MSW disposal. If the landfill closes, the total estimated solid waste management cost for the County is estimated to be approximately $6.36M to $7.02M ($115/ton to $120/ton).

4.1.2 Recommendations

Based on the value of the landfill as an asset to the county and the potential high cost of future waste and recyclable management, it is recommended that the County does not close the landfill.

5.0 RECOMMENDATIONS

Based on Cornerstone's findings, it is our overall recommendation that the County carefully consider the implications of each of the alternatives presented herein prior to deciding on how to proceed.

5.1 SUMMARY OF ALTERNATIVES

Alternative No.	Description
#1	Continue Operations and implement Efficiency Measures at MRF, Transfer Stations, Landfill Gas & Landfill)
#2	Develop a Public-Private Partnership to Operate Solid Waste program facilities.
#3	Close Landfill

5.1.1 Alternative #1 - Maintain Overall Integrated System - Initiate Efficiencies

- Efficiencies: This includes evaluating options to modify and improve the operation of the residential Transfer Stations, the MRF, the LFG utilization system and Landfill Operations.
    - Transfer Stations
        - Continued TS Operations with New Efficiency Measures
        - Selective TS Ownership Transfer to Towns
        - Selective TS Closures
    - Materials Recovery Facility Alternatives
        - Continued MRF Operations with New Efficiency Measures
        - MRF Conversion to Recyclables Transfer Facility
        - Residential Recyclables Drop-Off Only
    - Landfill Gas Beneficial Use Alternatives
        - Continued Landfill Gas Recovery and Flaring
        - Utilization Alternatives
    - Landfill Operations
        - Reduce Landfill Days/Hours

5.1.2 Alternative #2 – Landfill Public/Private Partnership

- Negotiate with Private Waste Firm to Operate Landfill
    - Contractual Obligations
    - Services to be Provided
    - Agreement Duration
    - Financial Compensation

5.1.3 Alternative #3 – Landfill Closure

- Close and Cap Landfill
- Future Waste Management

- Develop MSW Transfer Station
- Convert MRF to Manage Recyclables
- Haul and Dispose of Waste at an out-of-county Landfill

5.2 RECOMMENDATION

Cornerstone recommends that the County pursue Alternative #2 and enter into a public/private partnership with a solid waste management firm and negotiate an agreement that provides the same or an increased level of services to Madison County residents and businesses. Based on the New York State Procurement Guidelines, the first step is to select a procurement process to develop a public/private partnership for solid waste operations. It is likely the procurement method will be a Request for Proposals (RFP).

If the County elects not to pursue a public/private partnership, Alternative #1 is the next best alternative.

Cornerstone does not recommend that the County close its landfill (Alternative #3).

6.0 LIMITATIONS

The work product included in the attached was undertaken in full conformity with generally accepted professional consulting principles and practices and to the fullest extent as allowed by law we expressly disclaim all warranties, express or implied, including warranties of merchantability or fitness for a particular purpose. The work product was completed in full conformity with the contract with our client and this document is solely for the use and reliance of our client (unless previously agreed upon that a third party could rely on the work product) and any reliance on this work product by an unapproved outside party is at such party's risk.

The work product herein (including opinions, conclusions, suggestions, etc.) was prepared based on the situations and circumstances as found at the time, location, scope and goal of our performance and thus should be relied upon and used by our client recognizing these considerations and limitations. Cornerstone Engineering and Geology, PLLC shall not be liable for the consequences of any change in environmental standards, practices, or regulations following the completion of our work and there is no warrant to the veracity of information provided by third parties, or the partial utilization of this work product.

APPENDIX A

FINANCIAL MODEL - BASELINE

Table A-1: Baseline Analysis (30-year) Summary

Madison County Landfill Financial Model (Baseline 30-Year)

		Notes:
Salvage Value ($)	$0.00	*No value of landfill airspace once "filled"*
Number of Units (CY)	2,222,222	*airspace remaining as of 2021 Annual Report*
NPV Previous Liner Debt	$ 3,725,548.62	
NPV of Previous Leachate Line Debt	$ 2,245,973.49	
NPV Liner Construction	$15,902,903.64	
NPV Closure Costs	$7,387,161.91	
NPV Post-Closure Maintenance Costs	$10,968,784.82	
Development Costs	**$34,258,850.38**	*Cost (in today's dollars) which needs to be capitalized over the next 120 years and is depleted over time*
Development Rate (on per CY basis)	$ 15.42	*one CY of airspace is worth (today's dollars)*
Waste Density (Tons/CY)	0.81	*historical average from annual rpt form*
Development Rate (on per ton basis)	**$ 12.49**	*cost associated using a CY of airspace on a per ton basis (today's dollars)*
Existing Debt	$ 5,971,522.11	*Cost (in today's dollars) of existing debt*
Debt (on per ton basis)	**$ 2.18**	
Total Number Units Extracted (ton/yr)	60,000	*permitted rate*
Total Development Expense (2022)	$ 749,241.06	*using up this much "value" in air space*
Landfill Annual Operating Expenses (2021 or Avg)	$ 4,152,761.83	*landfill only*
Annual Operating Expense per ton	**$ 69.21**	*cost to place a ton of waste into the landfill*
Annual Net Cost per ton	$ 83.88	*landfill only*

Total Annual Operating Expenses (2021 or Avg)	$ 5,894,356.68	*all facilities*
Total Annual Revenue (2021 Projected)	$ 1,023,288.00	*sale of County/ARC recyclables, punch card fees, methane gas sale*
Annual Operating Expense per ton (all facilities)	**$ 81.18**	*Average overall cost per ton of waste (distribued over 60,000 ton diposed in LF)*
Annual Net Cost per ton	$ 95.85	*Average overall cost per ton of waste with debt and development (distribued over 60,000 ton diposed in LF)*

Assumptions:

Estimated Cost to Line an acre (2021)	$ 1,329,282.00
Estimated Cost to Cap an acre (2021)	$ 291,585.00
Estimated annual cost to maintain an acre post-closure (2021)	$ 1,796.52
Estimated annual cost for leachate management (entire landfill) (2021)	Varies
Estimated total cost for custodial care following 30-year post-closure period	$ 10,000,000.00
# of Acres Remaining Cap during 30 year analysis	33.91
# of Acres to Maintain Post-Closure	63.61

Table A-2: Net Present Value of Development and Debt Service

Liner Construction Cost ($)				
2.22% <-- Discount Rate				
	t		Inflated Future Cost	Present Value
2024		2	$5,279,060.69	$5,064,936.42
2032		10	$10,805,117.73	$8,726,119.22
2048		26	$3,713,256.58	$2,111,848.00
2052			**$19,797,434.99**	**$15,902,903.64**
Capping Cost ($)				
2.22% <-- Discount Rate				
	t		Inflated Future Cost	Present Value
2024		2	$1,484,029.93	$1,420,408.93
2031		9	$1,764,045.23	$1,448,365.00
2038		16	$2,096,895.44	$1,476,871.29
2045		23	$2,492,549.73	$1,505,938.63
2052		30	$2,962,858.36	$1,535,578.07
			$10,800,378.69	**$7,387,161.91**
TOTAL POST CLOSURE				
2.22% <-- Discount Rate				
	t		Inflated Future Cost	Present Value
2053		31	$1,493,648.05	$757,346.56
2054		32	$1,530,989.26	$759,458.22
2055		33	$1,569,263.99	$761,575.77
2056		34	$1,608,495.59	$763,699.23
2057		35	$1,648,707.98	$765,828.61
2058		36	$575,457.98	$261,509.11
2059		37	$589,844.43	$262,238.26
2060		38	$604,590.54	$262,969.45
2061		39	$619,705.30	$263,702.67
2062		40	$635,197.93	$264,437.94
2063		41	$463,249.00	$188,675.08
2064		42	$474,830.23	$189,201.15
2065		43	$486,700.98	$189,728.69
2066		44	$498,868.51	$190,257.70
2067		45	$511,340.22	$190,788.18
2068		46	$430,209.29	$157,038.69
2069		47	$440,964.52	$157,476.55
2070		48	$451,988.63	$157,915.63
2071		49	$463,288.35	$158,355.94
2072		50	$474,870.56	$158,797.48
2073		51	$439,785.10	$143,877.95
2074		52	$450,779.73	$144,279.11
2075		53	$462,049.22	$144,681.40
2076		54	$473,600.45	$145,084.80
2077		55	$485,440.46	$145,489.34
2078		56	$473,644.40	$138,877.84
2079		57	$485,485.51	$139,265.07
2080		58	$497,622.64	$139,653.37
2081		59	$510,063.21	$140,042.76
2082		60	$10,522,814.79	$2,826,532.27
			$30,373,496.85	**$10,968,784.82**

Remaining Payments from LF Expansion Principal + Interest (Total Principal and Interest p10/11 of budget package)

2.22% <-- Discount Rate

	t	Future Cost	Present Value
2022	0	$287,356.25	$287,356.25
2023	1	$286,731.00	$280,517.54
2024	2	$285,956.00	$273,696.94
2025	3	$285,031.00	$266,899.77
2026	4	$288,881.00	$264,643.02
2027	5	$287,506.00	$257,675.87
2028	6	$285,981.00	$250,754.87
2029	7	$289,231.00	$248,108.94
2030	8	$287,256.00	$241,074.93
2031	9	$290,056.00	$238,149.76
2032	10	$292,556.00	$234,997.20
2033	11	$294,756.00	$231,633.67
2034	12	$291,562.00	$224,158.56
2035	13	$292,968.00	$220,358.58
2036	14	$279,296.00	$205,522.73
		$4,325,123.25	**$3,725,548.62**

Remaining Payments from Sewer Line Principal

2.22% <-- Discount Rate

		Future Cost	Present Value
2022	0	$109,000.00	$109,000.00
2023	1	$109,000.00	$106,637.97
2024	2	$109,000.00	$104,327.12
2025	3	$109,000.00	$102,066.35
2026	4	$109,000.00	$99,854.57
2027	5	$109,000.00	$97,690.73
2028	6	$109,000.00	$95,573.77
2029	7	$109,000.00	$93,502.68
2030	8	$109,000.00	$91,476.48
2031	9	$109,000.00	$89,494.18
2032	10	$109,000.00	$87,554.84
2033	11	$109,000.00	$85,657.53
2034	12	$109,000.00	$83,801.33
2035	13	$109,000.00	$81,985.35
2036	14	$109,000.00	$80,208.73
2037	15	$109,000.00	$78,470.61
2038	16	$109,000.00	$76,770.15
2039	17	$109,000.00	$75,106.54
2040	18	$109,000.00	$73,478.98
2041	19	$109,000.00	$71,886.69
2042	20	$109,000.00	$70,328.90
2043	21	$109,000.00	$68,804.87
2044	22	$109,000.00	$67,313.87
2045	23	$109,000.00	$65,855.18
2046	24	$109,000.00	$64,428.10
2047	25	$109,000.00	$63,031.94
2048	26	$109,000.00	$61,666.04
		$2,943,000.00	**$2,245,973.49**

Table A-3: Operating Cost Summary

OPERATING EXPENSES			2021 Actual	Average Annual Expense (2018-2021)	Highest of 2021 or Average)	Approximate Allocations based on Highest of 2021 Cost or Average — LANDFILL %	LANDFILL $	
EE816480	511000	PERSONAL SERVICES FULL TIME	1,041,047.22	$ 1,063,550.02	$ 1,063,550.02	75%	$ 797,662.52	
EE816480	513000	PERSONAL SERVICES PART TIME	89,807.49	$ 79,678.07	$ 89,807.49	55%	$ 49,394.12	
EE816480	514000	OVERTIME	34,258.06	$ 43,181.36	$ 43,181.36	90%	$ 38,863.23	
EE816480	515000	SEVERANCE		$ 7,425.23	$ 7,425.23	85%	$ 6,311.45	
EE816480	522500	VEHICLE LEASE EXPENSE	$ 35,042.04	$ 28,249.81	$ 35,042.04	85%	$ 29,785.73	
EE816480	529080	VEHICLE		$ 19,019.25	$ 19,019.25	85%	$ 16,166.36	
EE816480	529330	MISCELLANEOUS EQUIPMENT	168,718.07	$ 81,244.08	$ 168,718.07	80%	$ 134,974.46	
EE816480	529990	CAPITAL EQUIPMENT RESERVE	$ 178,334.00	$ 35,666.80	$ 178,334.00	90%	$ 160,500.60	
EE816480	540101	COMPUTER EQUIP NOT CAPITALIZED	$ -	$ 657.44	$ 657.44	90%	$ 591.70	
EE816480	540103	COMPUTER SOFTWARE MAINTENANCE	$ 4,312.00	$ 6,821.53	$ 6,821.53	100%	$ 6,821.53	
EE816480	540123	SITE SECURITY	$ 112,611.79	$ 26,895.06	$ 112,611.79	95%	$ 106,981.20	
EE816480	540124	OFFICE BUILDING DESIGN & BIDDING	$ 19,839.01	$ 3,967.80	$ 19,839.01	90%	$ 17,855.11	
EE816480	540157	TIRE MANAGEMENT	$ 15,926.55	$ 12,301.46	$ 15,926.55	85%	$ 13,537.57	
EE816480	540200	MISCELLANEOUS EXPENSE	$ 5,737.47	$ 5,690.73	$ 5,737.47	90%	$ 5,163.72	
EE816480	540300	MISCELLANEOUS BUILDING EXPENSE	$ 16,235.22	$ 44,945.54	$ 44,945.54	90%	$ 40,450.99	
EE816480	540450	RECYCLING EXPENSE	$ 72,229.73	$ 67,382.05	$ 72,229.73	0%	$ -	
EE816480	540460	LEACHATE TREATMENT TRANSPORT	$ 232,177.04	$ 115,089.22	$ 232,177.04	100%	$ 232,177.04	
EE816480	540461	LEACHATE DISPOSAL	$ 341,828.38	$ 167,488.63	$ 341,828.38	100%	$ 341,828.38	
EE816480	540462	TRANSPORTATION OF BIOSOLIDS	$ 35,106.78	$ 34,290.17	$ 35,106.78	100%	$ 35,106.78	
EE816480	540560	EMPLOYEE SAFETY EXPENSE	$ 14,356.27	$ 16,713.65	$ 16,713.65	90%	$ 15,042.28	
EE816480	540602	COMPENSATED ABSENCE EXPENSE		$ 5,335.19	$ 5,335.19	90%	$ 4,801.67	
EE816480	540635	LANDFILL SITE MAINTENANCE	$ 182,701.66	$ 114,867.41	$ 182,701.66	100%	$ 182,701.66	
EE816480	541000	TRAVEL EXPENSE (MILEAGE)	$ 574.88	$ 2,298.33	$ 2,298.33	100%	$ 2,298.33	
EE816480	541375	EMERGENCY COVID-19 EXPENSE		$ -			$ -	
EE816480	542008	JANITORIAL SERVICES	$ 16,046.79	$ 11,893.50	$ 16,046.79	100%	$ 16,046.79	
EE816480	542140	ENGINEERING EXPENSE	$ 274,776.21	$ 188,002.04	$ 274,776.21	100%	$ 274,776.21	
EE816480	542175	PROFESSIONAL LEGAL COUNSEL	$ 9,308.00	$ 9,758.35	$ 9,758.35	100%	$ 9,758.35	
EE816480	542756	HIGHWAY DEPT SERVICES BILLING		$ 2,208.00	$ 2,208.00	100%	$ 2,208.00	
EE816480	542757	PUBLIC INFORMATION DEPT SVCS	$ 5,000.00	$ 2,000.00	$ 5,000.00	100%	$ 5,000.00	
EE816480	544000	GAS & ELECTRIC EXPENSE	$ 14,278.32	$ 30,460.68	$ 30,460.68	90%	$ 27,414.61	
EE816480	544011	SEWER UTILITY EXPENSE	$ 27,619.53	$ 26,521.48	$ 27,619.53	100%	$ 27,619.53	
EE816480	547007	INSURANCE	$ 31,289.00	$ 28,372.00	$ 31,289.00	95%	$ 29,724.55	
EE816480	547250	RECYCLING CONTRACT ARC	$ 814,655.00	$ 940,955.36	$ 940,955.36	0%	$ -	
EE816480	547251	E-WASTE MANAGEMENT ARC	$ 61,548.00	$ 47,806.80	$ 61,548.00	0%	$ -	
EE816480	547260	DEPUTY SHERIFF'S SERVICE	$ 9,202.07	$ 9,187.65	$ 9,202.07	100%	$ 9,202.07	
EE816480	547330	CONTRACT PAVING		$ 20,833.43	$ 20,833.43	50%	$ 10,416.71	
EE816480	548200	REPAIR PARTS	$ 168,450.39	$ 141,869.28	$ 168,450.39	90%	$ 151,605.35	
EE816480	548220	FUEL OIL (DIESEL)	$ 104,796.15	$ 107,266.04	$ 107,266.04	90%	$ 96,539.43	
EE816480	548900	PHOTOCOPY USAGE/LEASE	$ 2,135.25	$ 2,738.53	$ 2,738.53	90%	$ 2,464.68	
EE816480	549000	CENTRAL POSTAGE EXPENSE	$ 1,216.93	$ 1,473.02	$ 1,473.02	90%	$ 1,325.72	
EE816480	549100	CENTRAL PRINT & SUPPLY EXPENSE	$ 853.61	$ 1,415.04	$ 1,415.04	90%	$ 1,273.54	
EE816480	549110	OFFICE SUPPLIES & EXPENSE	$ 8,739.08	$ 9,311.20	$ 9,311.20	90%	$ 8,380.08	
EE816480	549200	CENTRAL TELEPHONE EXPENSE	$ 5,846.14	$ 5,960.93	$ 5,960.93	90%	$ 5,364.84	
EE816480	549600	RESIDENTIAL TSF ST IMPROVEMENT	$ 4,290.28	$ 2,462.79	$ 4,290.28	0%	$ -	
EE816480	549994	INDIRECT COST RECOVERY	$ 188,682.00	$ 190,304.40	$ 190,304.40	90%	$ 171,273.96	
EE816480	549995	HOST COMMUNITY PACKAGE	$ 50,000.00	$ 52,816.00	$ 52,816.00	100%	$ 52,816.00	
EE816480	549996	RESERVE FOR FUTURE DEBT SVC		$ -			$ -	
EE816480	581100	STATE RETIREMENT EXPENSE	$ 152,634.04	$ 218,842.24	$ 218,842.24	75%	$ 164,131.68	
EE816480	582100	SOCIAL SECURITY EXPENSE	$ 87,051.23	$ 89,057.84	$ 89,057.84	75%	$ 66,793.38	
EE816480	583100	WORKERS COMPENSATION EXPENSE	$ 39,439.47	$ 51,776.91	$ 51,776.91	75%	$ 38,832.68	
EE816480	584100	UNEMPLOYMENT BENEFITS	$ -	$ 762.90	$ 762.90	75%	$ 572.18	
EE816480	585100	DISABILITY EXPENSE	$ 2,152.80	$ 2,393.32	$ 2,393.32	75%	$ 1,794.99	
EE816480	586100	EMPLOYEE HEALTH INSURANCE	$ 191,420.70	$ 224,022.13	$ 224,022.13	75%	$ 168,016.60	
EE817180	546250	FACILITIES EXPENSE	$ 49,770.54	$ 30,335.20	$ 49,770.54	90%	$ 44,793.49	
			$ 4,922,045.19	**$ 4,433,565.88**	**$ 5,310,356.68**	68%	**$ 3,627,161.83**	
EXTRA ITEMS INCLUDED IN MODEL								
EE816480	529640	Equipment Budget (Capital Plan)	502,000.00	$ 584,000.00	$ 584,000.00	90%	$ 525,600.00	
EE816480	594215	TRANSFER TO GENERAL MID-YEAR	20,000.00				$ -	
EE817680	542161	GAS FIELD SUPPLY & SERVICE	$ 43,216.93				$ -	
			$ 5,487,262.12	**$ 5,017,565.88**	**$ 5,894,356.68**	*Overall Operating Expense*	**$ 4,152,761.83**	*Landfill Only Operating Expense*

Table A-4: Operating Revenue Summary (Non Landfill)

OPERATING REVENUES			2021 PROJECTED	2021 ACTUAL		USED IN MODEL CALCUALTIONS
EE816480	421301	USER FEES RESIDENTIAL PUNCH CARDS	$ 560,000.00	$	518,288.00	$ 518,288.00
EE816480	426510	SALE OF COUNTY RECYCLABLES	$ 130,000.00			$ 130,000.00
EE816480	426511	SALE OF ARC RECYCLABLES	$ 300,000.00			$ 300,000.00
EE817680	421500	METHANE GAS SALES	$ 75,000.00			$ 75,000.00
						$ 1,023,288.00

Table A-5: Leachate Generation Summary

Leachate Generated (estimated)

	63.61	Total acres to generate leachate during post-closure
$	0.05	cost to treat leachate ($/gal)
	500	leachate rate (gal/ac/d) - Years 0-5 of Post Closure
	250	leachate rate (gal/ac/d) - Years 5-10 of Post Closure
	125	leachate rate (gal/ac/d) - Years 10-15 of Post-Closure
	62.5	leachate rate (gal/ac/d) - Years 15-20 of Post Closure
	31.25	leachate rate (gal/ac/d) - Years 20-25 of Post Closure
	15.625	leachate rate (gal/ac/d) - Years 25-30 of Post Closure

Annual Leachate Costs

$	580,441.25	Years 0-5 of Post Closure
$	290,220.63	Years 6-10 of Post Closure
$	145,110.31	Years 11-15 of Post-Closure
$	72,555.16	Years 16-20 of Post Closure
$	36,277.58	Years 21-25 of Post Closure
$	18,138.79	Years 26-30 of Post Closure

Table A-6: Assumptions

Assumptions:		
Estimated Cost to Line an acre (2021)	$ 1,329,282.00	
Estimated Cost to Cap an acre (2021)	$ 291,585.00	
Estimated annual cost to maintain an acre post-closure (2021)	$ 1,796.52	From Post Closure Cost Table - comb. of O&M Costs and Water Moniotirung Costs over an existing 52 acres
Estimated annual cost for leachate management (entire landfill) (2021)	*Varies*	
Estimated total cost for custodial care following 30-year post-closure period	$ 10,000,000.00	

Inflation Rate	0.025
Discount Rate	0.02215

# of Acres Remaining Cap during 30 year analysis	33.91	
# of Acres to Maintain Post-Closure	63.61	(approx. 52 acres existing, 11.6 acres new)

Source:	
Estimated Cost to Line an acre (2021)	*Taken from Cell No. 10 Liner Construction Cost Estimate (November 2021)*
Estimated Cost to Cap an acre (2021)	*Barton & Loguidice "Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates (March 11, 2021)" page 2 of 8*
Estimated annual cost to maintain an acre post-closure (2021)	*Barton & Loguidice "Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates (March 11, 2021)" page 3 of 8*
Estimated annual cost for leachate management (entire landfill) (2021)	*Barton & Loguidice "Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates (March 11, 2021)" page 3 of 8*
Inflation Rate	*US Bureau of Labor Statistics CPI for All Urban Consumers in Northeast (CPI-U)*
	Although average CPI over 10 years is 2.1% and that 2021 was exceptionally high at 3.9%, we assumed an average CPI of 2.5% for financial model
Discount Rate	*Choosing a Discount Rate - Impact DataSource*
	10-year municipal bond rates are between 2.06% and 2.37% based on credit rating. Therefore, we assumed an average of 2.215% for financial model
# of Acres Remaining Cap during 30 year analysis	*Barton & Loguidice "Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates (March 11, 2021)"*
# of Acres to Maintain Post-Closure	*"Permitted Cell Limits (ID 2541306)" AutoCAD file*

Barton & Loguidice

March 11, 2021

Ms. Amy Miller
Madison County Department
of Solid Waste & Sanitation
P.O. Box 27
Wampsville, New York 13163

Re: Revised 2021 Financial Assurance Closure/Post-Closure Cost Estimates

File: 154.112.020

Dear Ms. Miller:

In accordance with your request, we have prepared a letter of projected financial assurance estimates for both the east side and west side landfills. A summary of the estimates is included in Table 1. The closure estimate for the active portion of the west side landfill includes all of Phases I, II, and III.

1. East Side Landfill

- Annual Future Post-Closure Expense (Monitoring & Maintenance - The standard landfill post-closure period is a minimum of 30 years).
  - Site maintenance, mowing, and repairs (see Tables 1a and 2a) $9,445/yr
  - Cost estimates for field sampling, laboratory analyses, and environmental reporting for the site under existing conditions and monitoring requirements: $17,579/yr

2. West Side Landfill

- Total Tonnage Received to date in West Side Expansion (does not include on-site cover soils):
  - See Table 4 (attached) for historical tonnage data.
  - 2020 scale weights:

– In-County Waste Materials	48,693 tons
– Sludges Disposed Per Contract(s)	5,533 tons
– Alternate Cover Materials Used	10,591 tons
– Total Tons Landfilled in 2020	64,817 tons
Total Tonnage Landfilled in Phases I, II & III of the West Side Expansion, through December 31, 2020 (not including on-site cover soils)	1,504,739 tons

- Estimate of Remaining Life for Phases I, II, and III:
    - The remaining site life was calculated based on the proposed top of intermediate cover contours for the constructed landfill and the top of waste survey performed by Costich Engineering, Land Surveying & Landscape Architecture D.P.C on October 20, 2020. This calculation has resulted in an estimated remaining airspace value of 304,278 cubic yards. Based on the actual scale weights of waste received, and the airspace utilization estimated by the October 20, 2020 survey by Costich, the average in-place waste density for 2020 was 0.81 tons per cubic yard of air space. Using a projected landfill usage rate of 60,000 tons per year for 2021 and thereafter, the estimated remaining life of the constructed west side landfill after December 31, 2020 is 4 years and 1 month.

- Total Estimated Tonnage for Phases I, II, and III:
    - Based on the tons actually landfilled in Phases I, II, and III through December 31, 2020 and projected landfill usage rates of 60,000 tons per year of waste for 2021 and thereafter, at a projected average in-place waste density of 0.81 tons per cubic yard of airspace (per historical data) the total tonnage that will ultimately be landfilled in the constructed west side landfill is currently estimated to be a total of approximately: ..... 1,751,204 tons

- Total Estimated Closure Cost:
    - Based on the use of on-site soils, the estimated costs for third party closure of the active portion of the west side landfill (i.e., Phases I, II, and III) are:..... $6,505,271

- Total Estimated Post-Closure Cost: (The standard landfill post-closure period is 30 years):
    - Site maintenance, mowing, and repairs (see Tables 1a and 2a) $13,940/yr
    - Field sampling, laboratory analyses, and environmental reporting for the site under existing conditions and monitoring requirements (see Tables 1a and 2a)..... $52,455/yr
    - Leachate monitoring, hauling and treatment for both East Side and West Side Landfills
        - Although leachate generation rates in modern lined landfills typically decrease substantially annually following closure, per the Department's request, a worst case scenario has been used for the purpose of estimating post closure leachate treatment costs. Therefore, the leachate treatment costs have been estimated based on a consistent leachate generation rate equal to that assumed for the first year following closure. Table 1, 1a, and 1b, attached, detail and summarize the closure and post closure cost estimates based on the high leachate volume assumption requested by the Department.

          Leachate monitoring, hauling and treatment (high estimate) $507,895/yr

- In our engineering opinion, the leachate generation estimates previously provided are a much more realistic and reasonable assessment of future leachate treatment costs based on leachate generation rate reductions seen at this facility and other similar facilities after installation of a landfill capping system. Table 2, 2a, and 2b detail and summarize what we consider to be a more realistic set of closure and post-closure care cost estimates for Madison County's financial planning purposes based on the installation of a Part 360 compliant landfill capping system.

  Leachate monitoring, hauling and treatment (reduced estimate) $127,334/yr

3. Tire Facility Closure Cost

   - Closure costs for the tire processing facility on site are shown in Table 3. Closure costs shall include removal and disposal of all whole tires and tire chips present on site.

     Closure Cost for Tire Processing Facility ……$57,596

If you need any additional information, please do not hesitate to call me at (315) 457-5200. Thank you.

Sincerely,

BARTON & LOGUIDICE, D.P.C.

Jillian M. Blake, P.E.
Managing Engineer

JMB2/jms

Attachments

cc: Cindy Edick, Madison County (via E-mail)
Louanne Randall, Madison County (via E-mail)
Elizabeth Gondeck, NYSDEC Region 7 (via E-mail)

Tables

Table 1

MADISON COUNTY LANDFILL
CLOSURE & POST CLOSURE FINANCIAL ASSURANCE COST ESTIMATE SUMMARY
HIGH LEACHATE VOLUME ASSUMPTION ESTIMATE - 2020

	POST CLOSURE COSTS			TOTAL
CLOSURE COST (2020 Dollars)	**POST-CLOSURE (Years)**	**POST-CLOSURE (Annual Cost)**	**POST-CLOSURE (Total)** Present Value @ 3%	**CLOSURE & POST CLOSURE**
$6,505,271	30	$601,314	$11,786,020	**$18,291,291**

Notes:

1. Post closure costs to date for the capped portion of the landfill include mowing costs.
2. Landfill closure costs to date based off of an estimated $160,700/acre.
3. Refer to attached Table 1a for detailed breakdown of costs.

Table 1a
MADISON COUNTY LANDFILL
FINANCIAL ASSURANCE SUMMARY
HIGH LEACHATE VOLUME ASSUMPTION ESTIMATE

Closure Cost Breakdown

Table

East Side Developed Area with Waste Placed - January 2020:	**25.00**	**acres**	25.00	acres	Existing Capped
West Side Developed Area with Waste Placed - January 2020:	**27.01**	**acres**	14.5	acres	33% slopes
			7.8	acres	4% slope
			4.7	acres	Existing capped

Total Acreage Requiring Closure: 22.31

Notes:
1. Closure unit costs below based on 2020 pricing.

Component	Quantity	Unit	Unit Price ($)	Cost
Mobilization/Demobilization	1.00	LS	$ 80,000.00	$ 80,000
Grading	22.31	acres	$ 7,500.00	$ 167,325
Erosion Control	22.31	acres	$ 5,500.00	$ 122,705
Fertilize, Seed & Mulch	22.31	acres	$ 5,500.00	$ 122,705
Barrier Protection Layer	53,990.20	cy	$ 37.00	$ 1,997,637
Geosynthetic Clay Liner (4% Slope Only)	340,190.53	sf	$ 0.67	$ 227,928
40 MIL Textured LLDPE Geomembrane	971,823.60	sf	$ 0.91	$ 884,359
Composite Geonet	971,823.60	sf	$ 0.75	$ 728,868
Topsoil Layer	17,996.73	cy	$ 18.00	$ 323,941
Vertical Gas Collection Wells	23.00	ea.	$ 6,000.00	$ 138,000
Stormwater Controls	22.31	acres	$ 30,000.00	$ 669,300
Toe Drain	3,390.00	LF	$ 50.00	$ 169,500
Design / QA/QC (10% of Construction Cost)				$ 563,227
			Total Closure Cost	$ 6,195,495
			Total with 5% Contingency =	**$ 6,505,271**
			Cost Per Acre	**$ 291,585**

Table 1a
MADISON COUNTY LANDFILL
FINANCIAL ASSURANCE SUMMARY

Annual Post Closure Costs

Ops, Maint. Admin		Units	Unit Cost	Quantity/Yr	Total Cost/Yr
East Side					
	Cap repair (labor and equipment)	hr	$ 195	4.0	$ 780
	LFG System repair (labor and equipment)	hr	$ 195	4.0	$ 780
	General labor	hr	$ 45	4.0	$ 180
	Seeding and fertilizing cap	acre	$ 1,410	0.5	$ 705
	Mowing	acre	$ 95	25.0	$ 2,375
	Surface water management maintenance	lump sum	$ 2,275	1.0	$ 2,275
	Annual inspections and reports	lump sum	$ 1,900	1.0	$ 1,900
				East Side Total	*$ 8,995*
West Side				**Total with 5% Contingency**	**$ 9,445**
	Cap repair (labor and equipment)	hr	$ 195	8.0	$ 1,560
	LFG System repair (labor and equipment)	hr	$ 195	8.0	$ 1,560
	General labor	hr	$ 45	8.0	$ 360
	Seeding and fertilizing cap	acre	$ 1,410	0.5	$ 705
	Mowing	acre	$ 95	27.0	$ 2,566
	Surface water management maintenance	lump sum	$ 2,275	1.0	$ 2,275
	Security and building repairs	lump sum	$ 900	1.0	$ 900
	Annual inspections and reports	lump sum	$ 1,900	1.0	$ 1,900
	Site Utilities	annual	$ 1,450	1.0	$ 1,450
				West Side Total	*$ 13,276*
				Total with 5% Contingency	**$ 13,940**
				Operation, Maint., Admin costs (including 5% contingency):	***$ 23,385***

Water Monitoring		Units	Unit Cost	Locations	Events/Year	Total Cost/Yr
East Side						
	Monitoring Well Sampling (Baseline)	each	$ 272	20	1	$ 5,440
	Monitoring Well Laboratory Analysis (Baseline)	each	$ 262	20	1	$ 5,240
	Surface Water Sampling (Baseline)	each	$ 272	1	1	$ 272
	Surface Water Laboratory Analysis (Baseline)	each	$ 249	1	1	$ 249
	Sediment Laboratory Analysis	each	$ 140	1	1	$ 140
	Reporting	ls	$ 5,000	1	1	$ 5,000
	Well Replacements	each	$ 400	1	1	$ 400
					East Side Total	*$ 16,741*
					Total with 5% Contingency	**$ 17,579**
West Side						
	Monitoring Well Sampling (Baseline)	each	$ 242	24	1	$ 5,808
	Monitoring Well Laboratory Analysis (Baseline)	each	$ 262	24	1	$ 6,288
	Monitoring Well Sampling (Routine)	each	$ 242	24	2	$ 11,616
	Monitoring Well Laboratory Analysis (Routine)	each	$ 140	24	2	$ 6,720
	Surface Water Sampling (Baseline)	each	$ 242	2	1	$ 484
	Surface Water Laboratory Analysis (Baseline)	each	$ 249	2	1	$ 498
	Surface Water Sampling (Routine)	each	$ 242	2	2	$ 968
	Surface Water Laboratory Analysis (Routine)	each	$ 127	2	2	$ 508
	Sediment Laboratory Analysis	each	$ 140	2	2	$ 560
	Residential Well Sampling (Routine)	each	$ 242	1	3	$ 726
	Residential Well Laboratory Analysis (Routine)	each	$ 127	1	3	$ 381
	Reporting	ls	$ 5,000	1	3	$ 15,000
	Well Replacements	each	$ 400	1	1	$ 400
					West Side Total	*$ 49,957*
					Total with 5% Contingency	**$ 52,455**
					Ground and surface water monitoring costs (including 5% contingency):	***$ 70,034***

Leachate Management (East and West Sides Commingled)		Units	Unit Cost	Quantity/Yr	Total Cost/Yr
	Leachate management system repairs	lump sum	$ 9,000	1	$ 9,000
	Waste Water Treatment Plant (WWTP) Quarterly Testing	lump some	$ 100	4	$ 400
	Leachate Treatment per Year (Year 1 Closure Generation)	lump sum	$ 453,180	1	$ 453,180
	Leachate Sampling	lump sum	$ 2,184	2	$ 4,368
	Leachate Laboratory Analysis (Expanded Parameters)	/event	$ 15,761	1	$ 15,761
	Leachate Reporting	lump sum	$ 500	2	$ 1,000
				Leachate Management Costs:	*$ 483,709*
				Total with 5% Contingency	**$ 507,895**

Annual Post Closure Costs : $ 601,314

Table 1b
MADISON COUNTY LANDFILL
HIGH LEACHATE VOLUME GENERATION
POST CLOSURE FINANCIAL ASSURANCE COST ESTIMATE

Post Closure Year	Leachate Generated (Gal.)	Cost *
Year 1**	9,063,600	$453,180
Year 2	9,063,600	$453,180
Year 3	9,063,600	$453,180
Year 4	9,063,600	$453,180
Year 5	9,063,600	$453,180
Year 6	9,063,600	$453,180
Year 7	9,063,600	$453,180
Year 8	9,063,600	$453,180
Year 9	9,063,600	$453,180
Year 10	9,063,600	$453,180
Year 11	9,063,600	$453,180
Year 12	9,063,600	$453,180
Year 13	9,063,600	$453,180
Year 14	9,063,600	$453,180
Year 15	9,063,600	$453,180
Year 16	9,063,600	$453,180
Year 17	9,063,600	$453,180
Year 18	9,063,600	$453,180
Year 19	9,063,600	$453,180
Year 20	9,063,600	$453,180
Year 21	9,063,600	$453,180
Year 22	9,063,600	$453,180
Year 23	9,063,600	$453,180
Year 24	9,063,600	$453,180
Year 25	9,063,600	$453,180
Year 26	9,063,600	$453,180
Year 27	9,063,600	$453,180
Year 28	9,063,600	$453,180
Year 29	9,063,600	$453,180
Year 30	9,063,600	$453,180
Totals Post Closure:	271,908,000	$13,595,400

* - Leachate Disposal Estimated at $0.05/gallon

** - Annual Leachate generation based on 2020 generation rate

Table 2

MADISON COUNTY LANDFILL
CLOSURE & POST CLOSURE FINANCIAL ASSURANCE COST ESTIMATE SUMMARY
REDUCTION FOR PART 360 COMPLIANT CAP ESTIMATE - 2020

	POST CLOSURE COSTS			TOTAL
CLOSURE COST (2020 Dollars)	**POST-CLOSURE (Years)**	**POST-CLOSURE (Annual Cost)**	**POST-CLOSURE (Total)** Present Value @ 3%	**CLOSURE & POST CLOSURE**
$6,505,271	30	$220,753	$4,326,856	**$10,832,127**

Notes:

1. Post closure costs to date for the capped portion of the landfill include mowing costs.
2. Landfill closure costs to date based off of an estimated $160,700/acre.
3. Refer to attached Table 2b for detailed breakdown of costs.

Table 2a
MADISON COUNTY LANDFILL
FINANCIAL ASSURANCE SUMMARY
REDUCTION FOR PART 360 COMPLIANT CAP ESTIMATE

Closure Cost Breakdown

Table

East Side Developed Area with Waste Placed - January 2020:	**25.00 acres**	25.00	acres	Existing Capped
West Side Developed Area with Waste Placed - January 2020:	**27.01 acres**	14.5	acres	33% slopes
		7.8	acres	4% slope
		4.7	acres	Existing capped

Total Acreage Requiring Closure: 22.31

Notes:
1. Closure unit costs below based on 2020 pricing.

Component	Quantity	Unit	Unit Price ($)	Cost
Mobilization/Demobilization	1.00	LS	$ 80,000.00	$ 80,000
Grading	22.31	acres	$ 7,500.00	$ 167,325
Erosion Control	22.31	acres	$ 5,500.00	$ 122,705
Fertilize, Seed & Mulch	22.31	acres	$ 5,500.00	$ 122,705
Barrier Protection Layer	53,990.20	cy	$ 37.00	$ 1,997,637
Geosynthetic Clay Liner (4% Slope Only)	340,190.53	sf	$ 0.67	$ 227,928
40 MIL Textured LLDPE Geomembrane	971,823.60	sf	$ 0.91	$ 884,359
Composite Geonet	971,823.60	sf	$ 0.75	$ 728,868
Topsoil Layer	17,996.73	cy	$ 18.00	$ 323,941
Vertical Gas Collection Wells	23.00	ea.	$ 6,000.00	$ 138,000
Stormwater Controls	22.31	acres	$ 30,000.00	$ 669,300
Toe Drain	3,390.00	LF	$ 50.00	$ 169,500
Design / QA/QC (10% of Construction Cost)				$ 563,227
			Total Closure Cost	$ 6,195,495
			Total with 5% Contingency =	**$ 6,505,271**
			Cost Per Acre	**$ 291,585**

Table 2a
MADISON COUNTY LANDFILL
FINANCIAL ASSURANCE SUMMARY

Annual Post Closure Costs

Ops, Maint. Admin		Units	Unit Cost	Quantity/Yr	Total Cost/Yr
East Side					
	Cap repair (labor and equipment)	hr	$ 195	4.0	$ 780
	LFG System repair (labor and equipment)	hr	$ 195	4.0	$ 780
	General labor	hr	$ 45	4.0	$ 180
	Seeding and fertilizing cap	acre	$ 1,410	0.5	$ 705
	Mowing	acre	$ 95	25.0	$ 2,375
	Surface water management maintenance	lump sum	$ 2,275	1.0	$ 2,275
	Annual inspections and reports	lump sum	$ 1,900	1.0	$ 1,900
				East Side Total	*$ 8,995*
West Side				**Total with 5% Contingency**	**$ 9,445**
	Cap repair (labor and equipment)	hr	$ 195	8.0	$ 1,560
	LFG System repair (labor and equipment)	hr	$ 195	8.0	$ 1,560
	General labor	hr	$ 45	8.0	$ 360
	Seeding and fertilizing cap	acre	$ 1,410	0.5	$ 705
	Mowing	acre	$ 95	27.0	$ 2,566
	Surface water management maintenance	lump sum	$ 2,275	1.0	$ 2,275
	Security and building repairs	lump sum	$ 900	1.0	$ 900
	Annual inspections and reports	lump sum	$ 1,900	1.0	$ 1,900
	Site Utilities	annual	$ 1,450	1.0	$ 1,450
				West Side Total	*$ 13,276*
				Total with 5% Contingency	**$ 13,940**
				Operation, Maint., Admin costs (including 5% contingency):	***$ 23,385***

Water Monitoring		Units	Unit Cost	Locations	Events/Year	Total Cost/Yr
East Side						
	Monitoring Well Sampling (Baseline)	each	$ 272	20	1	$ 5,440
	Monitoring Well Laboratory Analysis (Baseline)	each	$ 262	20	1	$ 5,240
	Surface Water Sampling (Baseline)	each	$ 272	1	1	$ 272
	Surface Water Laboratory Analysis (Baseline)	each	$ 249	1	1	$ 249
	Sediment Laboratory Analysis	each	$ 140	1	1	$ 140
	Reporting	ls	$ 5,000	1	1	$ 5,000
	Well Replacements	each	$ 400	1	1	$ 400
					East Side Total	*$ 16,741*
					Total with 5% Contingency	**$ 17,579**
West Side						
	Monitoring Well Sampling (Baseline)	each	$ 242	24	1	$ 5,808
	Monitoring Well Laboratory Analysis (Baseline)	each	$ 262	24	1	$ 6,288
	Monitoring Well Sampling (Routine)	each	$ 242	24	2	$ 11,616
	Monitoring Well Laboratory Analysis (Routine)	each	$ 140	24	2	$ 6,720
	Surface Water Sampling (Baseline)	each	$ 242	2	1	$ 484
	Surface Water Laboratory Analysis (Baseline)	each	$ 249	2	1	$ 498
	Surface Water Sampling (Routine)	each	$ 242	2	2	$ 968
	Surface Water Laboratory Analysis (Routine)	each	$ 127	2	2	$ 508
	Sediment Laboratory Analysis	each	$ 140	2	2	$ 560
	Residential Well Sampling (Routine)	each	$ 242	1	3	$ 726
	Residential Well Laboratory Analysis (Routine)	each	$ 127	1	3	$ 381
	Reporting	ls	$ 5,000	1	3	$ 15,000
	Well Replacements	each	$ 400	1	1	$ 400
					West Side Total	*$ 49,957*
					Total with 5% Contingency	**$ 52,455**
					Ground and surface water monitoring costs (including 5% contingency):	***$ 70,034***

Leachate Management (East and West Sides Commingled)		Units	Unit Cost	Quantity/Yr	Total Cost/Yr
	Leachate management system repairs	lump sum	$ 9,000	1	$ 9,000
	Waste Water Treatment Plant (WWTP) Quarterly Testing	lump some	$ 100	4	$ 400
	Leachate Treatment per Year (Year 1 Closure Generation)	lump sum	$ 90,741	1	$ 90,741
	Leachate Sampling	lump sum	$ 2,184	2	$ 4,368
	Leachate Laboratory Analysis (Expanded Parameters)	/event	$ 15,761	1	$ 15,761
	Leachate Reporting	lump sum	$ 500	2	$ 1,000
				Leachate Management Costs:	*$ 121,270*
				Total with 5% Contingency	**$ 127,334**

Annual Post Closure Costs : $ 220,753

Table 2b
MADISON COUNTY LANDFILL
LEACHATE GENERATION FOR PART 360 COMPLIANT CAP
POST CLOSURE FINANCIAL ASSURANCE COST ESTIMATE

Post Closure Year	Leachate Generated (Gal.)	Cost *
Year 1**	9,063,600	$453,180
Year 2	7,250,880	$362,544
Year 3	5,438,160	$271,908
Year 4	4,078,620	$203,931
Year 5	3,058,965	$152,948
Year 6	2,753,069	$137,653
Year 7	2,477,762	$123,888
Year 8	2,229,985	$111,499
Year 9	2,006,987	$100,349
Year 10	1,806,288	$90,314
Year 11	1,625,659	$81,283
Year 12	1,463,093	$73,155
Year 13	1,316,784	$65,839
Year 14	1,185,106	$59,255
Year 15	1,066,595	$53,330
Year 16	959,936	$47,997
Year 17	863,942	$43,197
Year 18	777,548	$38,877
Year 19	699,793	$34,990
Year 20	629,814	$31,491
Year 21	566,832	$28,342
Year 22	510,149	$25,507
Year 23	459,134	$22,957
Year 24	413,221	$20,661
Year 25	371,899	$18,595
Year 26	334,709	$16,735
Year 27	301,238	$15,062
Year 28	271,114	$13,556
Year 29	244,003	$12,200
Year 30	219,602	$10,980
Totals Post Closure:	54,444,488	$2,722,224
	Average Annual Cost:	$90,741

* - Leachate Disposal Estimated at $0.05/gallon

** - Year 1 leachate generation based on 2020 generation rate

Madison County
Madison County Landfill
Canastota, NY

Table 3 - Landfill Tire Chip and Whole Tire Closure Cost Estimate

ITEM						COST
1. Material Disposal						**$52,360**
Load-out, transportation, and disposal of material inventory:						
Whole Tires	220 tons	@	$	166.00	/ton =	$36,520
Tire Chips	660 tons	@	$	24.00	/ton =	$15,840
					Total Disposal Cost =	$52,360
2. Miscellaneous/Contingency (10% of above subtotal)						**$5,236**
					Grand Total	**$57,596**

1 - All costs are estimated third-party costs and in present worth dollar. Cost estimates are based on Madison County operating experience and B&L engineering experience in retaining third-party contractors and commercial services for similar work.

Table 4 - Madison County West Side Landfill Annual Waste Tonnages

Year	In-County Waste Materials (tons)	Alternate Cover Materials (tons)	Sewage Treatment Plant Sludge (tons)	Treated Medical Waste (tons)	Total Tons Landfilled
1996	7,642	4,420			12,062
1997	30,545	20,431	952		51,928
1998	34,350	5,805	1,458		41,613
1999	39,770	11,258	1,466	1,815	54,309
2000	42,177	16,595	3,207	2,341	64,320
2001	32,366	9,321	855	2,141	44,683
2002	42,463	22,235	668	2,005	67,371
2003	46,048	10,860	648	1,747	59,303
2004	47,847	22,655	1,187	2,000	73,689
2005	51,477	12,032	1,022	1,274	65,805
2006	50,441	16,928	551	2,071	69,991
2007	50,473	9,758	3,803		64,034
2008	46,932	10,401	2,806		60,139
2009	45,486	11,481	2,378		59,345
2010	44,040	9,002	2,962		56,004
2011	43,985	9,953	2,642		56,580
2012	42,973	8,054	2,219		53,246
2013	43,418	17,809	2,623		63,850
2014	44,062	7,106	2,649		53,817
2015	46,244	12,986	8,719		67,949
2016	45,287	35,913	9,144		90,344
2017	47,772	13,582	7,745		69,099
2018	53,246	15,858	6,661		75,766
2019	46,827	11,516	6,332		64,675
2020	48,693	10,591	5,533		64,817
Totals	**1,074,564**	**336,550**	**78,230**	**15,394**	**1,504,739**

APPENDIX B

FINANCIAL MODEL - 30-YEAR WITH EFFICIENCIES

Table B-1: 30-year Summary with Efficiencies and New Regs

Madison County Landfill Financial Model (30-Year with Efficiencies and New Regs)

			Notes:
Salvage Value ($)		$0.00	*No value of landfill airspace once "filled"*
Number of Units (CY)		2,222,222	*airspace remaining as of 2021 Annual Report*
NPV Previous Liner Debt	$	3,725,548.62	
NPV of Previous Leachate Line Debt	$	2,245,973.49	
NPV Liner Construction		$16,229,033.61	
NPV Closure Costs		$7,387,161.91	
NPV Post-Closure Maintenance Costs		$10,968,784.82	
CAPEX to Build Leachate Pre-treatment		$3,000,000.00	
CAPEX to Convert MRF to TS		$1,500,000.00	
Development Costs		**$39,084,980.34**	*Cost (in today's dollars) which needs to be capitalized over the next 120 years and is depleted over time*
Development Rate (on per CY basis)	$	17.59	*one CY of airspace is worth (today's dollars)*
Waste Density (Tons/CY)		0.81	*historical average from annual rpt form*
Development Rate (on per ton basis)	**$**	**14.25**	*cost associated using a CY of airspace on a per ton basis (today's dollars)*
Existing Debt	$	5,971,522.11	*Cost (in today's dollars) of existing debt*
Debt (on per ton basis)	**$**	**2.18**	
Total Number Units Extracted (ton/yr)		60,000	*permitted rate*
Total Development Expense (2022)	$	854,788.52	*using up this much "value" in air space*
Landfill Annual Operating Expenses (2021 or Avg)	$	4,377,761.83	*landfill only*
Annual Operating Expense per ton	**$**	**72.96**	*cost to place a ton of waste into the landfill*
Annual Net Cost per ton	$	89.39	*landfill only*

Costs to Subsidize All County Facilities (with Efficiencies and New Regs)

Total Annual Operating Expenses (if all recommended efficiencies are implemented)	$	5,376,356.68	*all facilities - with efficiencies and new regs*
Total Annual Revenue (2023 Projected if all recommended efficiencies are implemented)	$	899,000.00	*sale of County recyclables, punch card fees, methane gas sale*
Total Annual Operating Expense per ton	**$**	**74.62**	*Average overall cost per ton of waste (distribued over 60,000 ton diposed in LF)*
Annual Net Cost per ton	$	91.05	*Average overall cost per ton of waste with debt and development (distribued over 60,000 ton diposed in LF)*

Assumptions:

Estimated Cost to Line an acre (2021) - Cell 10	$	1,329,282.00
Estimated Cost to Line an acre (2021) - Cell 11 and 12 with 80 mil HDPE	$	1,369,282.00
Estimated Cost to Cap an acre (2021)	$	291,585.00
Estimated annual cost to maintain an acre post-closure (2021)	$	1,796.52
Estimated annual cost for leachate management (entire landfill) (2021)	Varies	
Estimated total cost for custodial care following 30-year post-closure period	$	10,000,000.00
# of Acres to Cap		33.91
# of Acres to Maintain Post-Closure		63.61

Table B-2: Net Present Value of Development and Debt Service

Liner Construction Cost ($)

2.22%	<-- Discount Rate		
	t	Inflated Future Cost	Present Value
2024	2	$5,279,060.69	$5,064,936.42
2032	10	$11,130,259.20	$8,988,700.65
2048	26	$3,824,993.79	$2,175,396.53
2052		**$20,234,313.68**	**$16,229,033.61**

Capping Cost ($)

2.22%	<-- Discount Rate		
	t	Inflated Future Cost	Present Value
2024	2	$1,484,029.93	$1,420,408.93
2031	9	$1,764,045.23	$1,448,365.00
2038	16	$2,096,895.44	$1,476,871.29
2045	23	$2,492,549.73	$1,505,938.63
2052	30	$2,962,858.36	$1,535,578.07
		$10,800,378.69	**$7,387,161.91**

TOTAL POST CLOSURE

2.22%	<-- Discount Rate		
	t	Inflated Future Cost	Present Value
2053	31	$1,493,648.05	$757,346.56
2054	32	$1,530,989.26	$759,458.22
2055	33	$1,569,263.99	$761,575.77
2056	34	$1,608,495.59	$763,699.23
2057	35	$1,648,707.98	$765,828.61
2058	36	$575,457.98	$261,509.11
2059	37	$589,844.43	$262,238.26
2060	38	$604,590.54	$262,969.45
2061	39	$619,705.30	$263,702.67
2062	40	$635,197.93	$264,437.94
2063	41	$463,249.00	$188,675.08
2064	42	$474,830.23	$189,201.15
2065	43	$486,700.98	$189,728.69
2066	44	$498,868.51	$190,257.70
2067	45	$511,340.22	$190,788.18
2068	46	$430,209.29	$157,038.69
2069	47	$440,964.52	$157,476.55
2070	48	$451,988.63	$157,915.63
2071	49	$463,288.35	$158,355.94
2072	50	$474,870.56	$158,797.48
2073	51	$439,785.10	$143,877.95
2074	52	$450,779.73	$144,279.11
2075	53	$462,049.22	$144,681.40
2076	54	$473,600.45	$145,084.80
2077	55	$485,440.46	$145,489.34
2078	56	$473,644.40	$138,877.84
2079	57	$485,485.51	$139,265.07
2080	58	$497,622.64	$139,653.37
2081	59	$510,063.21	$140,042.76
2082	60	$10,522,814.79	$2,826,532.27
		$30,373,496.85	**$10,968,784.82**

Remaining Payments from LF Expansion Principal + Interest (Total Principal and Interest p10/11 of budget package)

2.22% <-- Discount Rate

	t	Future Cost	Present Value
2022	0	$287,356.25	$287,356.25
2023	1	$286,731.00	$280,517.54
2024	2	$285,956.00	$273,696.94
2025	3	$285,031.00	$266,899.77
2026	4	$288,881.00	$264,643.02
2027	5	$287,506.00	$257,675.87
2028	6	$285,981.00	$250,754.87
2029	7	$289,231.00	$248,108.94
2030	8	$287,256.00	$241,074.93
2031	9	$290,056.00	$238,149.76
2032	10	$292,556.00	$234,997.20
2033	11	$294,756.00	$231,633.67
2034	12	$291,562.00	$224,158.56
2035	13	$292,968.00	$220,358.58
2036	14	$279,296.00	$205,522.73
		$4,325,123.25	**$3,725,548.62**

Remaining Payments from Sewer Line Principal

2.22% <-- Discount Rate

		Future Cost	Present Value
2022	0	$109,000.00	$109,000.00
2023	1	$109,000.00	$106,637.97
2024	2	$109,000.00	$104,327.12
2025	3	$109,000.00	$102,066.35
2026	4	$109,000.00	$99,854.57
2027	5	$109,000.00	$97,690.73
2028	6	$109,000.00	$95,573.77
2029	7	$109,000.00	$93,502.68
2030	8	$109,000.00	$91,476.48
2031	9	$109,000.00	$89,494.18
2032	10	$109,000.00	$87,554.84
2033	11	$109,000.00	$85,657.53
2034	12	$109,000.00	$83,801.33
2035	13	$109,000.00	$81,985.35
2036	14	$109,000.00	$80,208.73
2037	15	$109,000.00	$78,470.61
2038	16	$109,000.00	$76,770.15
2039	17	$109,000.00	$75,106.54
2040	18	$109,000.00	$73,478.98
2041	19	$109,000.00	$71,886.69
2042	20	$109,000.00	$70,328.90
2043	21	$109,000.00	$68,804.87
2044	22	$109,000.00	$67,313.87
2045	23	$109,000.00	$65,855.18
2046	24	$109,000.00	$64,428.10
2047	25	$109,000.00	$63,031.94
2048	26	$109,000.00	$61,666.04
		$2,943,000.00	**$2,245,973.49**

Table B-3: Operating Cost Summary with Efficiecies and New Regs

						Approximate Allocations based on Highest of 2021 Cost or Average	
							LANDFILL
OPERATING EXPENSES		2021 Actual	Average Annual Expense (2018-20	Highest of 2021 or Average)	%		$
EE816480	511000 PERSONAL SERVICES FULL TIME	1,041,047.22	$ 1,063,550.02	$ 1,063,550.02	75%	$	797,662.52
EE816480	513000 PERSONAL SERVICES PART TIME	89,807.49	$ 79,678.07	$ 89,807.49	55%	$	49,394.12
EE816480	514000 OVERTIME	34,258.06	$ 43,181.36	$ 43,181.36	90%	$	38,863.23
EE816480	515000 SEVERANCE		$ 7,425.23	$ 7,425.23	85%	$	6,311.45
EE816480	522500 VEHICLE LEASE EXPENSE	$ 35,042.04	$ 28,249.81	$ 35,042.04	85%	$	29,785.73
EE816480	529080 VEHICLE		$ 19,019.25	$ 19,019.25	85%	$	16,166.36
EE816480	529330 MISCELLANEOUS EQUIPMENT	168,718.07	$ 81,244.08	$ 168,718.07	80%	$	134,974.46
EE816480	529990 CAPITAL EQUIPMENT RESERVE	$ 178,334.00	$ 35,666.80	$ 178,334.00	90%	$	160,500.60
EE816480	540101 COMPUTER EQUIP NOT CAPITALIZED	$ -	$ 657.44	$ 657.44	90%	$	591.70
EE816480	540103 COMPUTER SOFTWARE MAINTENANCE	$ 4,312.00	$ 6,821.53	$ 6,821.53	100%	$	6,821.53
EE816480	540123 SITE SECURITY	$ 112,611.79	$ 26,895.06	$ 112,611.79	95%	$	106,981.20
EE816480	540124 OFFICE BUILDING DESIGN & BIDDING	$ 19,839.01	$ 3,967.80	$ 19,839.01	90%	$	17,855.11
EE816480	540157 TIRE MANAGEMENT	$ 15,926.55	$ 12,301.46	$ 15,926.55	85%	$	13,537.57
EE816480	540200 MISCELLANEOUS EXPENSE	$ 5,737.47	$ 5,690.73	$ 5,737.47	90%	$	5,163.72
EE816480	540300 MISCELLANEOUS BUILDING EXPENSE	$ 16,235.22	$ 44,945.54	$ 44,945.54	90%	$	40,450.99
EE816480	540450 RECYCLING EXPENSE	$ 72,229.73	$ 67,382.05	$ 72,229.73	0%	$	-
EE816480	540460 LEACHATE TREATMENT TRANSPORT	$ 232,177.04	$ 115,089.22	$ 232,177.04	100%	$	232,177.04
EE816480	540461 LEACHATE DISPOSAL	$ 341,828.38	$ 167,488.63	$ 341,828.38	100%	$	341,828.38
EE816480	540462 TRANSPORTATION OF BIOSOLIDS	$ 35,106.78	$ 34,290.17	$ 35,106.78	100%	$	35,106.78
EE816480	540560 EMPLOYEE SAFETY EXPENSE	$ 14,356.27	$ 16,713.65	$ 16,713.65	90%	$	15,042.28
EE816480	540602 COMPENSATED ABSENCE EXPENSE		$ 5,335.19	$ 5,335.19	90%	$	4,801.67
EE816480	540635 LANDFILL SITE MAINTENANCE	$ 182,701.66	$ 114,867.41	$ 182,701.66	100%	$	182,701.66
EE816480	541000 TRAVEL EXPENSE (MILEAGE)	$ 574.88	$ 2,298.33	$ 2,298.33	100%	$	2,298.33
EE816480	541375 EMERGENCY COVID-19 EXPENSE		$ -			$	-
EE816480	542008 JANITORIAL SERVICES	$ 16,046.79	$ 11,893.50	$ 16,046.79	100%	$	16,046.79
EE816480	542140 ENGINEERING EXPENSE	$ 274,776.21	$ 188,002.04	$ 274,776.21	100%	$	274,776.21
EE816480	542175 PROFESSIONAL LEGAL COUNSEL	$ 9,308.00	$ 9,758.35	$ 9,758.35	100%	$	9,758.35
EE816480	542756 HIGHWAY DEPT SERVICES BILLING		$ 2,208.00	$ 2,208.00	100%	$	2,208.00
EE816480	542757 PUBLIC INFORMATION DEPT SVCS	$ 5,000.00	$ 2,000.00	$ 5,000.00	100%	$	5,000.00
EE816480	544000 GAS & ELECTRIC EXPENSE	$ 14,278.32	$ 30,460.68	$ 30,460.68	90%	$	27,414.61
EE816480	544011 SEWER UTILITY EXPENSE	$ 27,619.53	$ 26,521.48	$ 27,619.53	100%	$	27,619.53
EE816480	547007 INSURANCE	$ 31,289.00	$ 28,372.00	$ 31,289.00	95%	$	29,724.55
EE816480	547250 RECYCLING CONTRACT ARC	$ 814,655.00	$ 940,955.36	$ 940,955.36	0%	$	-
EE816480	547251 E-WASTE MANAGEMENT ARC	$ 61,548.00	$ 47,806.80	$ 61,548.00	0%	$	-
EE816480	547260 DEPUTY SHERIFF'S SERVICE	$ 9,202.07	$ 9,187.65	$ 9,202.07	100%	$	9,202.07
EE816480	547330 CONTRACT PAVING		$ 20,833.43	$ 20,833.43	50%	$	10,416.71
EE816480	548200 REPAIR PARTS	$ 168,450.39	$ 141,869.28	$ 168,450.39	90%	$	151,605.35
EE816480	548220 FUEL OIL (DIESEL)	$ 104,796.15	$ 107,266.04	$ 107,266.04	90%	$	96,539.43
EE816480	548900 PHOTOCOPY USAGE/LEASE	$ 2,135.25	$ 2,738.53	$ 2,738.53	90%	$	2,464.68
EE816480	549000 CENTRAL POSTAGE EXPENSE	$ 1,216.93	$ 1,473.02	$ 1,473.02	90%	$	1,325.72
EE816480	549100 CENTRAL PRINT & SUPPLY EXPENSE	$ 853.61	$ 1,415.04	$ 1,415.04	90%	$	1,273.54
EE816480	549110 OFFICE SUPPLIES & EXPENSE	$ 8,739.08	$ 9,311.20	$ 9,311.20	90%	$	8,380.08
EE816480	549200 CENTRAL TELEPHONE EXPENSE	$ 5,846.14	$ 5,960.93	$ 5,960.93	90%	$	5,364.84
EE816480	549600 RESIDENTIAL TSF ST IMPROVEMENT	$ 4,290.28	$ 2,462.79	$ 4,290.28	0%	$	-
EE816480	549994 INDIRECT COST RECOVERY	$ 188,682.00	$ 190,304.40	$ 190,304.40	90%	$	171,273.96
EE816480	549995 HOST COMMUNITY PACKAGE	$ 50,000.00	$ 52,816.00	$ 52,816.00	100%	$	52,816.00
EE816480	549996 RESERVE FOR FUTURE DEBT SVC		$ -			$	-
EE816480	581100 STATE RETIREMENT EXPENSE	$ 152,634.04	$ 218,842.24	$ 218,842.24	75%	$	164,131.68
EE816480	582100 SOCIAL SECURITY EXPENSE	$ 87,051.23	$ 89,057.84	$ 89,057.84	75%	$	66,793.38
EE816480	583100 WORKERS COMPENSATION EXPENSE	$ 39,439.47	$ 51,776.91	$ 51,776.91	75%	$	38,832.68
EE816480	584100 UNEMPLOYMENT BENEFITS	$ -	$ 762.90	$ 762.90	75%	$	572.18
EE816480	585100 DISABILITY EXPENSE	$ 2,152.80	$ 2,393.32	$ 2,393.32	75%	$	1,794.99
EE816480	586100 EMPLOYEE HEALTH INSURANCE	$ 191,420.70	$ 224,022.13	$ 224,022.13	75%	$	168,016.60
EE817180	546250 FACILITIES EXPENSE	$ 49,770.54	$ 30,335.20	$ 49,770.54	90%	$	44,793.49
		$ 4,922,045.19	**$ 4,433,565.88**	**$ 5,310,356.68**	68%	$	3,627,161.83
EXTRA ITEMS INCLUDED IN MODEL							
EE816480	529640 Equipment Budget (Capital Plan)	502,000.00	$ 584,000.00	$ 584,000.00	90%	$	525,600.00
EE816480	594215 TRANSFER TO GENERAL MID-YEAR	20,000.00				$	-
EE817680	542161 GAS FIELD SUPPLY & SERVICE	$ 43,216.93				$	-
		$ 5,487,262.12	**$ 5,017,565.88**	**$ 5,894,356.68**		**$**	**4,152,761.83**
			Landfil Efficiency (-$75,000)	**$ (75,000.00)**		**$**	**(75,000.00)**
			Annual Leachate Operating Expense (+$300,000)	**$ 300,000.00**		**$**	**300,000.00**
			Transfer Station Efficiency (-$198,000)	**$ (198,000.00)**			
			MRF Efficency (-$ 545,000)	**$ (545,000.00)**			
			Total =	**$ 5,376,356.68**	*Overall Operating Expense*	**$**	**4,377,761.83** *Landfill Only Operating Expense*

Table B-4: Operating Revenue Summary (Non Landfill)

OPERATING REVENUES		2021 PROJECTED	2021 ACTUAL	USED IN BASE MODEL CALCUALTIONS	USED IN MODEL w/EFFICIENCIES CALCUALTIONS	
EE816480	421301 USER FEES RESIDENTIAL PUNCH CARDS	$ 560,000.00	$ 518,288.00	$ 518,288.00	**$ 684,000**	**Project Transfer Station Revenue with Efficiencies**
EE816480	426510 SALE OF COUNTY RECYCLABLES	$ 130,000.00		$ 130,000.00	$ 140,000.00	**Recyclables Revenue with Efficiencies**
EE816480	426511 SALE OF ARC RECYCLABLES	$ 300,000.00		$ 300,000.00	$ -	
EE817680	421500 METHANE GAS SALES	$ 75,000.00		$ 75,000.00	$ 75,000.00	
				$ 1,023,288.00	**$ 899,000.00**	

APPENDIX C

LANDFILL CLOSURE COSTS: TABLES

Table C-1: Net Present Value of Development and Remaining Debt Service (Close Now)

Liner Construction Cost ($)				
	2.22%	<-- Discount Rate		
		t (years)	Inflated Future Cost	Present Value
			$0.00	$0.00
Capping Cost ($)				
	2.22%	<-- Discount Rate		
		t (years)	Inflated Future Cost	Present Value
	2025	3	**$7,941,554.50**	**$7,436,380.82**
TOTAL POST CLOSURE				
	2.22%	<-- Discount Rate		
		t (years)	Inflated Future Cost	Present Value
	2026	4	$626,876.31	$574,279.52
	2027	5	$642,548.22	$575,880.75
	2028	6	$658,611.93	$577,486.44
	2029	7	$675,077.22	$579,096.61
	2030	8	$691,954.16	$580,711.27
	2031	9	$359,848.78	$295,452.95
	2032	10	$368,845.00	$296,276.75
	2033	11	$378,066.12	$297,102.84
	2034	12	$387,517.78	$297,931.23
	2035	13	$397,205.72	$298,761.94
	2036	14	$253,589.23	$186,606.14
	2037	15	$259,928.96	$187,126.45
	2038	16	$266,427.18	$187,648.20
	2039	17	$273,087.86	$188,171.41
	2040	18	$279,915.06	$188,696.08
	2041	19	$210,139.61	$138,589.36
	2042	20	$215,393.10	$138,975.79
	2043	21	$220,777.93	$139,363.28
	2044	22	$226,297.38	$139,751.86
	2045	23	$231,954.81	$140,141.52
	2046	24	$199,367.03	$117,842.55
	2047	25	$204,351.20	$118,171.13
	2048	26	$209,459.98	$118,500.61
	2049	27	$214,696.48	$118,831.02
	2050	28	$220,063.89	$119,162.35
	2051	29	$206,001.46	$109,130.45
	2052	30	$211,151.49	$109,434.73
	2053	31	$216,430.28	$109,739.86
	2054	32	$221,841.04	$110,045.84
	2055	33	$10,227,387.06	$4,963,428.89
			$19,754,812.29	**$12,002,337.84**

Remaining Payments from LF Expansion (p10/11 of budget package)

2.22% <-- Discount Rate

	t	Future Cost	Present Value
2022	0	$287,356.25	$287,356.25
2023	1	$286,731.00	$280,517.54
2024	2	$285,956.00	$273,696.94
2025	3	$285,031.00	$266,899.77
2026	4	$288,881.00	$264,643.02
2027	5	$287,506.00	$257,675.87
2028	6	$285,981.00	$250,754.87
2029	7	$289,231.00	$248,108.94
2030	8	$287,256.00	$241,074.93
2031	9	$290,056.00	$238,149.76
2032	10	$292,556.00	$234,997.20
2033	11	$294,756.00	$231,633.67
2034	12	$291,562.00	$224,158.56
2035	13	$292,968.00	$220,358.58
2036	14	$279,296.00	$205,522.73
		$4,325,123.25	**$3,725,548.62**

Remaining Payments from Sewer Line Principal

2.22% <-- Discount Rate

		Future Cost	Present Value
2022	0	$109,000.00	$109,000.00
2023	1	$109,000.00	$106,637.97
2024	2	$109,000.00	$104,327.12
2025	3	$109,000.00	$102,066.35
2026	4	$109,000.00	$99,854.57
2027	5	$109,000.00	$97,690.73
2028	6	$109,000.00	$95,573.77
2029	7	$109,000.00	$93,502.68
2030	8	$109,000.00	$91,476.48
2031	9	$109,000.00	$89,494.18
2032	10	$109,000.00	$87,554.84
2033	11	$109,000.00	$85,657.53
2034	12	$109,000.00	$83,801.33
2035	13	$109,000.00	$81,985.35
2036	14	$109,000.00	$80,208.73
2037	15	$109,000.00	$78,470.61
2038	16	$109,000.00	$76,770.15
2039	17	$109,000.00	$75,106.54
2040	18	$109,000.00	$73,478.98
2041	19	$109,000.00	$71,886.69
2042	20	$109,000.00	$70,328.90
2043	21	$109,000.00	$68,804.87
2044	22	$109,000.00	$67,313.87
2045	23	$109,000.00	$65,855.18
2046	24	$109,000.00	$64,428.10
2047	25	$109,000.00	$63,031.94
2048	26	$109,000.00	$61,666.04
		$2,943,000.00	**$2,245,973.49**

APPENDIX D

HAULING COST SPREADSHEET

Project:	Madison County, NY
Estimator:	Chris Koehler
Reviewer:	
Date:	1-Sep-22
Estimate Basis:	Madison County to Senaca LF
Costs:	2022 $
Location:	Madison County, NY

	Madison to Senaca	Comments
Tonnage (tpy):	**60,000**	
Tonnage per load	39.0	*Will require tonnage permits*
Number of Trailer Loads	1,538	
Load Time (minutes):	45	*Estimate*
Unload Time (minutes):	45	*Estimate*
One-Way Distance (miles)	70	
Average Speed (mph):	60	*60 MPH is calculated from internet route mapping*
Average Loads/Year:	1,616	*Increased by 5% to account for light loads*
Average Loads/Month:	135	
Average Loads/Week:	32	
Average Loads/Day:	5	*Assumes full day of deliveries on Saturday*
Hours Per Round Trip	5.3	*round trip*
Weekly Freight Hours:	171	*round trip*
Wkly Prorated Veh Inspect/Breaks:	6	*1 hour per week/truck*
Annual Freight Hours:	8,875	*Freight hours only for vehicle fuel, oil & grease cost*
Total Miles/Yr	226,233	

Annual Costs Assumptions:

Fuel, Oil & Grease		
Fuel Cost per Gallon	$5.33	*AAA average price for diesel in NY State 9/1/2022*
Miles per Gallon	5	
Oil & Grease ($/freight hour)	$0.50	*Estimate*
Tires		
New Tires Price	$700	
# New Tires Per 50,000 Miles	6	*6 tires on tractor & 12 tires on trailers*
Retread Tires	$300	
# Retread Tires Per 25,000 Miles	12	
Maintenance & Repairs		
Mechanic Labor annual salary	$115,000	*Salary plus benefits (same as mechanic)*
Mechanic Labor % per Truck	5%	
Parts, Repairs, Overhaul ($/mile)	$0.25	
Equipment Operator/Driver Labor		
Driver % (based on total time)	80%	*This should be between 80% and 100%*
Number of Drivers, FTE	6.0	*Number of loads/day*
Driver annual salary	$115,000	*Mechanic prevailing wage rate plus benefits*
Fringe benefits (% of salary)	40%	*Provided, Included in annual*
Truck Amortization		
Number of Tractors	7	*Update based on loads/day plus 1*
Capital Cost - per semi-truck	$160,000	*New truck price*
Resale Value (% of truck $)	20%	
Replacement Schedule (years)	7	*years replacement based on mileage*
Interest Rate	4%	
Capital Recovery Factor (A/P,i,n)	0.1666	
Trailer Amortization		
Number of Trailers	7	*Update based on loads/day & trip time Loads/day plus 2*
Capital Cost -- per trailer	$95,000	*100 CY*
Replacement Schedule (years)	10	
Interest Rate	4%	
Capital Recovery Factor (A/P,i,n)	0.1233	
Insurance (per yr/truck) @ 3% $	$4,800	*Estimate % of capital cost*
License&Taxes (per yr/truck)@1.5% $	$2,400	*Estimate % of capital cost*
Overhead & Profit @ % of O&M	10%	*% of all O&M*

Annual Haul Cost to Disposal:	Madison to Senaca	Comments
Fuel, Oil & Grease	$245,600	Mileage & Time Based
Tires	$51,580	Mileage Based
Maintenance & Repairs	$96,810	Mileage & Time Based
Driver Labor	$690,000	FTE, Time Based
Truck Amortization	$149,280	100% Utilized
Trailer Amortization	$81,990	100% Utilized
Insurance	$33,600	No. trucks
Licensing & Taxes	$16,800	No. trucks
Overhead & Profit	$136,570	
MSW Annual Haul Cost	**$1,502,230**	
Total Haul Cost/Ton	**$25.00**	
Total Haul Cost/Mile	**$6.64**	

Appendix B

Madison County
Solid Waste and Sanitation

LOCAL LAW NO. 3 FOR THE YEAR 2004
COUNTY OF MADISON, NEW YORK

PROPOSED LOCAL LAW OF THE COUNTY OF MADISON TO PROVIDE AN ORDERLY PROGRAM FOR THE COLLECTION, TRANSPORTATION AND DISPOSAL OF SOLID WASTE AND RECYCLABLES IN ORDER TO PROMOTE THE SAFETY, HEALTH, WELFARE AND CONVENIENCE OF THE CITIZENS OF MADISON COUNTY, AND TO PROHIBIT RANDOM REFUSE DISPOSAL AND LITTERING ALONG PUBLIC HIGHWAYS AND ROADS, AND IN FURTHERANCE OF THE LEGISLATIVE FINDINGS SET FORTH BELOW, AND TO AMEND AND RESTATE LOCAL LAW #5 FOR THE YEAR 1991, LOCAL LAW #4 FOR THE YEAR 2001 AND ANY AMENDMENTS THERETO.

BE IT ENACTED, by the Board of Supervisors of the County of Madison, New York as follows:

LEGISLATIVE FINDINGS

The Board of Supervisors of the County of Madison, upon consideration and in support of the adoption of Local Law # 3 for the year 2004, hereby finds and declares:

1. The County restates and re-affirms below its Findings set out in local law #4 of 2001. However, it has determined that, in order to provide for the continued efficient and effective administration and enforcement of the County's integrated solid waste management system as established by local law #4 of 2001, it is appropriate to amend certain of the provisions of that local law.

2. The safe and proper disposal of the solid wastes generated by the people of the County of Madison has long been and remains a matter of serious public concern. In the 1960's, virtually every municipality in Madison County provided a dump for use by local residents and businesses, as a traditional local government service. In response to growing concerns and increased public awareness of adverse environmental impacts caused by the operation of unlined dumps – such as drinking water contamination, disease carrying vectors, open burning, landfill gas migration, and the potential for other public health and environmental problems associated with historical waste disposal practices at unlined local dumps -- by 1974 all sixteen town, village and city dumps then operating in Madison County were phased out of service and replaced with a county owned and operated centralized sanitary landfill in the Town of Lincoln and three rural residential waste transfer stations located in the towns of Cazenovia, Hamilton and Sullivan. In the late 1980's Madison County re-examined its long-term solid waste management plan to decide on an economically viable and environmentally sound long-term management program. This resulted in the adoption of a plan to pursue a comprehensive countywide recycling program in 1989 and a Comprehensive Solid Waste Management Plan approved by the New York State Department of Environmental Conservation on March 15, 1993 that is periodically updated by the County. The County hereby reaffirms the objectives set forth in the plan, as amended, to reduce, reuse and recycle so much of the waste stream of Madison County as is feasible, and to landfill the remainder in an environmentally secure public landfill facility.

3. Since the adoption of the Plan, the County has implemented an integrated system of waste management to achieve the objectives set forth in the Plan. The actions taken to implement this system include the following:

a) Madison County's integrated solid waste management system consists of one central sanitary landfill with a double composite liner system in the Town of Lincoln, four transfer stations (located in the Towns of Hamilton, Cazenovia, Sullivan, and Lincoln), a central materials recovery facility (MRF) located on County property adjacent to the landfill site, and four yard waste and recyclables drop-off locations (at the four transfer stations). In addition, at the transfer station in the Town of Lincoln the County recycles special wastes such as used oil, antifreeze, vehicle tires, vehicle batteries, dry cell batteries, white goods and other bulk metals.

b) All of these facilities are owned and operated by the County with the exception of the MRF, which is located on County property at the County's landfill site and is operated by the Madison-Cortland Chapter of NYSARC, Inc. (ARC) pursuant to a lease and operating contract with the County. The ARC is a not-for-profit association that assists persons with mental retardation or developmental disabilities. Ownership of the MRF will revert to the County if the ARC's operating contract with the County is terminated. The County markets recyclable materials that are processed at the MRF, and employs a recycling educator to inform and educate the public about recycling and waste reduction.

c) Since 1996, Madison County has provided County residents and conditionally exempt small quantity generators with free access to one or more household hazardous waste collection facilities located in nearby counties, to limit the disposal of such materials in the County landfill and to provide an environmentally sound means for the disposal of such materials. The County also provides a syringe disposal program in cooperation with local pharmacies.

d) The County's integrated solid waste management system is structured to be financially self-supporting, without the use of tax money to subsidize its waste management and recycling program costs. Revenues from tipping fees on non-recyclable wastes and from the sale of recyclable materials are used to pay for system operating and debt service costs, cost of future landfill development, and to fund a landfill closure/post-closure reserve account that will be used to pay for future landfill closure and post-closure costs. The annual cost of the County's integrated solid waste management system is typically in the range of approximately $3.0 million, although this is subject to change each year depending on a variety of factors including the amount required each year for capital improvements and associated debt service payments, the amount and net costs of recycling, the amount of solid waste generated in the county, and changes in fuel costs and other costs of operating and maintaining the county's solid waste management facilities.

e) The County provides a strong economic incentive to maximize recycling and waste reduction, by only charging a fee on non-recyclable waste deliveries. The County does not charge for the use of its recycling programs and recycling services. Tipping fees on non-recyclable wastes are used to financially support the County's recycling programs and household hazardous waste collection services, which do not generate sufficient revenues to support themselves.

4. In order to provide for the safe and effective collection of solid waste and recyclables, the County has established a regulatory scheme for the granting of permits to collect and transport waste and recyclables within the County. The permits established by the County are described below.

a) The County historically has had four permit categories:

i) The annual **Commercial Waste Permit** allows for disposal of co-mingled residential, commercial and institutional solid waste. Holders of Commercial Waste Permits handle approximately 85 per cent of the

waste that is generated in the County. The longstanding practice of Waste Collectors in the County is to pass through landfill disposal costs to their customers.

ii) The **Special Waste Permit**, or one-day permit, allows for disposal of co-mingled residential, commercial and institutional solid waste and is included in the 85 per cent figure listed above.

iii) The **Resident Waste Permit** allows individual residents to drop-off their own residential waste at any of the County's transfer stations, and represents approximately 14 per cent of all waste generated in the County.

iv) The **Roadside Clean Up Permit** is issued free of charge to municipalities and community organizations for litter clean up only. This permitted use represents less than one per cent of all waste generated in the County.

b) Madison County's Solid Waste programs are supported by tipping fees on non-recyclable waste and through the sale of recyclable items collected at the ARC MRF and the County's transfer stations.

c) The County's integrated solid waste management system is financially supported by a user fee system that is more equitable than taxes. Revenues needed to pay for the County's solid waste system are from user fees that are based on the amount of non-recyclable waste delivered to the County's facilities, rather than from tax revenues that are based on the assessed value of properties in the County. The user fee system is a much more fair and fiscally responsible method to pay for the solid waste system than taxes, because waste generators pay based on the amount of waste they dispose of and the solid waste system is structured to be self-sustaining. Furthermore, with no fees charged for the delivery of recyclable materials to the County system, there is a financial incentive for waste generators and Commercial Waste Permit holders (e.g., Waste Collectors) to increase recycling to lower their disposal costs. This user fee system maximizes the opportunities for environmental benefits from increased recycling and waste reduction activities, and all classes of waste generators are equitably served when all classes deliver their wastes to the County's system. However, fiscal inequity results when some classes of generators or a significant number of waste generators or haulers do not participate in the system. In addition, waste reduction and recycling benefits are lost when recyclable materials are commingled with non-recyclable waste for disposal at out-of-system facilities.

5. The County finds that additional programs and improvements to the existing system of public facilities are currently required and will be required from time to time to implement the solid waste management program in the future. These include, but are not limited to, the programs and improvements listed below.

a) The County plans to continue to provide a local, publicly owned landfill that will provide an environmentally sound disposal site to reliably meet the needs of future generations of residents and other local generators of solid waste. The double composite liner system at the County landfill will need to be extended periodically (e.g., approximately every 6 or 7 years), to continue to provide a local, long-term, publicly owned and environmentally secure disposal site for non-recyclable wastes generated by County residents, businesses and institutions. Each liner extension represents a significant capital investment of millions of dollars.

b) In 1994 and 1995, the County conducted a food waste composting pilot project. The results of the pilot project indicated that the composting of food waste is a viable means to reduce the amount of waste requiring landfilling. However, a lack of funding prevented the County from implementing a long-term food waste composting program at that time.

c) In 1995 and 1996, the County evaluated the cost effectiveness of a recycling program for a portion of the construction and demolition debris waste stream. The results of that evaluation indicated that it would be more economical to landfill construction and demolition debris. If sufficient funds are available, the potential development of a construction and demolition debris recycling program may be re-evaluated in the future. The future development of a separate landfill solely for the disposal of construction and demolition debris was evaluated in 2001 and may also be pursued, to help extend the life of the County's double-lined landfill that is currently used for the disposal of mixed municipal solid wastes including construction and demolition debris.

d) The County has been pursuing the beneficial use of landfill gas, such as to generate electricity, since 1997, and a study is actively underway to examine the feasibility of a landfill gas to energy project. If a viable project can be established, the County intends to continue pursuing an environmentally beneficial and cost effective use for landfill gas.

e) The County will continue to evaluate the feasibility of recycling additional materials, as warranted by market and economic conditions, and to monitor, and, where appropriate, incorporate new and environmentally beneficial technologies into its waste system.

6. The County finds and declares that the integrated system developed pursuant to the Solid Waste Management Plan has been and continues to be intended to serve all of the waste generators in Madison Country in an environmentally sound and reliable manner, for current and future generations. The system is most effective in achieving its goals, both in terms of system administration and equitable distribution of system costs, when all of the non-recyclable waste generated in Madison County is directed to the public facilities established for the system. As a result of recent judicial action in the federal courts, legal uncertainty with respect to the power of municipal governments to direct the flow of waste to public facilities has been resolved. The County of Madison remains authorized by Chapter 369 of the Laws of 1991 of the State of New York to direct the flow of waste generated in the County to facilities constructed for that purpose. The County hereby declares it in the public interest to adopt the updated annexed legislation which originally amended Local Law Number 5 of 1991 and which required the delivery of all Commercial Waste, Industrial Waste, Residential Waste and Construction and Demolition Debris generated within the County to the County Landfill for disposal, in order to include all such waste within the integrated system, for the long-term benefit of all participants of the system.

SECTION I. DEFINITIONS

a. **Board of Hearing** shall mean the board described in Section IV of this local law.

b. **Board of Supervisors** shall mean the duly elected County Board of Supervisors for Madison County, New York.

c. **Commercial Waste** shall mean Solid Waste generated by stores, offices, institutions, restaurants, warehouses, non-manufacturing activities in industrial facilities and agricultural enterprises.

d. **Commercial Waste Permit** shall mean the permit issued pursuant to Section III.1 of this local law.

e. **Committee** shall mean the Madison County Solid Waste and Recycling Committee, as established by the Madison County Board of Supervisors.

f. **Construction and Demolition Debris** shall mean Solid Waste resulting from construction, remodeling, repair and demolition of structures, roads, buildings and land clearing. Such wastes include, but are not limited to, bricks, concrete and other masonry materials, soil, rock, lumber, road spoils, paving material and tree and bush stumps.

g. **Container** shall mean a container provided, or marked for identification, by a Waste Collector for use in the collection of Solid Waste and/or Recyclables within the County. Containers with a capacity equal to or greater than ten cubic yards shall be identified, marked and otherwise maintained in compliance with Sections III.1.b., III.1.f., III.1.j., and III.1.m. below.

h. **County** shall mean Madison County, New York, a municipal corporation of the State of New York, with offices at Wampsville, New York.

i. **County Landfill** shall mean the Landfill owned and operated by the County and located at Buyea Road, Town of Lincoln, New York, or any other landfill owned and/or operated, or caused to be operated, by the County.

j. **Department** shall mean the Madison County Department of Solid Waste and Sanitation, or its successor. The Director of the Madison County Department of Solid Waste and Sanitation, or his appointees, is authorized to act on behalf of the Department and the Committee.

k. **Designated Recyclables** shall mean recyclable materials, as specifically designated by the Board of Supervisors by resolution and which shall be separated from the Solid Waste stream for collection and/or delivery to a materials recovery facility or other recycling facility, Transfer Station or Processor. The list of Designated Recyclables may be modified from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors. A current official list of Designated Recyclables shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation.

l. **Facility** shall mean any Solid Waste management facility or facilities owned and/or operated, or caused to be operated by the County that accepts or disposes of Solid Waste and/or Recyclables, including but not limited to landfills, transfer stations, materials recovery facilities, drop off centers, and resource recovery facilities.

m. **Farm** shall have the meaning specified in 6 NYCRR Part 360 - 1.2 as the same may be amended, suspended or replaced.

n. **Hazardous Waste** shall mean those materials, substances, or wastes including, but not limited to, pesticides and containers used for pesticides, other waste which appears on the list or satisfies characteristics of hazardous waste promulgated by the New York State Commissioner of the Department of Environmental Conservation, and any other material, determined now or in the future, to be hazardous by State or Federal rule, regulation and/or statute.

o. **Industrial Waste** shall mean Solid Waste generated by manufacturing or industrial processes. Such waste may include, but is not limited to, the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals

manufacturing/foundries; organic chemicals; plastic and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include oil or gas drilling, production, and treatment wastes (such as brines, oil, and fluids); or overburden, spoil, or trailing resulting from mining; or solution mining brine and insoluble component wastes.

p. **Open Dump** shall mean a Solid Waste disposal area which is not authorized to be operated under applicable Federal and State laws and regulations.

q. **Municipality** shall mean the County, and any Town, City or Village within Madison County.

r. **Person** or **Persons** shall mean any individual, company, partnership, association, firm, corporation, municipality or any other entity.

s. **Processor** shall mean a primary user of the particular material such as Recyclables, including but not limited to glass factories, de-tinners, plastic recovery facilities, paper mills or consolidators of such materials.

t. **Prohibited Materials** shall mean materials which shall not be accepted at the County Landfill; provided, however, that the Board of Supervisors may accept certain Prohibited Materials or designated components thereof at a Facility in the County pursuant to rules and regulations (i) adopted by the Department and (ii) approved by resolution of the Board of Supervisors. The list of Prohibited Materials may be established and modified from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors. A current official list of Prohibited Materials shall be maintained by and be available from the Madison County D
u.epartment of Solid Waste and Sanitation.

v. **Recyclable**s shall mean such material from Commercial Waste, Industrial Waste and Residential Waste sources, including but not limited to Designated Recyclables, which under any applicable law or regulation, is not Hazardous Waste and which can be reasonably separated from the Solid Waste stream and held for its material recycling or reuse value. If, as a result of a change in law or any interpretation thereof by a court or governmental body of competent jurisdiction, Recyclables are not considered a component of or generated from Solid Waste, Recyclables shall, for purposes of this local law, nevertheless have the meaning specified in this definition. Also see the definition of Designated Recyclables for reference to a list of materials that the County requires to be separated from the Solid Waste stream for collection and/or delivery to a materials recovery facility or other recycling facility, Transfer Station or Processor.

w. **Resident** shall mean any individual who is a legal resident of the County or any individual who is a temporary resident of the County.

x. **Residential Waste** shall mean Solid Waste generated from all houses, apartments and other residential dwellings, including, but not limited to, all single family dwellings and multifamily dwellings in the County.

y. **Resident Waste Permit** shall mean the permit issued pursuant to Section III.3. of this local law.

z. **Rules of Procedure** shall mean the rules used by the Hearing Board in enforcement hearings. Said rules shall be set by resolution of the Board of Supervisors and amended as necessary from time to time.

aa. **Solid Waste** shall have the meaning specified in 6 NYCRR Part 360-1.2 as the

same may be amended, superseded or replaced.

bb. **Special Waste Permit** shall mean the permit issued pursuant to Section III.2. of this local law.

cc. **State** shall mean the State of New York.

dd. **Transfer Station** shall mean a facility owned by the County for the consolidation of deliveries made by individual Residents of Solid Waste and/or Recyclables, including County yard waste composting facilities that may be co-located at such Transfer Stations. The County's four Transfer Stations are located in the Towns of Cazenovia, Hamilton, and Sullivan, and on the east side of Buyea Road in the Town of Lincoln.

ee. **Waste Collector** shall mean any individual, association, partnership, firm, corporation, not-for-profit organization, municipality, educational institution or any other Person deemed by the Department to be engaged in the collection, pickup, transfer, removal and/or disposal of Solid Waste and/or Recyclables.

SECTION II. ADMINISTRATION

1. The Department, or its successor, shall be primarily responsible for all ministerial and administrative duties described or reasonably required by the terms of this local law.

2. The Department, or its successor, shall administer the program of registering and permitting all Waste Collectors and other Persons collecting, transporting or disposing of Solid Waste and/or Recyclables generated within the County. This includes the issuance, renewal, and revocation of all permits described in this local law.

3. The Department, or its successor, shall promulgate rules and regulations in connection with the operation of the County Landfill or any other Facility.

4. The Department, or its successors, shall issue warning notices and initiate proceedings pursuant to Section IV of this local law to prosecute violations of this local law.

5. The Department, or its successor, may encourage and conduct studies, investigations and research relating to various aspects of Solid Waste management as it deems necessary or as requested by the Board of Supervisors or Committee.

SECTION III - STANDARDS AND REGULATIONS

1. Commercial Waste Permit Requirements

   a) No Waste Collector shall collect, transport or dispose of Solid Waste and/or Recyclables generated within the County without first obtaining a Commercial Waste Permit issued by the County. Each day during which a Waste Collector collects, transports or disposes of Solid Waste or Recyclables generated within the County without a Commercial Waste Permit shall be considered a separate violation of this Section.

   b) All applications for Commercial Waste Permits shall be in writing and shall contain such information as requested by the Department, but at a minimum, as set forth in this local law. Other than individuals, all Persons applying for Commercial Waste Permits shall submit adequate proof of the legal status of the entity seeking the permit. Such applications shall include a list that identifies all vehicles, and all containers with a capacity equal to or greater than ten cubic yards, that the applicant intends to utilize for the collection of Solid Waste and/or Recyclables in the County, along with the cubic yard capacity for each vehicle or

container. The Department will assign an identification number for each vehicle and for each container with a capacity equal to or greater than ten cubic yards. All Commercial Waste Permit information shall be verified by the applicant as required by this local law and the Department. The applicant shall file with any application a Certificate of Insurance and shall pay the required permit fee as set forth in this local law.

c) Each applicant other than a Municipality shall be required to pay a Commercial Waste Permit fee. A current official list of Department fees shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation.

d) Municipalities shall not be required to pay the permit application fee identified in this Section III.1.c., but shall be required to comply with all other requirements, including other fee requirements, of this local law.

e) The Certificate of Insurance to be filed with the application shall be executed by a duly authorized and qualified representative of an insurance company, subject to verification and approval by the Department, evidencing that said insurance company has issued liability and property damage insurance policies covering, at a minimum, the following:

i) All operations of the applicant or any other person, firm or corporation employed by him in collecting and/or transporting Solid Waste and/or Recyclables.

ii) The disposal of such Solid Waste and/or Recyclables to and within the designated and approved County Landfill and/or Facility.

iii) Protecting the public and any person from injuries or damages sustained by reason of collecting and/or transporting Solid Waste and/or Recyclables.

iv) The certificate shall specifically evidence the following minimum amounts of insurance coverage based upon the number of vehicles permitted for hauling waste in Madison County which shall remain in effect for the term of the permit, and shall provide that written notice shall be given to the Department thirty (30) days prior to any change in the conditions of the certificate or any expiration or cancellation thereof:

<u>Commercial Haulers with one, two or three permitted trucks</u>

Public Liability Insurance –
Per Person……..100,000
Per Accident……...300,000

Property Damage –
Per Accident…… 50,000

<u>Commercial Haulers with four or more permitted trucks</u>

Public Liability Insurance –
Per Person……..250,000
Per Accident……...500,000

Property Damage –

Per Accident…… 50,000

f) Upon receipt of the application and the proper Certificate(s) of Insurance and the payment of the Commercial Waste Permit fee, the Department shall thereupon issue the applicant a Commercial Waste Permit so long as the applicant is otherwise deemed by the Department to be in compliance with this local law and related requirements of the Department. A Commercial Waste Permit shall expire on the next June 30 following the date of issue. Upon issuance of the Commercial Waste Permit the permit holder shall affix the Commercial Waste Permit to the inside rear bottom corner of the driver's window in each and every vehicle, on which shall be set forth clearly the official number of such Commercial Waste Permit and/or the license plate number of the vehicle to which the Commercial Waste Permit is affixed, and for every container with a capacity equal to or greater than ten cubic yards the permit holder shall affix its name along with the identification number assigned by the County for each such container in permanent lettering that is readily visible and a minimum of four inches in height, in a location or locations specified by the Department.

g) Renewal of Commercial Waste Permits shall be in the same manner and subject to the same conditions as original Commercial Waste Permits, and also shall be subject to any additional requirements in effect at the time of application for renewal as specified by the Department, the Committee or the Board of Supervisors.

h) Whenever satisfactory proof, such as by means of an affidavit, is submitted to the Department that a Commercial Waste Permit issued for the purpose set forth in this local law has been lost or destroyed, the Department shall, upon payment by the applicant of the appropriate fee, issue a new Commercial Waste Permit in lieu of the one that has been lost or destroyed.

i) No Commercial Waste Permit issued pursuant to the provisions of this local law shall be transferable.

j) The Commercial Waste Permit holder hereunder shall furnish the Department with a list identifying the municipalities within which collection services are provided and detailing the number of residences, commercial establishments or other generators of Solid Waste and/or Recyclables located in the County and serviced by the applicant. The identification numbers and cubic yard capacities of the vehicles, and of the containers that have a capacity equal to or greater than ten cubic yards, utilized in each collection area by the Commercial Waste Permit holder shall be included on aforesaid list. This list shall be prepared at a level of detail satisfactory to the Department and shall be updated by the Commercial Waste Permit holder at the request of the Department, but not more often than every three months.

k) The Department, pursuant to Section IV of this local law, shall have the power to suspend or revoke a Commercial Waste Permit granted or renewed pursuant to this local law for any violation of any provision of this local law or any applicable rule, regulation, code or ordinance relating to the collection, handling, hauling or disposal of Solid Waste and/or Recyclables including, but not limited to, those promulgated by the Department.

l) All collection, transportation and/or disposal of Solid Waste and/or Recyclables shall be in strict conformance with the rules and regulations prescribed in this local law and as such rules and regulations may hereafter be amended or supplemented by the Department.

m) All vehicles used in the collection, transportation and/or disposal of Solid Waste and/or Recyclables shall be maintained in a sanitary condition and shall be

constructed as to prevent leakage in transit. The body of the vehicle shall be wholly enclosed or shall at all times be kept covered with an adequate cover. The name of the Commercial Waste Permit holder shall be readily visible on all vehicles, and on all Containers, along with permanent and unique identification numbers assigned by the Department for each vehicle and for each Container with a capacity equal to or greater than ten cubic yards. Operation of vehicles shall be done in such a manner as to prevent spilling or loss of contents.

n) Any Commercial Waste Permit issued pursuant to this local law shall be in the nature of a privilege subject to the terms and conditions set forth in this local law and as amended or supplemented by the Department, and shall not be deemed to create a property interest with respect to the Commercial Waste Permit in the holder.

o) All such Commercial Waste Permit requirements specified herein, including, but not limited to, Commercial Waste Permit fees and minimum insurance coverage amounts, may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

2. Special Waste Permit Requirements

a) Persons and Waste Collectors not holding Commercial or Residential Waste Permits may obtain a Special Waste Permit for the collection, transportation and/or disposal of Solid Waste generated within the County at the County Landfill. A Special Waste Permit must be obtained from the Department for a daily fee.

b) The Department may, at its sole discretion, require certain Special Waste Permit holders to provide proof of insurance in a form and amount satisfactory to the Department before such Special Waste Permit holder may dispose of Solid Waste and/or Recyclables at the County Landfill or any other Facility.

c) Special Waste Permit holders shall strictly comply with all rules and regulations prescribed by the Department.

d) All Special Waste Permit requirements specified herein, including, but not limited to, Special Waste Permit fees, may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

3. Resident Waste Permit Requirements

a) Resident individuals collecting, transporting or disposing of their own Solid Waste and/or Recyclables at a Transfer Station will be required to obtain a Resident Waste Permit from the Department's office or at a Transfer Station. Such permit shall be displayed on the rear window of the delivery vehicle and shall be valid for the duration of the residence of such individual, or ownership of such vehicle by such individual, whichever is shorter.

b) Resident Waste Permits shall be available and are required for passenger cars, vans, station wagons and pickup trucks (up to 1-ton capacity). All other vehicles must be registered under the provisions applicable to a Commercial Waste Permit or Special Waste Permit. The Department, at its sole discretion, may require any vehicle, regardless of type or size, collecting and/or transporting Solid Waste and/or Recyclables generated within the County for compensation

paid to the owner or operator, to comply with the provisions applicable to a Commercial Waste Permit or Special Waste Permit.

c) Resident Waste Permit holders shall strictly comply with all rules and regulations prescribed by the Department.

d) All Resident Waste Permit requirements specified herein, including, but not limited to, Resident Waste Permit fees, may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

4. Disposal of Solid Waste

a) All Waste Collectors and other Persons shall deliver all Commercial Waste, Industrial Waste, Residential Waste and Construction and Demolition Debris generated within the County, other than Prohibited Materials, Designated Recyclables or Recyclables separated at the point of generation for separate collection, to the County Landfill for disposal or, if permitted to do so in accordance with this local law and applicable Department rules and regulations, to one of the County Transfer Stations. No Waste Collector or other Person shall dispose of Solid Waste at the County Landfill or any Facility for the disposal of Solid Waste, without a Commercial Waste Permit, Resident Waste Permit or Special Waste Permit.

b) No Waste Collector or other Person shall dispose of Solid Waste at the County Landfill or at any other Facility unless such Person or entity shall pay the applicable tipping fee. Disposal of refrigeration units shall be only at Facilities designated by the County, and the fee for such disposal shall be as designated by the County Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and amended as necessary from time to time, by the Board of Supervisors.

c) Solid Waste generated outside the County will not be accepted at the County Landfill or at any other Facility located in the County, except pursuant to approval by the Board of Supervisors.

d) Anyone entering the County Landfill or any other Facility to dispose of Solid Waste must adhere to the rules and regulations as posted and must follow the instructions of the attendant on duty.

e) Nothing within this local law shall be construed at any time to restrict the ability of the Department to refuse to accept Hazardous Waste or other Prohibited Materials at the County Landfill or any other Facility.

f) The Department may, from time to time, provide alternative disposal means at the County Landfill or other Facilities for selected Prohibited Materials.

g) All disposal requirements specified herein may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

5. Fees for Disposal of Solid Waste by Commercial Waste Permit Holders

a) Except as may otherwise be set forth in a disposal contract with the County,

tipping fees for Commercial Waste Permit holders shall be set by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors. In the event that weighing scales at the County Landfill are for any reason not operable, a rate shall be set by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors and shall be based upon the cubic yard capacity of the delivery vehicle, except that a delivery of less than half the load capacity will pay half the fee computed on total capacity. The County's attendant shall be the sole judge of whether the load is less than half the vehicle's capacity. A current official list of Department fees shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation.

b) Upon issuance of initial permit or permit renewal, all Commercial Waste Permit holders must elect to pay tip fees by one of the following methods:

i) at the time of delivery of waste to the landfill. Payment at the time of disposal shall be by cash or valid check, or

ii) by monthly billing from the County. Monthly bills must be paid as determined by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and that may be amended from time to time by the Board of Supervisors. The minimum tipping fee charge for either payment method will be $5.00. Once the permit holder has chosen to pay either at the time of delivery or to be billed monthly, the manner of payment may only be changed at the time of renewal of said permit unless the permit holder is directed otherwise by the Department.

c) Failure to make payments when due may result in one or more of the following sanctions:

i) Suspension or revocation of the Commercial Waste Permit or Special Waste Permit as authorized by Section IV of this local law

ii) Payment of a surcharge as authorized by Section IV of this local law

iii) Requirement to pay Cash on Delivery, pursuant to a resolution adopted by the Board of Supervisors

d) In all cases, failure to make payments when due shall result in the imposition and collection of a late penalty. Said penalty amount shall be as designated by resolution of the County Board of Supervisors and amended as necessary from time to time.

e) Submittal to the County of checks by a Person in amount for which there are insufficient funds available shall be subject to a bounced check fee in an amount as determined by the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors, in addition to other remedies available by law.

f) All Solid Waste disposal requirements specified in this subsection, including, but not limited to, tipping fees and late penalties may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the

Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

6. Fees for Disposal of Solid Waste by Special Waste Permit Holders

a) Tipping fees for Special Waste Permit holders shall be set by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors. In the event that weighing scales at the County Landfill are for any reason not operable, a rate shall be set by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors based upon the cubic yard capacity of the delivery vehicle, except that a delivery of less than half the load capacity will pay half the fee computed on total capacity. The County's attendant shall be the sole judge of whether the load is less than half the vehicle's capacity. A current official list of Department fees shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation.

b) Submittal to the County of checks for tip fees in amount for which there are insufficient funds available shall be subject to a bounced check fee in an amount as determined by the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors, as well as remedies available to the County for failure to make payments by Commercial Waste Permit holders as provided in Section III.5.d. above and as otherwise provided by law.

c) A current official list of Department fees shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation.

d) All Solid Waste disposal requirements specified in this subsection, including, but not limited to, tipping fees, may be amended or adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted, and that may be amended from time to time, by the Board of Supervisors.

7. Fees for Disposal of Solid Waste by Resident Waste Permit Holders

a) Tipping fees for Resident Waste Permit holders shall be imposed by requiring such Resident Waste Permit holder to present disposal punch cards for use as payment.

b) The number of punches required for disposal of various materials shall be set by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and amended as necessary from time to time by the Board of Supervisors. A current official list of Department fees for particular items shall be maintained by and be available from the Madison County Department of Solid Waste and Sanitation. Items not specifically listed by the Board of Supervisors shall require disposal punches as determined in the discretion of the attendant on duty with reference to the estimated volume of the bulk item.

c) Resident Waste Permit holders may purchase disposal punch cards from the Department, authorized County agents and clerks of the town, city or village in which such Resident resides. In the absence of a specific expiration date on the punch card, punch cards issued after January 1 of each calendar year shall be

valid until and shall expire on a date as determined by resolution of the Board of Supervisors.

8. Disposal of Recyclables

a) No Waste Collector or other Person shall dispose of Recyclables at a Facility in the County without a Commercial Waste Permit, Resident Waste Permit or Special Waste Permit.

b) All Persons generating Solid Waste, and/or Waste Collectors collecting Solid Waste and/or Recyclables generated within the County, must separate Designated Recyclables from the Solid Waste stream into such categories and/or into such packages or containers as specified in this local law or as designated and prescribed by the Department, and all Waste Collectors and Resident Waste Permit holders must ensure that any such Designated Recyclables be delivered to a materials recovery facility or other recycling facility, a Transfer Station or a Processor. No Person shall commingle separated Designated Recyclables and Solid Waste at or subsequent to the time said materials are set out for collection.

c) Solid Waste and Recyclables generated within the County that are not included in the current official list of Designated Recyclables must be separately packaged or contained in proper containers as specified in this local law or as designated by the Department. If plastic bags are utilized for this purpose, the bags must be clear plastic to facilitate viewing of their contents.

d) All Waste Collectors operating in the County must provide collection services for both Solid Waste and Recyclables. Collection of Recyclables may be performed on a less frequent basis than Solid Waste collection, but in no case less frequent than twice a month.

e) Customers of Waste Collectors must be provided the option of hiring full collection services for both Recyclables and Solid Waste, or for hiring collection of Solid Waste only, and opting to deliver their own Recyclables to a Transfer Station or recycling facility.

f) All Waste Collectors and Persons other than individual Residents, shall periodically, but no less frequently than annually, submit a report to the Department indicating the types and quantities of Recyclables delivered to a recycling facility or Processor other than Madison County for inclusion in data required by the New York State Department of Environmental Conservation, in accordance with reporting requirements established by the Department that it may modify from time to time.

g) The Department will maintain the Transfer Stations as Recyclable drop off stations for use by Resident Waste Permit holders only. The Department reserves the right to increase or decrease the number or relocate such Recyclable drop off stations.

h) No tipping fee or disposal charges will be imposed at any Facility located in the County for the disposal of Designated Recyclables, except as determined necessary by the Board of Supervisors, and as provided in Paragraph III.8.i below.

i) All Recyclable disposal requirements specified in this subsection, including, but not limited to, the imposition of tipping fees or disposal charges, may be adjusted from time to time by resolution of the Board of Supervisors or by the Department acting in accordance with policies and/or guidelines established by the Committee that have been adopted and that may be amended from time to time by the Board of Supervisors.

9. Littering

a) It shall be unlawful for any person, whether acting as owner, lessee, agent, tenant or otherwise, to throw, cast, deposit or place, or to cause, permit to run, drop, remain or to be thrown, cast or deposited, scattered or spilled by the wind, any Solid Waste, including as a passenger in, owner of, or driver of any car, truck, automobile, boat, bicycle or any other vehicle, in or on any public highway, street, alley, sidewalk, park, public building, dumpster or other container owned, leased or otherwise controlled by another person and for which public use is not authorized, or in any running water, body of water, land adjoining any highway or street, or in or on any other land, public or private in the County except at such places designated or lawfully established by the New York State Department of Environmental Conservation, the County Department of Health or the Department; provided, however, that Solid Waste may be temporarily kept in reasonable quantities in suitable cans, bags, vessels, tanks, dumpsters, and/or containers which are watertight with tightly fitting covers, but only in such manner as to prevent same from being scattered, dropped or spilled by the wind. Nothing in this subsection shall be construed as to prohibit the depositing of animal manure or fertilizers upon any property for the purpose of cultivation or improvement.

b) There shall be no Open Dumps in the County. This shall not be construed as to prohibit disposal areas located within the property boundaries of a Farm for Solid Waste generated from that Farm as otherwise permitted by law except in cases creating a public health nuisance.

SECTION IV - ENFORCEMENT

1. Presumptions

The following shall be rebuttable presumptions in the enforcement of the administrative and criminal provisions of this local law:

a) The placement or presence of any Container which is marked or identified with the name of any Waste Collector, at any location within the County, shall be presumptive evidence that said Waste Collector is providing solid waste collection services at said location within the County as of the date of said placement or presence.

b) Evidence of Solid Waste in a Container located as described in Section IV.1.a. above, and subsequent observation of the same Container empty, shall be presumptive evidence that Solid Waste was collected from the Container by the Waste Collector whose name is marked on the Container.

c) The failure to deliver any Solid Waste to a County Facility within three days of the collection of Solid Waste from any location within the County shall be presumptive evidence that the Solid Waste was disposed of at a location other than a County Facility.

d) Service upon any Person in a manner consistent with the requirements of Section IV.2.b. of this local law shall be presumptive evidence that such notice was received by that Person.

2. Administrative Sanctions

a) The Department shall have the right to impose a surcharge and/or suspend or revoke any Commercial Waste Permit, Resident Waste Permit, or Special Waste

Permit if the holder of such permit violates any of the provisions of this local law or any rules, regulations or requirements of the Department that may be adopted and modified from time to time in accordance with this local law. Revocation, suspension or surcharge may only follow a written notice of violation and, if demanded, a hearing as provided for in this local law.

b) Upon any violation of the provisions of this local law or any applicable rules, regulations or requirements of the Department, the Department may serve notice in person or by ordinary mail sent to the holder of any permit issued pursuant to this local law, at the address set forth in the permit application on file with the Department. Such notice shall state the Department's intent to revoke or suspend, and/or impose a surcharge upon the permit holder.

c) Any holder of a Commercial Waste Permit, Resident Waste Permit, or Special Waste Permit may demand a hearing as allowed by Section IV.2.a of this local law, by serving upon the Department a written request for a hearing; such request must be received by the Department within ten days of the date of service of notice. Upon receipt of such demand, a hearing shall be scheduled and held at the offices of the Department. Said hearing will be conducted in accordance with Rules of Procedure. A copy of said Rules shall be provided, upon request made to the Department, to any Person who requests a hearing.

d) Upon the expiration of such ten-day notice period provided for in Section IV.2.c of this local law, or the majority determination of the Board of Hearing, the revocation, suspension and/or surcharge provided for in the notice or as modified by the Board of Hearing upon notice to the violator, shall be effective upon service of said notice.

e) The Board of Hearing shall consist of three persons, as follows:

i) The Committee Chairperson

ii) Two (2) members of the Committee as appointed by the Committee Chairperson.

iii) Each member of the Board of Hearing may designate an individual from the Board of Supervisors who currently or in the past has served on the Madison County Solid Waste & Recycling Committee to serve in his or her place and stead for such period as shall be reasonably necessary. The Committee Chairperson may designate a third member of the Committee to serve in the Chairperson's place and stead, and upon such designation the Board of Hearing may waive the Committee Chairperson's attendance and participation.

f) Any Person who is found, after hearing, to have violated any of the provisions of this local law or any applicable rules, regulations or requirements of the Department may be required to pay a surcharge not to exceed $2000 for each violation. Such surcharge must be paid in full before any permit issued pursuant to this local law can be reinstated.

3. Criminal Sanctions

a) The County Sheriff's Department, New York State Police, New York State Department of Environmental Conservation Officers and all local law enforcement agencies shall be empowered to initiate proceedings against violators hereof in the name of the County in addition to any other remedies available under State or local law.

b) Any Person violating the provisions of this local law or any applicable rules, regulations or requirements of the Department shall be guilty of a violation, which shall be punishable upon conviction by a fine of up to $2000. Each day during which a violation continues shall be deemed to be a separate violation.

c) The Court may also order a cleanup of the affected area and/or community service in lieu of, or in addition to, a fine. Any fines shall be directed to be payable to the County of Madison and shall be transmitted to the County Treasurer.

d) Failure to pay any fine may result in imprisonment as prescribed in Section 420.10(3) of the Criminal Procedure Law.

4. Enforcement Guidelines

The Department or Committee may establish and modify from time to time enforcement guidelines that have been adopted and that may be amended from time to time by resolution of the Board of Supervisors with regard to any provision of this local law.

SECTION V - EFFECTIVE DATE

This law shall take effect immediately upon its adoption by the Board of Supervisors.

SECTION VI - SEVERABILITY

If any part of this local law, as originally enacted or as amended from time to time, is found to be illegal, or its application to any Person or circumstance is held invalid, the remainder and the application of its provisions to Persons or circumstances other that those to which it is held invalid, shall not be affected thereby and shall remain in full force and effect.

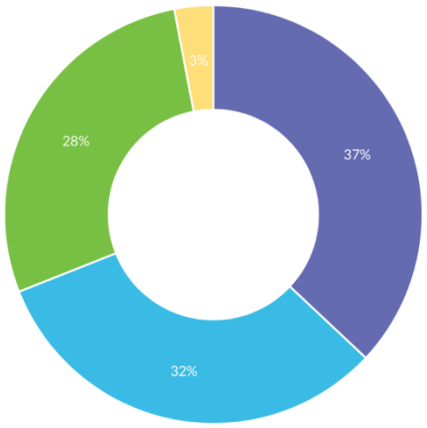
END

Appendix C

Survey Results

Q1 What is your role within the Cazenovia College community?

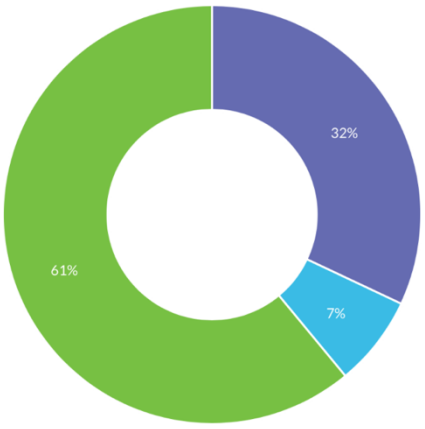
Multiple Choice



Choice	Total
Student	37
Staff	32
Faculty	28
Other	3

Q2 If you are a student do you live on or off campus?

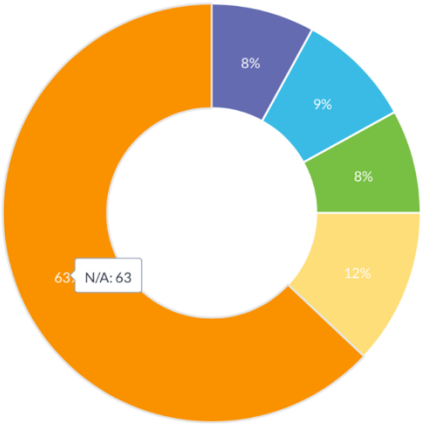
Multiple Choice



Choice	Total
On campus	32
Off campus	7
N/A	61

Q3 If you are a student, what year are you?

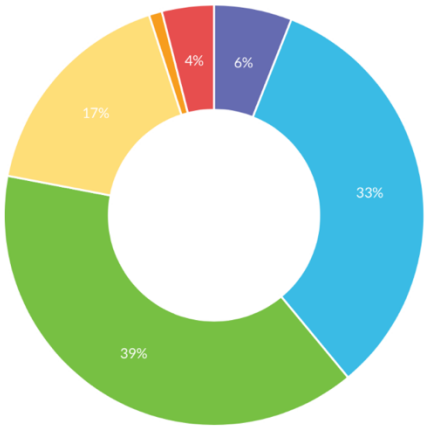
Multiple Choice



Choice	Total
Freshman	8
Sophomore	9
Junior	8
Senior	12
N/A	63

Q4 My current recycling technique involves

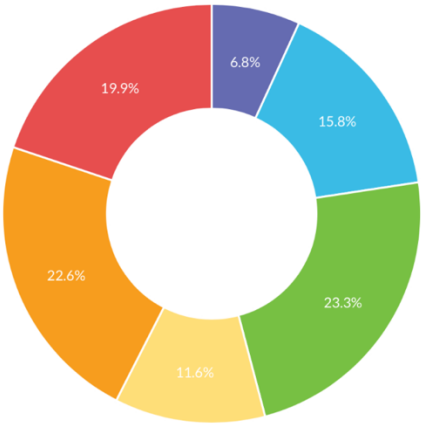
Multiple Choice



Choice	Total
Random guessing	6
Educated guessing	33
Looking for the number 1-7 and/or the recycling symbol	39
Looking for "please recycle" on items	17
I do not recycle	1
Other	4

Q5 What deters you from recycling?

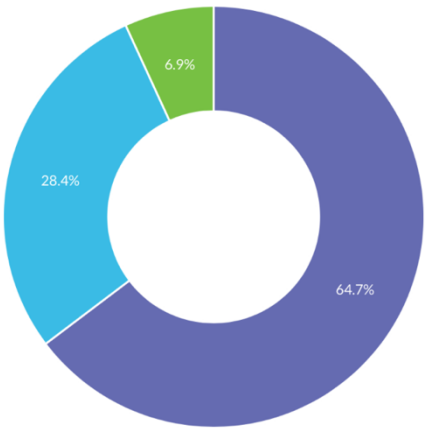
Multiple Choice



Choice	Total
I don't want to clean containers out	10
I don't know what is recyclable and what isn't	23
I don't have multiple bins in my offfice/room to separate items into	34
Recycling/trash areas on campus are confusing	17
I don't believe that recyclable items are actually being recycled	33
Other	29

Q6 Do you have separate bins for recycling and trash in your dorm room or office?

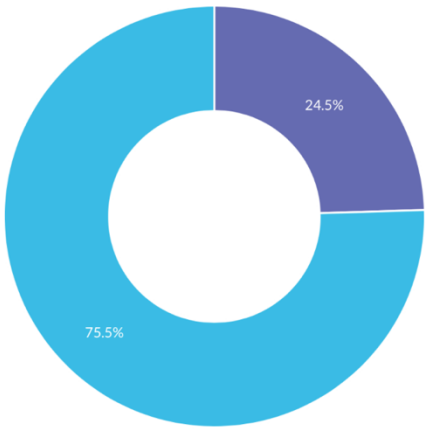
Multiple Choice



Choice	Total
Yes	66
No	29
N/A- staff without office/dorm space	7

Q7 Do you find the labeling of recycling and waste bins on campus confusing?

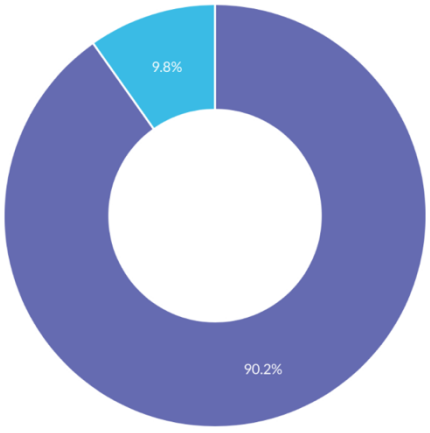
Multiple Choice



Choice	Total
Yes	25
No	77

Q8 I would like to improve my recycling habits

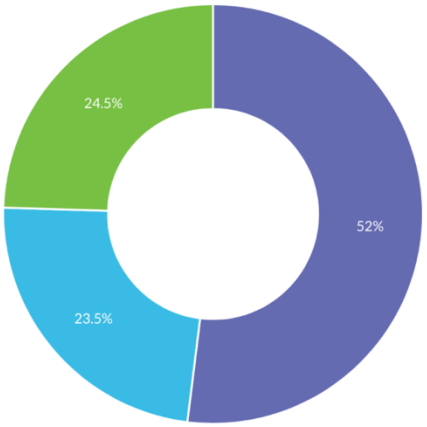
Multiple Choice



Choice	Total
yes	92
no	10

Q9 Please select the area in which you believe the following items belong. To-go containers and cups from the dining hall.

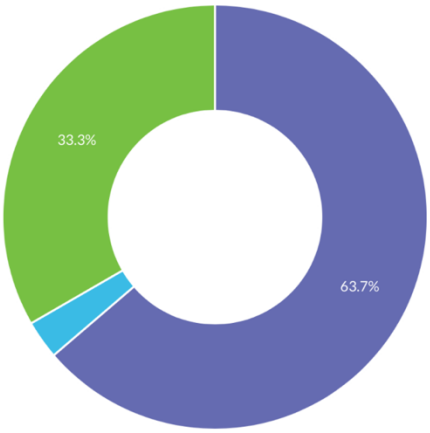
Multiple Choice



Choice	Total
Trash	53
Paper recycling	24
Containers recycling	25

Q10 Paper to go boxes and hot/cold cups along with their lids and straws are not recyclable and belong in the trash. They are made of materials that are not easy to break down. What about plastic to-go...

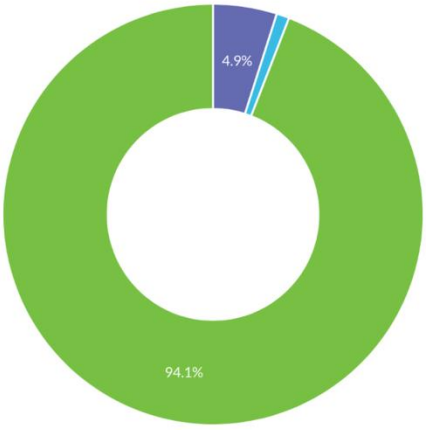
Multiple Choice



Choice	Total
Trash	65
Paper recycling	3
Containers recycling	34

Q11 Plastic to-go containers cups, lids and straws from restaurants and coffee shops also belong in the trash. These items are not recyclable because of the method in which they are made. They melt at a...

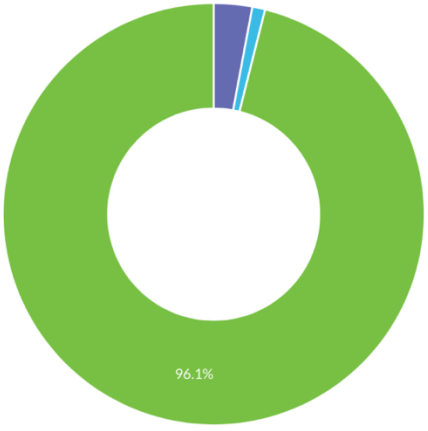
Multiple Choice



Choice	Total
Trash	5
Paper recycling	1
Containers recycling	96

Q12 Luckily, plastic bottles are recyclable! Just empty them, rinse them out, remove caps and place in the "containers" recycling. What about cans (soda/water/alcohol, soup)?

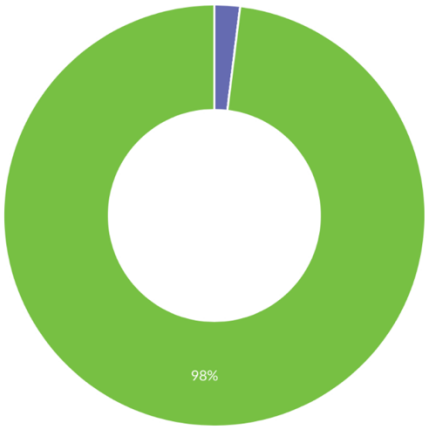
Multiple Choice



Choice	Total
Trash	3
Paper recycling	1
Containers recycling	98

Q13 Cans are also recyclable! Again, these should be emptied and placed in “containers” recycling. What about glass bottles and jars?

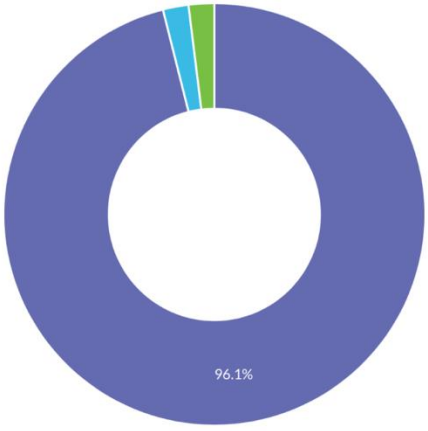
Multiple Choice



Choice	Total
Trash	2
Paper recycling	0
Containers recycling	100

Q14 Glass bottles and jars are also recyclable. They too should be put in the “containers” recycling bin after being emptied and rinsed. What about snack packaging (Dorito bags, Oreo containers, etc.)?

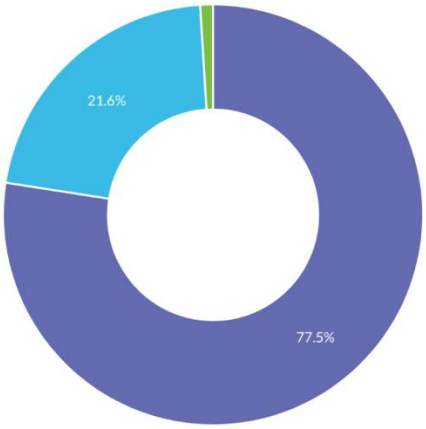
Multiple Choice



Choice	Total
Trash	98
Paper recycling	2
Containers recycling	2

Q15 Unfortunately, snack packaging is not recyclable and belongs in the trash because they are made of filmy plastic which can't be repurposed well. What about tissues, napkins, paper towels?

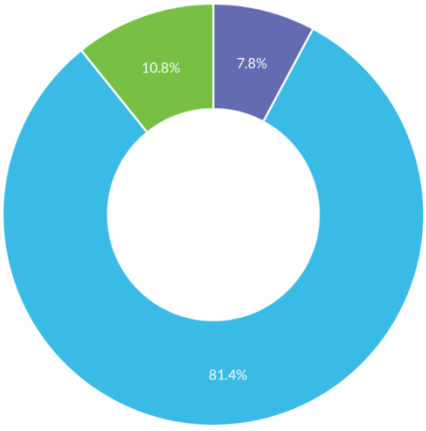
Multiple Choice



Choice	Total
Trash	79
Paper recycling	22
Containers recycling	1

Q16 Tissues, napkins and paper towels are not recyclable and belong in the trash. These items are made of fibers which are too short to recycle into new items, and if used, may also be contaminated with...

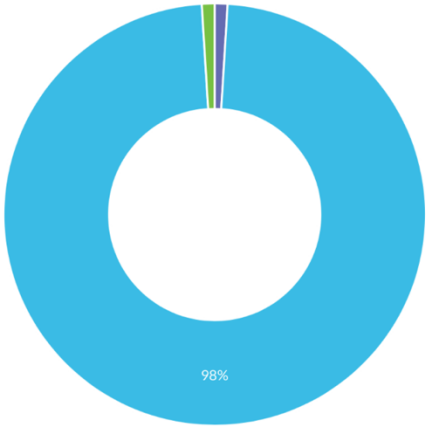
Multiple Choice



Choice	Total
Trash	8
Paper recycling	83
Containers recycling	11

Q17 Take-out pizza boxes belong in the “paper” recycling bin. Just remove the liner that was protecting the box from grease, and recycle the box. Frozen pizza boxes are not recyclable because they are...

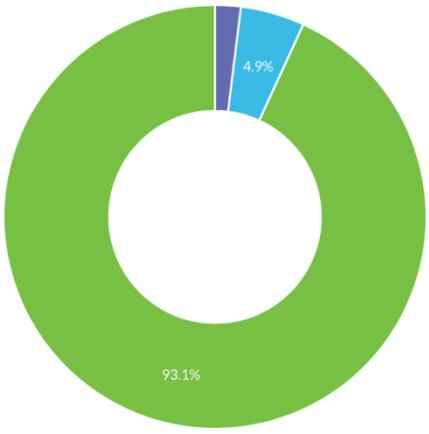
Multiple Choice



Choice	Total
Trash	1
Paper recycling	100
Containers recycling	1

Q18 Plain paper also belongs in the “ paper” recycling bin. What about a milk jug?

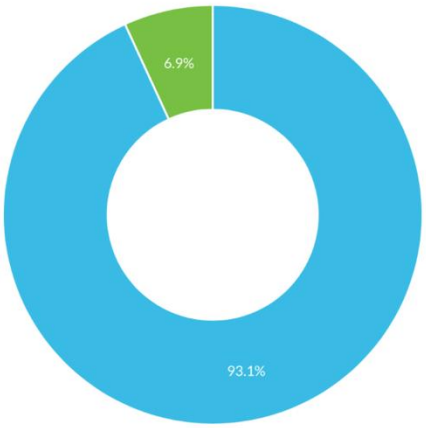
Multiple Choice



Choice	Total
Trash	2
Paper recycling	5
Containers recycling	95

Q19 Milk jugs are recyclable and belong in the “containers” recycling bin. Just make sure they are emptied, rinsed, and remove the cap. What about cardboard shipping boxes?

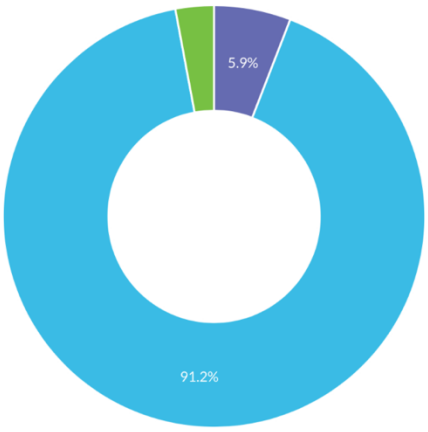
Multiple Choice



Choice	Total
Trash	0
Paper recycling	95
Containers recycling	7

Q20 Cardboard shipping boxes are recyclable as well and belong in “paper” recycling bins. What about cereal boxes?

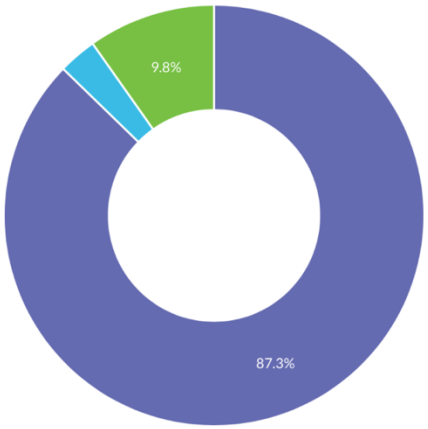
Multiple Choice



Choice	Total
Trash	6
Paper recycling	93
Containers recycling	3

Q21 Cereal boxes are recyclable as well and belong in “paper” recycling bins. What about styrofoam?

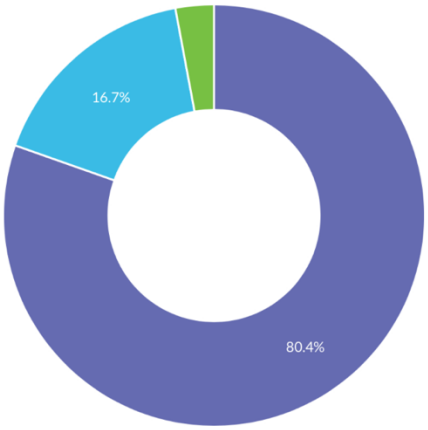
Multiple Choice



Choice	Total
Trash	89
Paper recycling	3
Containers recycling	10

Q22 Unfortunately, any Styrofoam products should not go in the recycling bins on campus as Styrofoam is not accepted in on-campus recycling containers. What about ice cream containers?

Multiple Choice



Choice	Total
Trash	82
Paper recycling	17
Containers recycling	3

Q23 Ice cream containers, as well as any other packaging made for products that are refrigerated or frozen, are not recyclable because they are made of plastic film and cardboard. These mixed materials...

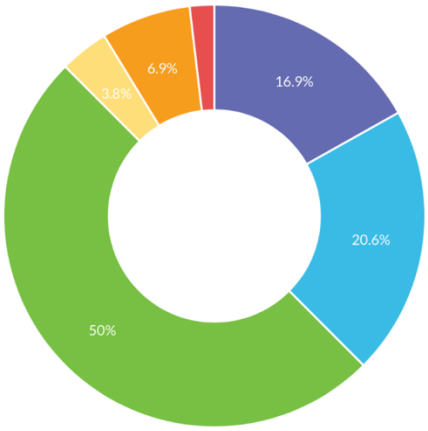
Essay

Date	Answers
May 8	Fabrics. Microwave food trays (plastic).
May 8	Some commercial food containers-always looking on container to be sure.
May 8	plastic vegetable and fruit containers, certain yogurt containers
May 8	my office only has a paper bin...a container bin would make personal recycling much easier!
May 4	I am good.
Apr 29	I don't know which plastic numbers are recyclable in the Cazenovia area.
Apr 29	cute pictures on the recycling boxes so I know where everything goes would be helpful
Apr 29	I am not confused about items. I understand and abide by recycling guidelines.
Apr 29	Yogurt containers, Chemical containers
Apr 29	paper egg cartons

Load More

Q24 During normal school operations- not during the coronavirus pandemic- The most effective way to communicate information to me is by

Multiple Choice



Choice	Total
Toilet Paper Times	27
Signs	33
Email	80
Information booth outside dining hall	6
Caz website	11
Other	3

Conclusion

Overall, I am pleasantly surprised. I would like to see more student responses in the future, but considering the limitations of this semester, this is great information. Areas of greatest confusion are to-go items and paper-towel like items. I do think that people learned as they completed the survey, which is awesome. Based on the number of people that recycle based on "please recycle" or 1-7 labels, and their noted interest in improving their techniques, clarification at recycling locations throughout campus would be beneficial to Cazenovia College's overall recycling practices. It would also be important to provide reassurance that the items are indeed being recycled. Lastly, encouraging or providing additional separate bins for paper and containers would benefit the program.

Appendix D

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2021.

A. This annual/quarterly report is for the year of operation from January 01, 2020 to December 31, 2020

B. Quarterly Report for: ☐ Quarter 1 ☐ Quarter 2 ☐ Quarter 3 ☐ Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION

FACILITY NAME: Madison County Landfill

FACILITY LOCATION ADDRESS:	FACILITY CITY:	STATE:	ZIP CODE:
6663 Buyea Rd	Canastota	NY	13032

FACILITY TOWN:	FACILITY COUNTY:	FACILITY PHONE NUMBER:
Lincoln	Madison	315-361-8408

FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Madison County

NYSDEC REGION #: 7

360 PERMIT #:	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:
7-2538-00011/00005	1/26/2018	11/1/2027	27S15

FACILITY CONTACT:	☒ public ☐ private	CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
Amy Miller		315-366-3068	

CONTACT EMAIL ADDRESS: amy.miller@madisoncounty.ny.gov

OWNER INFORMATION

OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:
Madison County Dept. of Solid Waste	315-361-8408	315-361-1524

OWNER ADDRESS:	OWNER CITY:	STATE:	ZIP CODE:
P.O. Box 27	Wampsville	NY	13163

OWNER CONTACT:	OWNER CONTACT EMAIL ADDRESS:
Amy Miller	amy.miller@madisoncounty.ny.gov

OPERATOR INFORMATION

OPERATOR NAME: ☒ *same as owner* ☒ **public** ☐ **private**

PREFERENCES

Preferred address to receive correspondence:	☐ *Facility location address*	☒ *Owner address*
☐ *Other (provide):*		
Preferred email address:	☐ *Facility Contact*	☒ *Owner Contact*
☐ *Other (provide):*		
Preferred individual to receive correspondence:	☐ *Facility Contact*	☒ *Owner Contact*
☐ *Other (provide):*		

Did you operate in 2020? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 23. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

   a. What is the estimated landfill capacity that was utilized during the reporting year?

   67,151 Cubic Yards of Airspace

   Please do not report units as pounds per cubic yard.

   b. What is the estimated in-situ waste density for the reporting year?

   0.81 Tons/Cubic Yard

2. Remaining Constructed Capacity

   a. What is the remaining capacity of the landfill that is already constructed?

   304,278 Cubic Yards of Airspace

   b. What is the estimated remaining life of the constructed capacity?

   4 Years 1 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

   c. The tonnage rate reported under 2.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain): At historical 10 year waste density of 0.81 Tons/CY

3. Permitted Capacity Still to be Constructed

   a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

   8,919,585 Cubic Yards of Airspace

   b. What is the projected life of capacity reported in 3.a?

   120 Years 5 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

   c. The tonnage rate reported under 3.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain):

   At historical 10 year waste density of 0.81 Reprinted

4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

none _____ Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

none _____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: City of Oneida / City of Rome

Does the landfill have a constructed liner and a leachate collection system? ☒ Yes ☐ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

For **each cell**, please report the **acreage** and the **primary leachate** amount.

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Phase 1	Phase 2	Phase 3	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	See note	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	31,852	214,704	571,560				855,387					
February	25,402	199,685	660,660				980,051					
March	22,378	188,699	571,560				791,938					
April	27,418	164,103	460,680				773,499					
May	26,208	176,098	722,370				837,630					
June	14,011	89,309	452,430				934,853					
July	22,680	142,028	1,743,390				1,869,059					
August	13,003	66,931	502,260				405,428					
September	12,600	49,090	523,380				346,417					
October	20,663	56,851	486,090				367,050					
November	23,284	42,941	517,770				377,592					
December	39,413	89,107	639,870				524,695					
ANNUAL	278,912	1,479,546	7,852,020				9,063,600					

*This includes primary and secondary leachate. Quantities are estimated based on bucket flow tests for Phases 1 and 2, and pump hours and pump design hourly flows for Phase 3.

*Entire site. The leachate quantities treated off-site represents the total volume of primary and secondary leachate collection for Phases 1-3, as well as the leachate generated from the East Side Landfill.

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Phase 1	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May	1,785											
June												
July												
August												
September	18,221											
October	132,835											
November	90,184											
December	105,719											
ANNUAL	348,744											

No leachate treated on site.

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Attached are maintenance logs for the West Side Landfill for 2020.

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? ☒ Yes ☐ No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: $ $105,000 for Oct. - Dec. 2020

Total quantity treated: 9,063,600 gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

Note: Secondary leachate quantities are commingled with primary leachate quantities; for exact values, please refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS AND ALTERNATIVE OPERATING COVER MATERIALS

For each type of waste material that the Department has approved for use as alternative operating cover (AOC), intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., operating cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) **Refer to the list of NYS Planning Units that can be found at the end of this report.**

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete						
Contaminated Soil	1,522.34	AOC	Madison County	Madison Count	NY	
Foundry Sand	257.84	AOC	Onondaga County (ex	Onondaga Cou	NY	Meloon Foundries: 1841 Lemoyne Ave, Syracuse, NY 13208
Glass	407.69	Drainage Material	Madison County	Madison Count	NY	
Industrial Waste (specify)						
MSW Ash	8,811.04	AOC	Onondaga County (ex	Onondaga Cou	NY	Onondaga County Resource Recovery Facility: 5801 Rock Cut Rd, Jamesville, NY 13078
Wood Ash						
Paper Mill Sludge						
Processed C&D						
Waste Tire-Derived Aggregate /						
Waste Tires	168.05	Drainage Material	Madison County	Madison Count	NY	
Other (specify)						
Total AOC	10,591.22					
Total Beneficial Use Determination Materials	11,166.96					

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = 19.53%

Please note the calculation **is**: Tons AOC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons AOC / (Tons Solid Waste + AOC) x 100

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

100 % Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)							
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)	511.84	253.94	362.75	402.36	545.22	719.00	840.60
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	2,949.04	2,536.17	3,108.93	3,066.19	3,323.11	3,666.40	4,402.76
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge	392.83	444.55	587.90	413.72	427.82	373.59	465.96
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed	3,853.71	3,234.66	4,059.58	3,882.27	4,296.15	4,758.99	5,709.32

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)	varies	550.82	673.70	718.58	626.11	413.61	6,618.53	21.7
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	varies	4,931.88	3,655.84	3,790.21	3,332.7	3,312.07	42,075.32	138.0
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge	varies	359.83	450.09	576.01	494.39	545.87	5532.56	18.1
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Disposed		5,842.53	4,779.63	5,084.80	4,453.22	4,271.55	54,226.41	177.8

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

- If the waste ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Asbestos					
Ash (Coal)					
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)	Direct Haul	NY	Madison County	Madison County	6,618.53

Reprinted (12/20)

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	Direct Haul	NY	Madison County	Madison County	37,199.95
	Madison County Transfer Stations	NY	Madison County	Madison County	4,718.67
	ARC Recycling Facility Residue	NY	Madison County	Madison County	156.70
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge	Direct Haul	NY	Madison County	Madison County	4,343.04
	Direct Haul	NY	Otsego County	Otsego County	1,189.52
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons):	54,226.41

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

☐ Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: http://www.dec.ny.gov/chemical/52706.html .

☒ No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Please identify where the recyclable materials are coming from. DO NOT REPORT IN CUBIC YARDS!

- If the materials ***WERE*** received from another solid waste management facility, please write in the name and address of the facility along with the appropriate state, county and planning unit/municipality.
- If the materials ***WERE NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the recyclables were generated.

Specify transport method, list type of material(s) and percentages of total waste transported by each:

100 % Road: Waste Type(s):_____ _____% Rail: Waste Type(s):_____

_____% Water: Waste Type(s):_____ _____% Other (specify: _____): Waste Type(s):_____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED

MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Scrap Metal	Direct Haul	NY	Madison County	Madison County	413.15
	Madison County Transfer Stations	NY	Madison County	Madison County	360.22
Mixed Containers	Direct Haul	NY	Madison County	Madison County	129.24
Batteries & Bulbs	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	16.63
Mixed Paper	Direct Haul	NY	Madison County	Madison County	234.60
Yard Waste	Direct Haul and Cazenovia Transfer Station	NY	Madison County	Madison County	249.00
Brush, Branches, Trees, & Stumps	Direct Haul	NY	Madison County	Madison County	324.21
Textiles	Direct Haul	NY	Madison County	Madison County	147.30
Confidential Paper	Direct Haul	NY	Madison County	Madison County	7.31
Miscellaneous	Direct Haul	NY	Madison County	Madison County	10.64
Other (specify)					
				TOTAL RECEIVED (tons):	1,892.3

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Paper (all grades)	ARC Recycling Facility	NY	Madison County	Madison County	234.60
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
Confidential Paper	Confidata - Utica, NY	NY	Oneida County	Oneida County	7.31
				TOTAL PAPER RECOVERED (tons):	241.91

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
				TOTAL GLASS RECOVERED (tons):	

METAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Aluminum Foil / Trays					
Bulk Metal (from MSW)	Upstate Shredding	NY	Tioga County	Tioga County	773.37
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	773.37

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)					
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Containers (metal, glass, plastic)	ARC Recycling Facility	NY	Madison County	Madison County	129.24
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	129.24

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Batteries & Bulbs	E-Waste + (Monroe County)	NY	Monroe County	Monroe County	6.7
	Interstate Batteries (Onondaga County)	NY	Onondaga County	Onondaga County	8.54
Batteries & Bulbs	Call2Recycle	unknown	unknown	unknown	1.39
Brush, Branches, Trees, & Stumps	Chipped On-Site for public use	NY	Madison County	Madison County	324.21
Miscellaneous (Cooking & Waste Oil)	JC Rendering	NY	Herkimer County	Herkimer County	0.23
	Used in On-Site Waste Oil Burner	NY	Madison County	Madison County	10.41
Yard Waste (curbside)	Composted On-Site for public use	NY	Madison County	Madison County	249
Textiles	Salvation Army	NY	Onondaga County	Onondaga County	147.30
				TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons):	747.78

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ■ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model RC2W34 of fixed unit.

Does your facility use a portable radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model MSpec of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

See Attachment 1 - Waste In Place Summary

Overall in place volume 1,810,369 cubic yards

Method for determining waste composition, if known. Scale Records

Explain if closed landfills are included above No closed landfills are included

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 3

Original* section used (years) from 1996 to 2012

Section Footprint 7.6 acres

Capped with approved final cover system Yes ■ No _____

Percent capped 61.8

Waste in Place: 401,658 Tons 536,985 Cubic Yards, if known

Next* section used (years) from 2003 to Present

Section Footprint 6.75 acres

Capped with approved final cover system Yes _____ No ■

Percent capped 0

Waste in Place: 452,041 Tons 558,075 Cubic Yards, if known

Section 3 - Used from 2009 to present encompasses 9.45 acres, none of which being capped. It has approximately 515,902 tons in place (approximately 715,309 cubic yards).

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?
Yes ■ No ____ If Yes: Active ■ Passive ___

Number of gas wells: 92 Vertical Wells, Horizontal Wells and Trench Collectors

Total landfill footprint acreage 48.5 West Side = 27.0 ac; East Side (Section I & II Closed Landfill) = 21.6 ac

Total landfill acreage from which gas is collected 36.2

Landfill sections from which gas is collected Phase 1, 2 and 3(West Side), Section II (East Side)

Landfill acreage from which gas is collected for energy recovery 36.2

Measured Methane Generation Rate*, k Default

Measured Potential Methane Generation Capacity*, L_o Default m^3/Mg

NMOC Concentration* 35 ppmv as hexane

Does the landfill require a Title V Permit? Yes ■ No _____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: WM Canastota Renewable Energy

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: 1

Type of Flare: Opened Flare x Enclosed Flare _____

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually 646,040 cubic feet
Flare Hours of Operation per Year 42 hours/year
Methane Percentage in Landfill Gas before flaring 48.60 %
Methane Destruction efficiency 99 %

Candlestick Flares:

Number of Candlestick Flares 0
Estimate of Gas Flared Candlestick Flare N/A cubic feet

Gas To Energy

Please report units in cubic feet

Number of Internal Combustion Engines: 1

Quantity of Gas collected for Internal Combustion Engine Annually 135,761,000 cubic feet
Methane Destruction efficiency 97 %
Methane Percentage in Landfill Gas before combustion 48.60 %
Utility Company Receiving Electricity _____

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing 0 cubic feet
Methane Percentage in Landfill Gas before processing - %
On-site or Off-site User of Gas none

Landfill Gas Recovery Facility/Landfill Data

Facility Contact Kevin Koennecke Phone # (315)339-0035

Contact e-mail address kkoennec@wm.com Fax # (_____)_____-_____

Operation and maintenance cost for calendar year: $undisclosed

Does the LGRF experience shut downs: ■ Yes _____ No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

Utility trips, maintenance, and repairs lead to planned and unplanned shutdowns

Year landfill opened: 1996 Anticipated landfill closure date: 2145

Reprinted (12/20)

Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January	12,359,000	N/A	560,069	0	0	732
February	11,322,000	N/A	536,816	0	0	690
March	12,426,000	N/A	561,397	0	0	742
April	12,007,000	N/A	555,656	0	0	716
May	12,113,000	N/A	546,307	0	0	737
June	11,453,000	N/A	495,027	0	0	703
July	11,628,000	N/A	524,190	0	0	742
August	11,852,000	N/A	541,466	0	0	740
September	10,654,000	N/A	460,536	0	0	710
October	10,089,000	N/A	441,448	0	0	744
November	9,638,000	N/A	430,747	0	0	710
December	10,220,000	N/A	454,482	0	0	744
ANNUAL TOTAL	135,761,00	0	6,108,181	0	0	8,710

* Provide where applicable.

Normal Weekdays of Operation 7 days/week Normal Hours of Operation 24 hours/day

Electricity Generated and used/marketed offsite 5,604,458 KWH
Electricity Generated and used onsite 503,723 KWH
Gas Processed and used/marketed offsite N/A cubic feet
Gas Processed and used onsite N/A cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

Condensate is collected and stored in a holding tank and is pumped out for co-disposal with site leachate.

Reprinted (12/20)

SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

☒ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan? Financial Assurance documents are submitted under separate cover after review by the County Treasurer.

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 11 – LANDFILL OPERATOR TRAINING

Name of trained landfill operator: Gregory Gelewski

Name and location of training course: NYSASWM 2020 Landfill Operator Training (Saratoga, NY)

Date completed: March 10-11, 2020

SECTION 16 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Reprinted (12/20)

SECTION 17 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 18 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 19 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 20 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 21 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

☒ Yes ☐ No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

Refer to "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted under separate cover.

Reprinted (12/20)

SECTION 22 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ■ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 23 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

Amy Miller
Signature

02/26/21
Date

Amy Miller
Name (Print or Type)

Director of Solid Waste Management
Title (Print or Type)

amy.miller@madisoncounty.ny.gov
Email (Print or Type)

P.O. Box 27
Address

Wampsville
City

NY, 13163
State and Zip

(315) 366-3068
Phone Number

ATTACHMENTS: ☒ YES ☐ NO
(Please check appropriate line)

Reprinted (12/20)

Attachment 1 - Madison County West Side Landfill Annual Waste Tonnages

Year	In-County Waste Materials (tons)	Alternate Cover Materials (tons)	Sewage Treatment Plant Sludge (tons)	Treated Medical Waste (tons)	Total Tons Landfilled
1996	7,642	4,420			12,062
1997	30,545	20,431	952		51,928
1998	34,350	5,805	1,458		41,613
1999	39,770	11,258	1,466	1,815	54,309
2000	42,177	16,595	3,207	2,341	64,320
2001	32,366	9,321	855	2,141	44,683
2002	42,463	22,235	668	2,005	67,371
2003	46,048	10,860	648	1,747	59,303
2004	47,847	22,655	1,187	2,000	73,689
2005	51,477	12,032	1,022	1,274	65,805
2006	50,441	16,928	551	2,071	69,991
2007	50,473	9,758	3,803		64,034
2008	46,932	10,401	2,806		60,139
2009	45,486	11,481	2,378		59,345
2010	44,040	9,002	2,962		56,004
2011	43,985	9,953	2,642		56,580
2012	42,973	8,054	2,219		53,246
2013	43,418	17,809	2,623		63,850
2014	44,062	7,106	2,649		53,817
2015	46,244	12,986	8,719		67,949
2016	*45,287*	*35,913*	*9,144*		*90,344*
2017	*47,772*	*13,582*	*7,745*		*69,099*
2018	*53,246*	*15,858*	*6,661*		*75,766*
2019	*46,827*	*11,516*	*6,332*		*64,675*
2020	*48,693*	*10,591*	*5,533*		*64,817*
Totals	**1,074,564**	**336,550**	**78,230**	**15,394**	**1,504,739**

Madison County Leachate Collection System Cleaning

Leachate Lines	Flushed	Jetted	Date	Comments	Tech
Eastside from pump to manhole		x	5/22/20		EB, Core Vis
Eastside from manhole to pond		x	5/22/20		EB, Core Vis
Manhole 1		x	5/18/20		EB, Core Vis
Manhole 2		x	5/18/20		EB, Core Vis
Manhole 3		x	5/18/20		EB, Core Vis
Manhole 4		x	5/18/20		EB, Core Vis
Manhole 5		x	5/18/20		EB, Core Vis
Manhole 6		x	5/18/20		EB, Core Vis
Header between 1&2		x	5/19/20		EB, Core Vis
Header between 2&4		x	5/19/20		EB, Core Vis
Header bewtween 5&6		x	5/19/20		EB, Core Vis
Main to pond from 2		x	5/19/20		EB, Core Vis
Main to pond from 5		x	5/19/20		EB, Core Vis
Manhole 7		x	5/18/20	Crushed at 600'	EB, Core Vis
Header from Manhole 7 to Pump Station 7		x	5/19/20		EB, Core Vis
Main line to pond from Pump Station 7 to C/O		x	5/21/20		EB, Core Vis
Main line to pond from C/O to Pond		x	5/22/20		EB, Core Vis
Manhole 7 to Cell 8		x	5/19/20		EB, Core Vis
Cell 8 Sumps		x	5/19/20		EB, Core Vis
Cell 8 Cleanout into cell		x	5/19/20		EB, Core Vis

******Fill in Date action taken and Check Which Action was Taken*******

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

RECYCLABLES HANDLING & RECOVERY FACILITY ANNUAL REPORT

(If you need assistance filling out this form please email swmfannualreport@dec.ny.gov or call 518-402-8678.)

Complete and submit this form by March 1, 2021.

This annual report is for the year of operation from January 01, 2020 to December 31, 2020

SECTION 1 – GENERAL INFORMATION

FACILITY INFORMATION

FACILITY NAME: Alternatives Recycling Center			
FACILITY LOCATION ADDRESS: 6641 Buyea Rd.	**FACILITY CITY:** Canastota	**STATE:** NY	**ZIP CODE:** 13032
FACILITY TOWN: Lincoln	**FACILITY COUNTY:** Madison	**FACILITY PHONE NUMBER:** 315-363-2372	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Madison County		**NYSDEC REGION #:** 7	

360 PERMIT #: (Refer to DEC Permit)	**DATE ISSUED:** 07/03/18	**DATE EXPIRES:** 05/03/23	**NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:** (Refer to DEC Registration) 27R20001

FACILITY CONTACT: Darin Pearo	☐ public ☒ private	**CONTACT PHONE NUMBER:** 315-363-3389 ext 7330	**CONTACT FAX NUMBER:** 315-363-9205
CONTACT EMAIL ADDRESS: Darin.Pearo@arcofmc.org			

OWNER INFORMATION

OWNER NAME: Arc Madison Cortland	**OWNER PHONE NUMBER:** 315-363-3389	**OWNER FAX NUMBER:** 315-363-4286	
OWNER ADDRESS: 701 Lenox Ave.	**OWNER CITY:** Oneida	**STATE:** NY	**ZIP CODE:** 13421
OWNER CONTACT: Perry Courto	**OWNER CONTACT EMAIL ADDRESS:** Perry.Courto@arcofmc.org		

OPERATOR INFORMATION

OPERATOR NAME: ☐ *same as owner* ☐ public ☐ private

PREFERENCES

Preferred address to receive correspondence: ☒ *Facility location address* ☐ *Owner address* ☐ *Other (provide):*

Preferred email address: ☒ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Preferred individual to receive correspondence: ☒ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Did you operate in 2020? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 11. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - MATERIAL RECEIVED

Please provide the tonnages of materials received. This includes all materials received at your facility regardless of their destination after processing. DO NOT REPORT IN CUBIC YARDS!

Specify the methods used to measure the quantities received and the percentages measured by each method:

100 % Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Recycling Type: Dual Stream

Material	Tip Fee ($/Ton)	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Commingled Containers (metal, glass, plastic)		76.50	88.17	75.51	75.51	57.43	90.58	103.80
Commingled Paper (all grades)		269.18	195.12	169.91	243.25	203.90	222.39	221.13
Single Stream (total)								
Other (specify)								
Total Tons Received		345.68	283.29	245.42	318.76	261.33	312.97	324.93

Material	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Commingled Containers (metal, glass, plastic)	29.91	97.89	114.24	57.38	161.88	1028.80	85.73
Commingled Paper (all grades)	206.34	214.65	257.39	206.06	230.78	2640.10	220.01
Single Stream (total)							
Other (specify)							
Total Tons Received	236.25	312.54	371.63	263.44	392.66	3668.90	305.74

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 3 – SERVICE AREA OF MATERIAL RECEIVED

Please identify where the material is coming from. The total tons received reported below should equal the total tons received in Section 2 (Solid Waste Received). DO NOT REPORT IN CUBIC YARDS!

- If the material ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the material ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the material was generated.

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s): Private haulers

_____% Rail: Material(s):_____

_____% Water: Material(s):_____

_____% Other (specify: _____): Material(s):_____

SERVICE AREA OF MATERIAL RECEIVED (where the material is coming from)					
MATERIAL	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "*Direct Haul*"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Commingled Containers (metal, glass, plastic)	All Materials are direct haul, either from county transfer station				1028.80
	or curbside pickup by trash haulers.		Madison County		
Commingled Paper (all grades)	All Materials are direct haul, either from county transfer station				
	or curbside pickup by trash haulers.		Madison County		2640.10
Single Stream (total)					
Other (specify)					
				TOTAL MATERIAL RECEIVED (tons):	3668.90

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name. Reprinted (12/20)

SECTION 4 – RESIDUE

Total residue (tons) = 156.70 Residue destination **(Name & Address)** Madison County Division for Salid Waste Landfill, 6663 Buyea Rd. Canastota, NY 13032

Percent Residue Calculation: Total tons residue/Total tons material received x 100 = 4.27

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS

Please identify destination of recyclable materials. Indicate the name of the facility, address, corresponding State/Country, County/Province, Destination Planning Unit/Municipality and the amount of material recovered. DO NOT REPORT IN CUBIC YARDS!

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s):_____ _____% Rail: Material(s):_____

_____% Water: Material(s):_____ _____% Other (specify: _____): Material(s):_____

PAPER RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Paper (all grades)	Casella Recycling, LLC 13 Gibson Rd. Scarborough, ME 04074	ME			2640.10
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
Gaylord Cardboard	N H Kelman 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie (Town)	4.03
				TOTAL PAPER RECOVERED (tons):	2644.13

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

GLASS RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass	TOMRA NY Recycling 1 Corporate Dr. Suite 710 Shelton, CT 06484	NY	Schenectady County	Schenectady County	147.35
	** Clear Glass **				
Industrial Scrap Glass					
Other Glass (specify)					
Aggregate Glass	Madison County Division of Solid Waste Landfill, 6663 Buyea Rd.	NY	Madison County	Madison County	407.69
	Canastota, NY 13032				
				TOTAL GLASS RECOVERED (tons):	555.04

METAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers	Conti Metals Inc. 1661 46th St. Brooklyn NY 11204 ** Aluminum Cans and Foil **	NY	Kings County	NYC	20.75
	Upstate Shreeding P.O. Box 420 Owego, NY 13827 **Tin Cans*	NY	Tioga County	Tioga County	135.99
Other Metal (specify)					
Deposit Cans/ Bottles	Caz Cans, LLC 2439 Route 20 E Cazenovia, NY 13035	NY	Madison County	Madison County	17.65
				TOTAL METAL RECOVERED (tons):	174.39

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

PLASTIC RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Plastic (#1 - #7)	N H Kelman 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie (Town)	22.13
	Trigon Plastics 17 Orlan Rd. New Holland, PA 17557	PA			273.21
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	295.34

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET - flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET - baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC - styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE - baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

MIXED MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Containers (metal, glass, plastic)					
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					

TOTAL MIXED MATERIAL RECOVERED (tons): _____

MISCELLANEOUS MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics					
Textiles					
Other (specify)					

TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons): _____

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name. Reprinted (12/20)

SECTION 6 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ☒ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

SECTION 7 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure?

☐ Yes ☒ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 8 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 9 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 10 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ☒ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 11 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental
Conservation Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-
7260 Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

_____	02/16/2020
Signature	Date
Darin Pearo	Director of Facilities & Buisiness
Name (Print or Type)	Title (Print or Type)
Darin.Pearo@arcofmc.org	
Email (Print or Type)	
701 Lenox Ave.	Oneida
Address	City
NY 13421	(315) 363-3389 ext 7330
State and Zip	Phone Number

ATTACHMENTS: ☐ YES ☒ NO

This page for reference only. Please do not return with submittal.

Division of Materials Management
New York State Department of Environmental Conservation
Albany, New York 12233-7260

RECYCLABLES HANDLING & RECOVERY FACILITY

A Recyclable Handling and Recovery Facility is a facility that receives source-separated recyclables. Further information and a listing of the recyclable handling and recovery facilities are available online at http://www.dec.ny.gov/chemical/50793.html.

If your facility is authorized to operate a construction and demolition debris handling and recovery facility you need to submit a Construction and Demolition Debris Handling and Recovery Facility Annual Report.

If your facility is authorized to operate as a transfer facility you need to submit a Transfer Facility Annual. If your facility is authorized to operate as a recyclables handling & recovery facility and a transfer facility you must submit both annual reports.

Forms for all solid waste management facilities can be found at http://www.dec.ny.gov/chemical/52706.html and a brief description of each type of facility can be found at http://www.dec.ny.gov/chemical/8495.html.

Annual Report

Submit the Annual Report no later than March 1, 2021.

Reporting of the information indicated on this Recyclables Handling and Recovery Facility Annual Report form is required pursuant to 6 NYCRR Part 360. Failure to provide the required information requested is a violation of Environmental Conservation Law. Timely submission of a properly completed form to the Department's Regional Office that has jurisdiction over your facility and to the Department's Central Office is required to meet the Annual/Quarterly Report requirements of 6 NYCRR Part 360.

Where the Annual Report requirements have been modified, appropriate Sections (as necessary to reflect the modification) must be completed and submitted with a copy of the Department's written notification which allows the modification.

Entries on the report forms should be either typewritten or neatly printed in black ink. Attach additional sheets if space on the pages is insufficient or supplementary information is required or appropriate.

SECTION 3 – SERVICE AREA OF MATERIAL RECEIVED

Identify the facility's service area by indicating the type and amount of material received, the Solid Waste Management facility (SWMF) from which it was received by your facility (or Direct Haul), the corresponding State/Country, the County/Province, and the NYS Planning Unit from which waste was received. **Refer to the list of NYS Planning Units that can be found at the end of this report.** The Total Tons Received reported below should equal the Total Tons Received in Section 2. DO NOT REPORT IN CUBIC YARDS!

Additional Service Area Guidance:

1) Direct hauled from the generator of the recyclables. In the case where the recyclables are hauled to your recycling facility from the generator (i.e., hauled from residences, commercial establishments, etc.), "Direct Haul" would be the appropriate response in Column 2 under "Service Area". Please report the tonnage by material type and identify the state, county and planning unit where it was generated; or

2) Sent to your recycling facility from another solid waste management facility. Recyclables may be sent to your recycling facility from another solid waste management facility. In this case, please report the tonnage by material type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

*This page for reference only. Please do not return with submittal.

New York State Planning Units & Regions

When completing the annual report, please use the ***Planning Unit*** listed below that corresponds with the municipality and county. Note: The Planning Unit is not the DEC Region.

DEC Region	Planning Unit	County	Municipality
1	Glen Cove	Nassau	Glen Cove (City)
	Hempstead		Hempstead (Town)
	Long Beach		Long Beach (City)
	North Hempstead Solid Waste Management Authority		North Hempstead (Town), except 10 villages (see below)
	Oyster Bay Solid Waste Disposal District		Oyster Bay (Town), except 17 villages (see below)
	Babylon	Suffolk	Babylon (Town)
	Brookhaven		Brookhaven (Town)
	East Hampton		East Hampton (Town)
	Fishers Island Waste Management District		Fishers Island
	Huntington		Huntington (Town)
	Islip Resource Recovery Agency		Islip (Town)
	Riverhead		Riverhead (Town)
	Shelter Island		Shelter Island (Town)
	Smithtown		Smithtown (Town)
	Southampton		Southampton (Town)
	Southold		Southold (Town), except Fishers Island
2	New York City	Bronx	Bronx
		Kings	Kings (Brooklyn)
		New York	New York (Manhattan)
		Queens	Queens
		Richmond	Richmond (Staten Island)
3	Dutchess County	Dutchess	
	Orange County	Orange	
	Putnam County	Putnam	
	Rockland County Solid Waste Management Authority (RCSWMA)	Rockland	
	Sullivan County	Sullivan	
	Ulster County Resource Recovery Agency (UCRRA)	Ulster	
	Westchester County	Westchester	
4	Colonie	Albany	Cohoes (City)
			Colonie (Town)
			Colonie (Village)
			Menands (Village)
			Watervliet (City)
	Capital Region Solid Waste Management Partnership	Albany	Albany (City)
			Altamont (Village)
			Berne (Town)
			Bethelehem (Town)
			Green Island (Town/Village)
			Guilderland (Town)
			Knox (Town)
			New Scotland (Town)
			Rensselaerville (Town)
			Voorheesville (Village)
			Westerlo (Town)

*This page for reference only. Please do not return with submittal.

		Rensselaer	East Greenbush (Town)
			Rensselaer (City)
4	Eastern Rensselaer County Solid Waste Management Authority	Rensselaer	Castleton-on-Hudson (Village)
			Hoosick Falls (Village)
			Nassau (Village)
			Pittstown (Town)
			Schaghticoke (Town/Village)
			Stephentown (Town)
			Valley Falls (Village)
			Berlin (Town) — Inactive Members
			Grafton (Town) — Inactive Members
			Hoosick (Town) — Inactive Members
			Nassau (Town) — Inactive Members
			Petersburg (Town) — Inactive Members
			Poestenkill (Town) — Inactive Members
	Columbia County	Columbia	All, except Town of Canaan
	Delaware County	Delaware	
	Greene County	Greene	
	Montgomery County	Montgomery	
	Otsego County	Otsego	
	Schoharie County	Schoharie	
	Schenectady County	Schenectady	
5	Clinton County	Clinton	
	Essex County	Essex	
	County of Franklin Solid Waste Management Authority (CFSWMA)	Franklin	
	Fulton County	Fulton	
	Hamilton County	Hamilton	
	Saratoga County	Saratoga	
	Warren County	Warren	
	Washington County	Washington	
6	Development Authority of the North Country (DANC)	Jefferson	
		Lewis	
		St. Lawrence	
	Oneida-Herkimer Solid Waste Authority	Oneida	
		Herkimer	
7	Broome County	Broome	
	Cayuga County	Cayuga	
	Chenango County	Chenango	
	Cortland County	Cortland	
	Madison County	Madison	
	Onondaga County	Onondaga	All municipalities, except Town and Village of Skaneatles (See below)
	Oswego County	Oswego	
	Tioga County	Tioga	
	Tompkins County	Tompkins	
8	Chemung County	Chemung	
	GLOW Region Solid Waste Management Committee	Genesee	
		Livingston	
	Monroe County	Monroe	
	Ontario County	Ontario	
	Orleans County	Orleans	
	Schuyler County	Schuyler	
	Seneca County	Seneca	

*This page for reference only. Please do not return with submittal.

	Steuben County	Steuben	
	Wayne County	Wayne	
	Yates County	Yates	
9	Allegany County	Allegany	
	Cattaraugus County	Cattaraugus	
	Chautauqua County	Chautauqua	
	GLOW Region Solid Waste Management Committee	Wyoming	
	Niagara	Niagara	
	Northeast-Southtowns Solid Waste Management Board (NEST)	Erie	Akron (Village)
			Alden (Town/Village)
			Angola (Village)
			Aurora (Town)
			Blasdell (Village)
			Boston (Town)
			Brant (Town)
			Cheektowaga (Town)
			Clarence (Town)
			Colden (Town)
			Collins (Town)
			Concord (Town)
			Depew (Village)
			East Aurora (Village)
			Eden (Town)
			Elma (Town)
			Evans (Town)
			Farnham (Village)
			Gowanda (Village)
			Hamburg (Town/Village)
			Holland (Town)
			Lackawanna (City)
			Lancaster (Town/Village)
			Marilla (Town)
			Newstead (Town)
			North Collins (Town/Village)
			Orchard Park (Town/Village)
			Sardinia (Town)
			Sloan (Village)
			Springville (Village)
			Wales (Town)
			West Seneca (Town)
	Northwest Communities Solid Waste Management Board (NWCB)	Erie	Amherst (Town)
			Grand Island (Town)
			Kenmore (Village)
			Tonawanda (Town/Village)
			Williamsville (Village)

*This page for reference only. Please do not return with submittal.

Municipalities Not Currently Affiliated With a Recognized Planning Unit

DEC Region	County	Non-Member Municipality	
1	Nassau	North Hempstead	Great Neck Estates (Village)
			Great Neck Plaza (Village)
			Mineola (Village)
			New Hyde Park (Village)
			Old Westbury (Village) (portion)
			Plandome (Village)
			Plandome Manor (Village)
			Roslyn Harbor (Village) (portion)
			Westbury (Village)
			Williston Park (Village)
		Oyster Bay	Bayville (Village)
			Brookville (Village)
			Centre Island (Village)
			Cove Neck (Village)
			East Hills (Village) (portion)
			Glenwood – Glen Head Garbage District
			Lattington (Village)
			Laurel Hollow (Village)
			Matinecock (Village)
			Mill Neck (Village)
			Muttontown (Village)
			Old Brookville (Village)
			Old Westbury (Village) (portion)
			Oyster Bay Cove (Village)
			Roslyn Harbor (Village) (portion)
			Sea Cliff (Village)
			Upper Brookville (Village)
4	Albany	Coeymans (Town)	
		Ravena (Village)	
	Rensselaer	Brunswick (Town)	
		North Greenbush (Town)	
		Sand Lake (Town)	
		Schodack (Town)	
		Troy (City)	
	Columbia	Canaan (Town)	
7	Onondaga	Skaneatles (Town/Village)	
9	Erie	Buffalo (City)	

*This page for reference only. Please do not return with submittal.

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management

MATERIAL MANAGEMENT PROGRAM CONTACTS

CENTRAL OFFICE
Bureau of Solid Waste Management
625 Broadway
Albany, NY 12233-7260
Phone: (518) 402-8678

For Submission of Solid Waste Management Facility Annual Reports only:
Fax: (518) 402-9041
Email: swmfannualreport@dec.ny.gov

REGIONAL OFFICE ADDRESS & LEAD CONTACT PERSON

REGION 1 (Nassau, Suffolk)

Syed Rahman/David Gibb
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790
Phone: (631) 444-0375
SWMFannualreportR1@dec.ny.gov

REGION 2 (Bronx, Kings, New York, Queens, Richmond)

Joseph O'Connell
47-40 21st Street
Long Island City, NY 11101-5407
Phone: (718) 482-4896
SWMFannualreportR2@dec.ny.gov

REGION 3 (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester)

Lee Reiff
21 South Putt Corners Road
New Paltz, NY 12561
Phone: (845) 256-3134
SWMFannualreportR3@dec.ny.gov

REGION 4 (Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady, Schoharie)

Brian Maglienti
1130 North Westcott Road
Schenectady, NY 12306
Phone: (518) 357-2085
SWMFannualreportR4@dec.ny.gov

REGION 5 (Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington)

Jessie Sangster
1115 State Route 86, PO Box 296
Ray Brook, NY 12977
Phone: (518) 897-1266
SWMFannualreportR5@dec.ny.gov

REGION 6 (Herkimer, Jefferson, Lewis, Oneida, St. Lawrence)

Gary McCullouch
317 Washington Street
Watertown, NY 13601
Phone: (315) 785-2513
SWMFannualreportR6@dec.ny.gov

REGION 7 (Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins)

Thomas Annal
615 Erie Boulevard West
Syracuse, NY 13204
Phone: (315) 426-7419
SWMFannualreportR7@dec.ny.gov

REGION 8 (Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates)

Greg MacLean
6274 East Avon-Lima Road
Avon, NY 14414
Phone: (585) 226-5411
SWMFannualreportR8@dec.ny.gov

REGION 9 (Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming)

Peter Grasso
270 Michigan Avenue
Buffalo, NY 14203
Phone: (716) 851-7220
SWMFannualreportR9@dec.ny.gov

September 2020

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2022.

A. This annual/quarterly report is for the year of operation from January 01, 2021 to December 31, 2021

B. Quarterly Report for: ☐ Quarter 1 ☐ Quarter 2 ☐ Quarter 3 ☐ Quarter 4

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION

FACILITY NAME: Madison County Landfill

FACILITY LOCATION ADDRESS:	FACILITY CITY:	STATE:	ZIP CODE:
6802 Buyea Rd	Canastota	NY	13032

FACILITY TOWN:	FACILITY COUNTY:	FACILITY PHONE NUMBER:
Lincoln	Madison	315-361-8408

FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Madison County

NYSDEC REGION #: 7

360 PERMIT #:	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:
7-2538-00011/00005	1/26/2018	11/1/2027	27S15

FACILITY CONTACT:	☒ public ☐ private	CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
Amy Miller		315-366-3068	

CONTACT EMAIL ADDRESS: amy.miller@madisoncounty.ny.gov

OWNER INFORMATION

OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:
Madison County Dept. of Solid Waste	315-361-8408	315-361-1524

OWNER ADDRESS:	OWNER CITY:	STATE:	ZIP CODE:
P.O. Box 27	Wampsville	NY	13163

OWNER CONTACT:	OWNER CONTACT EMAIL ADDRESS:
Amy Miller	amy.miller@madisoncounty.ny.gov

OPERATOR INFORMATION

OPERATOR NAME: ☒ *same as owner* ☒ **public** ☐ **private**

PREFERENCES

Preferred address to receive correspondence:	☐ *Facility location address*	☒ *Owner address*
☐ *Other (provide):*		
Preferred email address:	☐ *Facility Contact*	☒ *Owner Contact*
☐ *Other (provide):*		
Preferred individual to receive correspondence:	☐ *Facility Contact*	☒ *Owner Contact*
☐ *Other (provide):*		

Did you operate in 2021? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 23. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

   a. What is the estimated landfill capacity that was utilized during the reporting year?

   77,305 Cubic Yards of Airspace

   b. What is the estimated in-situ waste density for the reporting year?

   .75 Tons/Cubic Yard

   Please do not report units as pounds per cubic yard.

2. Remaining Constructed Capacity

   a. What is the remaining capacity of the landfill that is already constructed?

   234,504 Cubic Yards of Airspace

   b. What is the estimated remaining life of the constructed capacity?

   3 Years 2 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

   c. The tonnage rate reported under 2.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain): At historical 10 year waste density of .82 tons/CY

3. Permitted Capacity Still to be Constructed

   a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

   8,919,585 Cubic Yards of Airspace

   b. What is the projected life of capacity reported in 3.a?

   121 Years 5 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

   c. The tonnage rate reported under 3.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain):

   At historical 10 year waste density of .82 tons/CY

4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

none _____ Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

none _____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: City of Oneida / City of Rome

Does the landfill have a constructed liner and a leachate collection system? ☒ Yes ☐ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

For **each cell**, please report the **acreage** and the **primary leachate** amount.

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Phase 1	Phase 2	Phase 3	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	See note	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	33,870	116,020	509,190				669,959					
February	33,264	78,019	485,100				453,223					
March	43,345	173,880	711,480				882,775					
April	46,368	111,989	318,120				512,969					
May	37,599	123,985	459,360				608,501					
June	23,587	68,241	447,150				377,668					
July	36,489	129,931	878,460				981,446					
August	26,813	103,117	894,300				893,838					
September	20,765	77,818	429,660				570,477					
October	27,619	120,758	930,270				833,196					
November	37,094	168,134	944,790				1,176,426					
December	38,203	202,810	720,060				913,894					
ANNUAL	405,016	1,474,702	7,727,940				8,874,372					

*This includes primary and secondary leachate. Quantities are estimated based on bucket flow tests for Phases 1 and 2, and pump hours and pump design hourly flows for Phase 3.

*Entire Site. The leachate quantities treated off-site represents the total volume of primary and secondary leachate collection for Phases 1-3, as well as the leachate generated from the East Side Landfill.

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Phase 1	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	47,312											
February												
March	122,898											
April	928											
May												
June												
July												
August	21,195											
September												
October	36,315											
November												
December												
ANNUAL	228,648											

No leachate is treated on site.

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Attached are maintenance logs for the West Side Landfill for 2021.

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? ☒ Yes ☐ No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: $ ~570,000

Total quantity treated: 8,874,372 gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

Note: Secondary leachate quantities are commingled with primary leachate quantities; for exact values, please refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS AND ALTERNATIVE OPERATING COVER MATERIALS

For each type of waste material that the Department has approved for use as alternative operating cover (AOC), intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., operating cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) **Refer to the list of NYS Planning Units that can be found at the end of this report.**

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete						
Contaminated Soil	201.35	AOC	Madison County	Madison Count	NY	Various
Foundry Sand	187.09	AOC	Madison County	Madison Count	NY	Meloon Foundries: 1841 Lemoyne Ave Syracuse, NY 13208
Glass	374.78	AOC	Madison County	Madison Count	NY	Madison County ARC Recycling Facility
Industrial Waste (specify)						
MSW Ash	8344.2	AOC	Madison County	Madison Count	NY	Onondaga County Resource Recovery Facility (Jamesville, NY)
Wood Ash						
Paper Mill Sludge						
Processed C&D						
Waste Tire-Derived Aggregate /						
Waste Tires						
Other (specify)						
Tire chips	110.82	Drainage material	Madison County	Madison Count	NY	Shredded on site
Total AOC	9107.42					
Total Beneficial Use Determination Materials	9218.24					

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = 15.81%

Please note the calculation **is**: Tons AOC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons AOC / (Tons Solid Waste + AOC) x 100

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

100 % Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)							
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)	330.76	358.09	907.99	685.12	664.64	569.64	676.76
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	2719.61	2634.97	3326.72	3402.37	3510.70	4884.66	4075.12
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge	455.08	351.09	533.18	677.67	625.12	597.10	655.66
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed	3505.45	3345.02	4767.89	4765.16	4800.46	6051.40	5407.54

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)		692.39	1204.06	978.12	678.10	490.56	8237.10	27.0
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)		3971.54	3936.43	3521.72	3416.26	3328.23	42728.33	140.1
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge		481.41	629.28	469.23	511.94	653.52	6640.28	21.8
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Disposed		5145.34	5769.77	4969.07	4606.30	4472.31	57605.71	188.9

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

- If the waste ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Asbestos					
Ash (Coal)					
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)	Direct Haul	NY	Madison County	Madison County	8237.10

Reprinted (12/21)

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	Direct Haul	NY	Madison County	Madison County	38,295.04
	Madison County Transfer Stations	NY	Madison County	Madison County	4,287.26
	ARC Recycling Facility	NY	Madison County	Madison County	146.03
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge	Direct Haul	NY	Madison County	Madison County	5,324.68
	Direct Haul from City of Oneonta WWTP	NY	Otsego County	Otsego County	1,315.60
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons):	57,605.71

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

☐ Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: http://www.dec.ny.gov/chemical/52706.html .

■ No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Please identify where the recyclable materials are coming from. DO NOT REPORT IN CUBIC YARDS!

- If the materials ***WERE*** received from another solid waste management facility, please write in the name and address of the facility along with the appropriate state, county and planning unit/municipality.
- If the materials ***WERE NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the recyclables were generated.

Specify transport method, list type of material(s) and percentages of total waste transported by each:

100 % Road: Waste Type(s):_____ _____% Rail: Waste Type(s):_____

_____% Water: Waste Type(s):_____ _____% Other (specify: _____): Waste Type(s):_____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED					
MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Scrap Metal	Direct Haul	NY	Madison County	Madison County	324.01
	Madison County Transfer Stations	NY	Madison County	Madison County	289.49
Mixed Containers	Direct Haul	NY	Madison County	Madison County	115.37
Mixed Paper	Direct Haul	NY	Madison County	Madison County	212.35
Batteries & Bulbs	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	14.07
Yard Waste	Direct Haul and Cazenovia Transfer Station	NY	Madison County	Madison County	143.19
Brush, Branches, Trees, & Stumps	Direct Haul and Cazenovia Transfer Station	NY	Madison County	Madison County	1081.46
Textiles	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	69.8
Confidential Paper	Direct Haul	NY	Madison County	Madison County	10.77
Styrofoam	Direct Haul	NY	Madison County	Madison County	7.9
Other (specify) Tires	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	225.07
Miscellaneous - Waste Oils	Direct Haul	NY	Madison County	Madison County	0.75
				TOTAL RECEIVED (tons):	2494.23

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Paper (all grades)	ARC Recycling Facility	NY	Madison County	Madison County	212.35
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
Confidential Paper	ProShred - Syracuse, NY	NY	Onondaga County	Onondaga County (except	7.88
	ConfiData - Utica, NY	NY	Oneida County	Oneide-Herkimer Solid Wa	2.89
				TOTAL PAPER RECOVERED (tons):	223.12

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
				TOTAL GLASS RECOVERED (tons):	

METAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Aluminum Foil / Trays					
Bulk Metal (from MSW)	Upstate Shredding	NY	Tioga County	Tioga County	613.5
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	613.5

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)					
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Containers (metal, glass, plastic)	ARC Recycling Facility	Madison County	Madison County	Madison County	115.37
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	115.37

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Rechargeable Batteries	Call2Recycle	unknown	unknown	unknown	1.25
Vehicle Batteries	Interstate Battery	NY	Onondaga County	Onondaga County (except	6.55
Mixed Batteries & Bulbs	NLR	unknown	unknown	unknown	6.27
Textiles	Salvation Army	NY	Onondaga County	Onondaga County (except	69.8
Brush, Branches, Trees, & Stumps	Chipped on site for public use	NY	Madison County	Madison County	1081.46
Styrofoam	EcoDevelopment	unknown	unknown	unknown	7.9
Yard Waste (curbside)	Managed on site for public use	NY	Madison County	Madison County	143.19
Other (specify) Tires	Upstate Shredding - tires on rims	NY	Tioga County	Tioga County	16.31
Waste Motor Oil	Used in on site waste oil burner	NY	Madison County	Madison County	0.4
Vegetable Oil	JC Rendering	NY	Herkimer County	Oneide-Herkimer Solid Wa	0.35
				TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons):	1,333.48

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ■ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model RC2W34 of fixed unit.

Does your facility use a portable radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model MSpec of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time
090121	9/1/2021	12:00	Syracuse Haulers	CPP (Chittenango, NY)	box 284	103 uR/hr	Approved by Tom Papura via email for disposal	N/A	N/A

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

See Attachment 1 - Waste in Place Summary

Overall in place volume 1,887,673 cubic yards

Method for determining waste composition, if known. Scale records

Explain if closed landfills are included above No closed landfills are included.

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 3

Original* section used (years) from 1996 to 2012

Section Footprint 7.6 acres

Capped with approved final cover system Yes ■ No _____

Percent capped 61.8

Waste in Place: 401,658 Tons 536,985 Cubic Yards, if known

Next* section used (years) from 2003 to Present

Section Footprint 6.75 acres

Capped with approved final cover system Yes _____ No ■

Percent capped 0

Waste in Place: 452,041 Tons 558,075 Cubic Yards, if known

Section 3 - Used from 2009 to present, encompasses 12.65 acres, none of which being capped. It has approximately 573,508 tons in place (approximately 792,613 cubic yards)

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?
Yes ■ No ____ If Yes: Active ■ Passive ___

Number of gas wells: 94 Vertical wells, horizontal wells, and trench collectors

Total landfill footprint acreage 48.5 West Side = 27.0 ac; East Side (Section I & II Closed Landfill) = 21.6 ac

Total landfill acreage from which gas is collected 37.9

Landfill sections from which gas is collected Phase 1, 2, and 3 (West Side); Section II (East Side)

Landfill acreage from which gas is collected for energy recovery 37.9

Measured Methane Generation Rate*, k default

Measured Potential Methane Generation Capacity*, L_o default m^3/Mg

NMOC Concentration* 35 ppmv as hexane

Does the landfill require a Title V Permit? Yes ■ No _____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: WM Canastota Renewable Energy

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: 1

Type of Flare: Opened Flare X Enclosed Flare _____

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually 37,429,969 cubic feet
Flare Hours of Operation per Year 2,178 hours/year
Methane Percentage in Landfill Gas before flaring 50.56 %
Methane Destruction efficiency 99 %

Candlestick Flares:

Number of Candlestick Flares 0
Estimate of Gas Flared Candlestick Flare N/A cubic feet

Gas To Energy

Please report units in cubic feet

Number of Internal Combustion Engines: 1

Quantity of Gas collected for Internal Combustion Engine Annually 92,738,459 cubic feet
Methane Destruction efficiency 97 %
Methane Percentage in Landfill Gas before combustion 48.61 %
Utility Company Receiving Electricity _____

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing 0 cubic feet
Methane Percentage in Landfill Gas before processing - %
On-site or Off-site User of Gas None

Landfill Gas Recovery Facility/Landfill Data

Facility Contact Kevin Koennecke Phone # (315)339-0035

Contact e-mail address kkoennec@wm.com Fax # (_____)_____-_____

Operation and maintenance cost for calendar year: $ undisclosed

Does the LGRF experience shut downs: ■ Yes _____ No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

Utility trips, maintenance, and collection system repairs lead to planned and unplanned shutdowns

Year landfill opened: 1996 Anticipated landfill closure date: 2145

Reprinted (12/21)

Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter/Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January	10,426,489	N/A	448,486	0	0	736
February	8,931,526	N/A	401,929	0	0	650
March	10,085,436	N/A	441,897	0	0	732
April	10,273,758	N/A	433,570	0	0	720
May	10,252,116	N/A	443,218	0	0	725
June	10,226,720	N/A	410,370	0	0	684
July	11,190,145	N/A	435,704	0	0	733
August	10,655,194	N/A	471,240	0	0	742
September	10,463,849	N/A	468,901	0	0	717
October	284,158	N/A	8,243	0	0	14
November	0	N/A	0	0	0	0
December	0	N/A	0	0	0	0
ANNUAL TOTAL	92,829,390	0	3,963,558	0	0	6,453

* Provide where applicable.

Normal Weekdays of Operation 7 days/week Normal Hours of Operation 24 hours/day

Electricity Generated and used/marketed offsite 3,611,816 KWH
Electricity Generated and used onsite 351,742 KWH
Gas Processed and used/marketed offsite N/A cubic feet
Gas Processed and used onsite N/A cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

Condensate is collected and stored in a holding tank and is pumped out for co-disposal with site leachate.

Reprinted (12/21)

SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

☒ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

Financial Assurance documents are submitted under separate cover after review by the County Treasurer.

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 11 – LANDFILL OPERATOR TRAINING

Name of trained landfill operator: Gregory Gelewski

Name and location of training course: NYSASWM 2020 Landfill Operator Training (Saratoga, NY)

Date completed: March 10-11, 2020

SECTION 16 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Reprinted (12/21)

SECTION 17 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 18 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 19 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 20 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 21 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

☒ Yes ☐ No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Reprinted (12/21)

SECTION 22 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ■ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 23 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

Amy Miller
Signature

2/28/22
Date

Amy Miller
Name (Print or Type)

Director of Solid Waste Management
Title (Print or Type)

amy.miller@madisoncounty.ny.gov
Email (Print or Type)

PO Box 27
Address

Wampsville
City

New York, 13163
State and Zip

(315) 361-8408
Phone Number

ATTACHMENTS: ☒ YES ☐ NO
(Please check appropriate line)

Reprinted (12/21)

Attachment 1 - Madison County West Side Landfill Annual Waste Tonnages

Year	In-County Waste Materials (tons)	Alternate Cover Materials (tons)	Sewage Treatment Plant Sludge (tons)	Treated Medical Waste (tons)	Total Tons Landfilled
1996	7,642	4,420			12,062
1997	30,545	20,431	952		51,928
1998	34,350	5,805	1,458		41,613
1999	39,770	11,258	1,466	1,815	54,309
2000	42,177	16,595	3,207	2,341	64,320
2001	32,366	9,321	855	2,141	44,683
2002	42,463	22,235	668	2,005	67,371
2003	46,048	10,860	648	1,747	59,303
2004	47,847	22,655	1,187	2,000	73,689
2005	51,477	12,032	1,022	1,274	65,805
2006	50,441	16,928	551	2,071	69,991
2007	50,473	9,758	3,803		64,034
2008	46,932	10,401	2,806		60,139
2009	45,486	11,481	2,378		59,345
2010	44,040	9,002	2,962		56,004
2011	43,985	9,953	2,642		56,580
2012	42,973	8,054	2,219		53,246
2013	43,418	17,809	2,623		63,850
2014	44,062	7,106	2,649		53,817
2015	46,244	12,986	8,719		67,949
2016	45,287	35,913	9,144		90,344
2017	47,772	13,582	7,745		69,099
2018	53,246	15,858	6,661		75,766
2019	46,827	11,516	6,332		64,675
2020	48,693	10,591	5,533		64,817
2021	50,965	9,218	6,640		66,824
Totals	**1,125,530**	**345,769**	**84,871**	**15,394**	**1,571,563**

Madison County Leachate
Collection System
Cleaning

Leachate Lines	Flushed	Jetted	Date	Comments	Tech
Eastside from pump to manhole		x	6/17/21	2 Passes	Dekra, Ernie
Eastside from manhole to pond		x	6/17/21	2 Passes	Dekra, Ernie
Manhole 1		x	6/15/21	2 Passes	Dekra, Ernie
Manhole 2		x	6/15/21	2 Passes	Dekra, Ernie
Manhole 3		x	6/16/21	2 Passes	Dekra, Ernie
Manhole 4		x	6/16/21	2 Passes	Dekra, Ernie
Manhole 5		x	6/16/21	2 Passes	Dekra, Ernie
Manhole 6		x	6/16/21	2 Passes	Dekra, Ernie
Header between 1&2		x	6/17/21	2 Passes	Dekra, Ernie
Header between 2&4		x	6/17/21	2 Passes	Dekra, Ernie
Header bewtween 5&6		x	6/17/21	2 Passes	Dekra, Ernie
Main to pond from 2		x	6/17/21	2 Passes	Dekra, Ernie
Main to pond from 5		x	6/17/21	2 Passes	Dekra, Ernie
Manhole 7		x	6/17/21	2 Passes, Pipe crushed at 600'	Dekra, Ernie
Header from Manhole 7 to Pump Station 7		x	6/22/21	1 Pass	Dekra, Ernie
Main line to pond from Pump Station 7 to C/O		x	6/17/21	1 pass	Dekra, Ernie
Main line to pond from C/O to Pond		x	6/17/22	1 pass	Dekra, Ernie
Manhole 7 to Cell 8		x	6/22/21	1 pass	Dekra, Ernie
Cell 8 Sumps		x	6/26/21	2 passes	Dekra, Ernie
Cell 8 Cleanout into cell		x	6/22/2021	2 Passes	Dekra, Ernie
Cell 8 to 9 Header		x	6/22/2021	2 passes	Dekra, Ernie
Cell 9 Sumps		x	6/23/2021	2 Passes	Dekra, Ernie
Cell 9 Cleanout into cell		x	6/22/2021	2 passes	Dekra, Ernie

******Fill in Date action taken and Check Which Action was Taken*******

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

RECYCLABLES HANDLING & RECOVERY FACILITY ANNUAL REPORT

(If you need assistance filling out this form please email swmfannualreport@dec.ny.gov or call 518-402-8678.)

Complete and submit this form by March 1, 2022.

This annual report is for the year of operation from January 01, 2021 to December 31, 2021

SECTION 1 – GENERAL INFORMATION

FACILITY INFORMATION

FACILITY NAME: Alternatives Recycling Center			
FACILITY LOCATION ADDRESS: 6641 Buyea Rd	**FACILITY CITY:** Canastota	**STATE:** NY	**ZIP CODE:** 13032
FACILITY TOWN: Lincoln	**FACILITY COUNTY:** Madison	**FACILITY PHONE NUMBER:** 315-363-2372	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report.) Madison County		**NYSDEC REGION #:** 7	

360 PERMIT #: (Refer to DEC Permit)	**DATE ISSUED:** 07/03/18	**DATE EXPIRES:** 05/03/23	**NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:** (Refer to DEC Registration) 27R20001

FACILITY CONTACT: Darin Pearo	☐ public ☒ private	**CONTACT PHONE NUMBER:** 315-363-3389 ext 7330	**CONTACT FAX NUMBER:** 315-363-9205
CONTACT EMAIL ADDRESS:			

OWNER INFORMATION

OWNER NAME: Arc Madison Cortland	**OWNER PHONE NUMBER:** 315-363-3389	**OWNER FAX NUMBER:** 315-363-4286	
OWNER ADDRESS: 701 Lenox Ave	**OWNER CITY:** Oneida	**STATE:** NY	**ZIP CODE:** 13421
OWNER CONTACT: Perry Courto	**OWNER CONTACT EMAIL ADDRESS:** Perry.Courto@arcofmc.org		

OPERATOR INFORMATION

OPERATOR NAME: ☑ *same as owner* ☐ public ☒ private

PREFERENCES

Preferred address to receive correspondence: ☐ *Facility location address* ☒ *Owner address* ☐ *Other (provide):*

Preferred email address: ☒ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Preferred individual to receive correspondence: ☒ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Did you operate in 2021? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 11. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - MATERIAL RECEIVED

Please provide the tonnages of materials received. This includes all materials received at your facility regardless of their destination after processing. DO NOT REPORT IN CUBIC YARDS!

Specify the methods used to measure the quantities received and the percentages measured by each method:

100 % Scale Weight
0 % Truck Count
0 % Estimated
0 % Other (Specify: 0)

Material	Tip Fee ($/Ton)	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Commingled Containers (metal, glass, plastic)		128.09	66.34	99.08	51.00	91.53	67.03	74.67
Commingled Paper (all grades)		220.25	213.69	225.92	215.31	244.95	241.18	222.41
Single Stream (total)								
Other (specify)								
Total Tons Received		348.34	280.03	325.0	266.31	336.48	308.21	297.08

Material	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Commingled Containers (metal, glass, plastic)	104.41	24.99	119.19	85.91	30.01	942.25	78.52
Commingled Paper (all grades)	237.45	206.46	274.48	204.62	267.49	2774.21	231.18
Single Stream (total)							
Other (specify)							
Total Tons Received	341.86	231.45	393.67	290.53	297.50	3716.46	309.70

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 3 – SERVICE AREA OF MATERIAL RECEIVED

Please identify where the material is coming from. The total tons received reported below should equal the total tons received in Section 2 (Solid Waste Received). DO NOT REPORT IN CUBIC YARDS!

- If the material ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the material ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the material was generated.

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s): Private Haulers

0 % Rail: Material(s): _____

0 % Water: Material(s): _____

0 % Other (specify: _____): Material(s): _____

SERVICE AREA OF MATERIAL RECEIVED (where the material is coming from)					
MATERIAL	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "*Direct Haul*"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Commingled Containers (metal, glass, plastic)	All materials are direct haul, either from county transfer station or curbside pickup by trash haulers				933.27
			Madison County		
Commingled Paper (all grades)	All materials are direct haul, either from county transfer station or curbside pickup by trash haulers				2783.19
			Madison County		
Single Stream (total)					
Other (specify)					
				TOTAL MATERIAL RECEIVED (tons):	3716.46

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name. Reprinted (12/21)

SECTION 4 – RESIDUE

Total residue (tons) = 0 Residue destination **(Name & Address)** _____

Percent Residue Calculation: Total tons residue/Total tons material received x 100 = _____

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS

Please identify destination of recyclable materials. Indicate the name of the facility, address, corresponding State/Country, County/Province, Destination Planning Unit/Municipality and the amount of material recovered. DO NOT REPORT IN CUBIC YARDS!

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s):_____ 0 % Rail: Material(s):_____

0 % Water: Material(s):_____ 0 % Other (specify: _____): Material(s):_____

PAPER RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Paper (all grades)	Casella Recycling, LLC - 13 Gibson Rd. Scarborough, ME 04074	ME			2774.21
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)	N H Kelman 41 Euclid St. Cohoes, NY 12047	NYH	Albany County	Colonie (Town)	8.98
Gaylord Boxes					
				TOTAL PAPER RECOVERED (tons):	2783.19

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

GLASS RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass	Tomra NY Recycling, 1 Corporate Dr. Suite 710 Shelton, CT 06484	NY	Schenectady Cour	Schenectady	132.75
	** Clear glass				
Industrial Scrap Glass					
Other Glass (specify)					
Aggregate Glass	Madison County Division of Solid Waste Landfill, 6663 Buyea Rd	NY	Madison County	Madison County	374.78
	Canastota, NY 13032				
				TOTAL GLASS RECOVERED (tons):	507.53

METAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal					
Enameled Appliances / White Goods					
Industrial Scrap Metal	Steel Cans - Ekman Group, 1800 Route 34Building 4, Suite 401Wall 07719	NJ			44.72
	Steel Cans - TMS International LLC. 1155 Business Center Dr #200, Horsham, 19044	PA			23.44
Tin & Aluminum Containers	Alum, cans -Conti Metals Inc. 1661 46th St. Brooklyn NY 11204 - Alum cans and foil	NY	Kings County	NYC	23.21
	Steel Cans -Upstate Shreeding PO Box 420 Owego, NY 13827	NY	Tioga County	Tioga County	23.56
Other Metal (specify)	Steel Cans - N H Kelman 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie (Town)	23.51
Deposit Cans/ Bottles	Caz Cans, LLC. 2439 Route 20 E Cazenovia 13035	NY	Madison County	Madison County	8.63
Deposit Cans/ Bottles	Nickleback Redemption 379 Stafford Ave, Waterville, 13480	NY	Oneida	Oneida County	9.10
				TOTAL METAL RECOVERED (tons):	156.17

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

PLASTIC RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Plastic (#1 - #7)	N H Kelman 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie(Town)	179.16
	TriGon Plastics, 17 Orlan Rd. New Holland, PA 17557	PA			22.28
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
Plastic 1-7	Conti Metals, 1661 46th st. Brooklyn 11204	NY	Kings County	NYC	68.13
				TOTAL PLASTIC RECOVERED (tons):	269.57

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET - flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET - baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC - styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE - baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

MIXED MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Containers (metal, glass, plastic)					
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					

TOTAL MIXED MATERIAL RECOVERED (tons): _____

MISCELLANEOUS MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics					
Textiles					
Other (specify)					

TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons): _____

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 6 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ☒ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

SECTION 7 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure?

☐ Yes ☒ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 8 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 9 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 10 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ☒ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 11 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental
Conservation Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-
7260 Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

_____	2/18/22
Signature	Date
Darin Pearo	Director Of Facilities & Business Operations
Name (Print or Type)	Title (Print or Type)
Darin.Pearo@arcofmc.org	
Email (Print or Type)	
701 Lenox Ave	Oneida
Address	City
NY 13421	(315) 363-3389
State and Zip	Phone Number

ATTACHMENTS: ☐ YES ☒ NO

This page for reference only. Please do not return with submittal.

Division of Materials Management
New York State Department of Environmental Conservation
Albany, New York 12233-7260

RECYCLABLES HANDLING & RECOVERY FACILITY

A Recyclable Handling and Recovery Facility is a facility that receives source-separated recyclables. Further information and a listing of the recyclable handling and recovery facilities are available online at http://www.dec.ny.gov/chemical/50793.html.

If your facility is authorized to operate a construction and demolition debris handling and recovery facility you need to submit a Construction and Demolition Debris Handling and Recovery Facility Annual Report.

If your facility is authorized to operate as a transfer facility you need to submit a Transfer Facility Annual. If your facility is authorized to operate as a recyclables handling & recovery facility and a transfer facility you must submit both annual reports.

Forms for all solid waste management facilities can be found at http://www.dec.ny.gov/chemical/52706.html and a brief description of each type of facility can be found at http://www.dec.ny.gov/chemical/8495.html.

Annual Report

Submit the Annual Report no later than March 1, 2022.

Reporting of the information indicated on this Recyclables Handling and Recovery Facility Annual Report form is required pursuant to 6 NYCRR Part 360. Failure to provide the required information requested is a violation of Environmental Conservation Law. Timely submission of a properly completed form to the Department's Regional Office that has jurisdiction over your facility and to the Department's Central Office is required to meet the Annual/Quarterly Report requirements of 6 NYCRR Part 360.

Where the Annual Report requirements have been modified, appropriate Sections (as necessary to reflect the modification) must be completed and submitted with a copy of the Department's written notification which allows the modification.

Entries on the report forms should be either typewritten or neatly printed in black ink. Attach additional sheets if space on the pages is insufficient or supplementary information is required or appropriate.

SECTION 3 – SERVICE AREA OF MATERIAL RECEIVED

Identify the facility's service area by indicating the type and amount of material received, the Solid Waste Management facility (SWMF) from which it was received by your facility (or Direct Haul), the corresponding State/Country, the County/Province, and the NYS Planning Unit from which waste was received. **Refer to the list of NYS Planning Units that can be found at the end of this report.** The Total Tons Received reported below should equal the Total Tons Received in Section 2. DO NOT REPORT IN CUBIC YARDS!

Additional Service Area Guidance:

1) Direct hauled from the generator of the recyclables. In the case where the recyclables are hauled to your recycling facility from the generator (i.e., hauled from residences, commercial establishments, etc.), "Direct Haul" would be the appropriate response in Column 2 under "Service Area". Please report the tonnage by material type and identify the state, county and planning unit where it was generated; or

2) Sent to your recycling facility from another solid waste management facility. Recyclables may be sent to your recycling facility from another solid waste management facility. In this case, please report the tonnage by material type from each sending solid waste management facility, as well as the sending facility's name, address, county, and the planning unit where the sending facility is located.

*This page for reference only. Please do not return with submittal.

New York State Planning Units & Regions

When completing the annual report, please use the *Planning Unit* listed below that corresponds with the municipality and county. Note: The Planning Unit is not the DEC Region.

DEC Region	Planning Unit	County	Municipality
1	Glen Cove	Nassau	Glen Cove (City)
	Hempstead		Hempstead (Town)
	Long Beach		Long Beach (City)
	North Hempstead Solid Waste Management Authority		North Hempstead (Town), except 8 villages (see below)
	Oyster Bay Solid Waste Disposal District		Oyster Bay (Town), except 17 villages (see below)
	Babylon	Suffolk	Babylon (Town)
	Brookhaven		Brookhaven (Town)
	East Hampton		East Hampton (Town)
	Fishers Island Waste Management District		Fishers Island
	Huntington		Huntington (Town)
	Islip Resource Recovery Agency		Islip (Town)
	Riverhead		Riverhead (Town)
	Shelter Island		Shelter Island (Town)
	Smithtown		Smithtown (Town)
	Southampton		Southampton (Town)
	Southold		Southold (Town), except Fishers Island
2	New York City	Bronx	Bronx
		Kings	Kings (Brooklyn)
		New York	New York (Manhattan)
		Queens	Queens
		Richmond	Richmond (Staten Island)
3	Dutchess County	Dutchess	
	Orange County	Orange	
	Putnam County	Putnam	
	Rockland County Solid Waste Management Authority (RCSWMA)	Rockland	
	Sullivan County	Sullivan	
	Ulster County Resource Recovery Agency (UCRRA)	Ulster	
	Westchester County	Westchester	
4	Colonie	Albany	Cohoes (City)
			Colonie (Town)
			Colonie (Village)
			Menands (Village)
			Watervliet (City)
	Capital Region Solid Waste Management Partnership	Albany	Albany (City)
			Altamont (Village)
			Berne (Town)
			Bethelehem (Town)
			Green Island (Town/Village)
			Guilderland (Town)
			Knox (Town)
			New Scotland (Town)
			Rensselaerville (Town)
			Voorheesville (Village)
			Westerlo (Town)

		Rensselaer	East Greenbush (Town)	
			Rensselaer (City)	
4	Eastern Rensselaer County Solid Waste Management Authority	Rensselaer	Castleton-on-Hudson (Village)	
			Hoosick Falls (Village)	
			Nassau (Village)	
			Pittstown (Town)	
			Schaghticoke (Town/Village)	
			Stephentown (Town)	
			Valley Falls (Village)	
			Berlin (Town)	Inactive Members
			Grafton (Town)	
			Hoosick (Town)	
			Nassau (Town)	
			Petersburg (Town)	
			Poestenkill (Town)	
	Columbia County	Columbia	All, except Town of Canaan	
	Delaware County	Delaware		
	Greene County	Greene		
	Montgomery County	Montgomery		
	Otsego County	Otsego		
	Schoharie County	Schoharie		
	Schenectady County	Schenectady		
5	Clinton County	Clinton		
	Essex County	Essex		
	County of Franklin Solid Waste Management Authority (CFSWMA)	Franklin		
	Fulton County	Fulton		
	Hamilton County	Hamilton		
	Saratoga County	Saratoga		
	Warren County	Warren		
	Washington County	Washington		
6	Development Authority of the North Country (DANC)	Jefferson		
		Lewis		
		St. Lawrence		
	Oneida-Herkimer Solid Waste Authority	Oneida		
		Herkimer		
7	Broome County	Broome		
	Cayuga County	Cayuga		
	Chenango County	Chenango		
	Cortland County	Cortland		
	Madison County	Madison		
	Onondaga County	Onondaga	All municipalities, except Town and Village of Skaneatles (See below)	
	Oswego County	Oswego		
	Tioga County	Tioga		
	Tompkins County	Tompkins		
8	Chemung County	Chemung		
	GLOW Region Solid Waste Management Committee	Genesee		
		Livingston		
	Monroe County	Monroe		
	Ontario County	Ontario		
	Orleans County	Orleans		
	Schuyler County	Schuyler		
	Seneca County	Seneca		

	Steuben County	Steuben	
	Wayne County	Wayne	
	Yates County	Yates	
	Allegany County	Allegany	
	Cattaraugus County	Cattaraugus	
	Chautauqua County	Chautauqua	
	GLOW Region Solid Waste Management Committee	Wyoming	
	Niagara	Niagara	
9	Northeast-Southtowns Solid Waste Management Board (NEST)	Erie	Akron (Village)
			Alden (Town/Village)
			Angola (Village)
			Aurora (Town)
			Blasdell (Village)
			Boston (Town)
			Brant (Town)
			Cheektowaga (Town)
			Clarence (Town)
			Colden (Town)
			Collins (Town)
			Concord (Town)
			Depew (Village)
			East Aurora (Village)
			Eden (Town)
			Elma (Town)
			Evans (Town)
			Farnham (Village)
			Gowanda (Village)
			Hamburg (Town/Village)
			Holland (Town)
			Lackawanna (City)
			Lancaster (Town/Village)
			Marilla (Town)
			Newstead (Town)
			North Collins (Town/Village)
			Orchard Park (Town/Village)
			Sardinia (Town)
			Sloan (Village)
			Springville (Village)
			Wales (Town)
			West Seneca (Town)
	Northwest Communities Solid Waste Management Board (NWCB)	Erie	Amherst (Town)
			Grand Island (Town)
			Kenmore (Village)
			Tonawanda (Town/Village)
			Williamsville (Village)

Municipalities Not Currently Affiliated With a Recognized Planning Unit

DEC Region	County	Non-Member Municipality	
1	Nassau	North Hempstead	Great Neck Estates (Village)
			Great Neck Plaza (Village)
			Mineola (Village)
			New Hyde Park (Village)
			Plandome (Village)
			Plandome Manor (Village)
			Westbury (Village)
			Williston Park (Village)
		Oyster Bay	Bayville (Village)
			Brookville (Village)
			Centre Island (Village)
			Cove Neck (Village)
			East Hills (Village) (portion)
			Glenwood – Glen Head Garbage District
			Lattington (Village)
			Laurel Hollow (Village)
			Matinecock (Village)
			Mill Neck (Village)
			Muttontown (Village)
			Old Brookville (Village)
			Old Westbury (Village) (portion)
			Oyster Bay Cove (Village)
			Roslyn Harbor (Village) (portion)
			Sea Cliff (Village)
			Upper Brookville (Village)
4	Albany	Coeymans (Town)	
		Ravena (Village)	
	Rensselaer	Brunswick (Town)	
		North Greenbush (Town)	
		Sand Lake (Town)	
		Schodack (Town)	
		Troy (City)	
	Columbia	Canaan (Town)	
7	Onondaga	Skaneatles (Town/Village)	
9	Erie	Buffalo (City)	

*This page for reference only. Please do not return with submittal.

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Managment

MATERIAL MANAGEMENT PROGRAM CONTACTS

CENTRAL OFFICE
Bureau of Solid Waste Management
625 Broadway
Albany, NY 12233-7260
Phone: (518) 402-8678

For Submission of Solid Waste Management Facility Annual Reports only:
Fax: (518) 402-9041
Email: swmfannualreport@dec.ny.gov

REGIONAL OFFICE ADDRESS & LEAD CONTACT PERSON

REGION 1 (Nassau, Suffolk)

Syed Rahman/David Gibb
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790
Phone: (631) 444-0375
SWMFannualreportR1@dec.ny.gov

REGION 2 (Bronx, Kings, New York, Queens, Richmond)

Joseph O'Connell
47-40 21st Street
Long Island City, NY 11101-5407
Phone: (718) 482-4892
SWMFannualreportR2@dec.ny.gov

REGION 3 (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester)

Lee Reiff
21 South Putt Corners Road
New Paltz, NY 12561
Phone: (845) 256-3134
SWMFannualreportR3@dec.ny.gov

REGION 4 (Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady, Schoharie)

Brian Maglienti
1130 North Westcott Road
Schenectady, NY 12306
Phone: (518) 357-2085
SWMFannualreportR4@dec.ny.gov

REGION 5 (Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington)

Jessie Sangster
1115 State Route 86, PO Box 296
Ray Brook, NY 12977
Phone: (518) 897-1266
SWMFannualreportR5@dec.ny.gov

REGION 6 (Herkimer, Jefferson, Lewis, Oneida, St. Lawrence)

Gary McCullouch
317 Washington Street
Watertown, NY 13601
Phone: (315) 785-2513
SWMFannualreportR6@dec.ny.gov

REGION 7 (Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins)

Steve Perrigo
615 Erie Boulevard West
Syracuse, NY 13204
Phone: (315) 426-7419
SWMFannualreportR7@dec.ny.gov

REGION 8 (Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates)

Greg MacLean
6274 East Avon-Lima Road
Avon, NY 14414
Phone: (585) 226-5411
SWMFannualreportR8@dec.ny.gov

REGION 9 (Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming)

Peter Grasso
270 Michigan Avenue
Buffalo, NY 14203
Phone: (716) 851-7220
SWMFannualreportR9@dec.ny.gov

November 2021

MSW, INDUSTRIAL OR ASH LANDFILL ANNUAL/QUARTERLY REPORT

Submit the Annual Report no later than March 1, 2023.

A. ☒ **This annual report is for the year of operation from January 01, 2022 to December 31, 2022**

B. Quarterly Report for: ☐ **Quarter 1** ☐ **Quarter 2** ☐ **Quarter 3** ☐ **Quarter 4**

SECTION 1 – FACILITY INFORMATION

FACILITY INFORMATION			
FACILITY NAME: Madison County Landfill			
FACILITY LOCATION ADDRESS: 6802 Buyea Rd	**FACILITY CITY:** Canastota	**STATE:** NY	**ZIP CODE:** 13032
FACILITY TOWN: Lincoln	**FACILITY COUNTY:** Madison	**FACILITY PHONE NUMBER:** 315-361-8408	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Madison County		**NYSDEC REGION #:** 7	

360 PERMIT #:	**DATE ISSUED:**	**DATE EXPIRES:**	**NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER:**
7-2538-00011/00005	1/26/2018	11/1/2027	27S15

FACILITY CONTACT:		**CONTACT PHONE NUMBER:**	**CONTACT FAX NUMBER:**
Amy Miller	☒ **public** ☐ **private**	315-366-3068	
CONTACT EMAIL ADDRESS: amy.miller@madisoncounty.ny.gov			

OWNER INFORMATION			
OWNER NAME: Madison County Dept. of Solid Waste	**OWNER PHONE NUMBER:** 315-361-8408	**OWNER FAX NUMBER:** 315-361-1524	
OWNER ADDRESS: P.O. Box 27	**OWNER CITY:** Wampsville	**STATE:** NY	**ZIP CODE:** 13163
OWNER CONTACT: Amy Miller	**OWNER CONTACT EMAIL ADDRESS:** amy.miller@madisoncounty.ny.gov		

OPERATOR INFORMATION		
OPERATOR NAME: ☒ *same as owner*	☒ **public** ☐ **private**	

PREFERENCES		
Preferred address to receive correspondence: ☐ *Other (provide):*	☐ *Facility location address*	☒ *Owner address*
Preferred email address: ☐ *Other (provide):*	☐ *Facility Contact*	☒ *Owner Contact*
Preferred individual to receive correspondence: ☐ *Other (provide):*	☐ *Facility Contact*	☒ *Owner Contact*

Did you operate in 2022? ☒ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 23. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - SITE LIFE

1. Landfill Capacity Utilized Last Year (reporting year).

   a. What is the estimated landfill capacity that was utilized during the reporting year?

   71,536 Cubic Yards of Airspace

   b. What is the estimated in-situ waste density for the reporting year?

   Please do not report units as pounds per cubic yard.

   .78 Tons/Cubic Yard

2. Remaining Constructed Capacity

   a. What is the remaining capacity of the landfill that is already constructed?

   143,992 Cubic Yards of Airspace

   b. What is the estimated remaining life of the constructed capacity?

   1 Years 11 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials placed in the landfill, i.e., waste, soil, cover, alternative daily covers, etc.

   c. The tonnage rate reported under 2.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain): _____

3. Permitted Capacity Still to be Constructed

   a. What is the remaining but not yet constructed landfill capacity that is authorized by a Part 360 permit?

   8,919,595 Cubic Yards of Airspace

   b. What is the projected life of capacity reported in 3.a?

   122 Years 3 Months

   at 60,000 Tons/Year.*

   * Please note that this tonnage rate must include all materials disposed in the landfill, i.e., waste, and soil and alternative daily covers.

   c. The tonnage rate reported under 3.b. is based on (select one):

   _____ The amount of materials placed in the landfill in the reporting year

   _____ Estimated future disposal

   X Permit limit

   Other (explain):

   At historical 10 year density of .82

4. Capacity Proposed in a Part 360 Permit Application

What is the capacity of any expansion proposed in a Part 360 permit application that has been submitted to the Department but not authorized by a permit as of the end of the reporting period?

none _____ Cubic Yards of Airspace

5. Estimated Potential Future Capacity Not Permitted or in an Application (optional)

What is the estimated capacity of any potential future expansion at the facility that is not yet authorized by a permit or proposed in a Part 360 permit application that has been submitted to the Department?

none _____ Cubic Yards of Airspace

SECTION 3 - PRIMARY LEACHATE

Name of off-site leachate treatment facility(s) utilized: City of Oneida / City of Rome

Does the landfill have a constructed liner and a leachate collection system? ☒ Yes ☐ No

Enter the quantity of primary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:
(Note: For double-lined landfills this should not include the volume of leachate collected from secondary leachate collection and removal systems.)

For **each cell**, please report the **acreage** and the **primary leachate** amount.

	PRIMARY LEACHATE COLLECTED (GALLONS)						PRIMARY LEACHATE TREATED OFF SITE (GALLONS)					
	Phase 1	Phase 2	Phase 3	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	*See Note	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January	22,075	125,698	539,220				673,232					
February	26,510	117,432	652,740				736,888					
March	32,458	193,939	905,850				1,138,826					
April	49,190	337,176	975,480				1,265,170					
May	16,330	125,294	449,130				572,698					
June	15,406	77,414	358,710				481,070					
July	33,163	134,165	296,670				248,070					
August	12,298	43,042	357,060				280,165					
September	21,773	59,774	596,970				564,480					
October	12,600	40,522	406,230				422,193					
November	10,181	38,606	462,000				394,322					
December	29,938	85,680	1,011,860				683,980					
ANNUAL	281,922	1,378,742	7,011,920				7,461,094					

*This includes primary and secondary leachate. Quantities are estimated based on bucket flow tests for Phases 1 and 2, and pump hours and pump design hourly flows for Phase 3.

*Entire Site. The leachate quantities treated off-site represents the total volume of primary and secondary leachate collection for Phases 1-3, as well as the leachate generated from the East Side Landfill.

	PRIMARY LEACHATE RECIRCULATED (GALLONS)						PRIMARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

No leachate recirculated

No leachate treated on site

Submit (attached to this form) a copy of the maintenance logs which document compliance with the Operation and Maintenance Manual's schedule for the routine annual flushing and inspection of the primary leachate collection and removal system. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Attached are maintenance logs for the West Side Landfill for 2022.

Submit (attached to this form) a tabulated compilation of the semi-annual primary leachate quality data collected throughout the year including a summary comparing this year's data with the previous year's data and a summary discussion of results. This list should identify sample location(s) and method of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 4 - SECONDARY LEACHATE

Does landfill have a double liner system with a secondary leachate collection and removal system? ☒ Yes ☐ No

Submit (attached to this form) a tabulated compilation of the semi-annual secondary leachate quality data collected throughout the year including a summary comparing this year's data with all previous years' data and a summary discussion of results. This list should identify sample location(s) and methods of analysis. List required submissions that have been attached to this form or the reason for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Please report total cost for the year, not cost/gal.

Leachate Cost: (including transportation if appropriate) during the calendar year for leachate treatment: $ ~217,000

Total quantity treated: 7,461,094 gal

Enter the quantity of secondary leachate that was collected, removed for on-site and off-site treatment, and recirculated each month, and the corresponding **Acreage, by Cell**:

For **each cell**, please report the **acreage** and the **secondary leachate** amount.

	SECONDARY LEACHATE COLLECTED (GALLONS)						SECONDARY LEACHATE TREATED OFF SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

Note: Secondary leachate quantities are commingled with primary leachate quantities; for exact values, please refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

	SECONDARY LEACHATE RECIRCULATED (GALLONS)						SECONDARY LEACHATE TREATED ON SITE (GALLONS)					
	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres	Cell 1 ___Acres	Cell 2 ___Acres	Cell 3 ___Acres	Cell 4 ___Acres	Cell 5 ___Acres	Cell 6 ___Acres
January												
February												
March												
April												
May												
June												
July												
August												
September												
October												
November												
December												
ANNUAL												

SECTION 5 – BENEFICIAL USE DETERMINATION MATERIALS AND ALTERNATIVE OPERATING COVER MATERIALS

For each type of waste material that the Department has approved for use as alternative operating cover (AOC), intermediate cover, or other landfill material, provide the annual weight in tons, use (i.e., operating cover, intermediate cover, etc.), and source of material. (If material is from a solid waste facility also provide facility name, address, NYS Planning Unit, County/ Province, and State/Country.) **Refer to the list of NYS Planning Units that can be found at the end of this report.**

Type of Solid Waste	Weight (tons/year)	Use	NYS Planning Unit (See Attached List of NYS Planning Units)	County or Province	State or Country	Source (Facility and Address)
Aggregate/Concrete						
Contaminated Soil	4,734.97	AOC				Various
Foundry Sand	262.36	AOC	Madison County	Madison Count	NY	Meloon Foundries: 1841 Lemoyne Ave Syracuse, NY 13208
Glass	331.47	AOC	Madison County	Madison Coun	NY	Madison County ARC Recycling Facility
Industrial Waste (specify)						
MSW Ash	8,820.83	AOC	Madison County	Madison Count	NY	Onondaga County Resource Recovery Facility (Jamesville, NY)
Wood Ash						
Paper Mill Sludge						
Processed C&D						
Waste Tire-Derived Aggregate /						
Waste Tires						
Other (specify) Tire Chips	667.54	Drainage Material	Madison County	Madison Count	NY	Shredded on site
Total AOC	14,149.63					
Total Beneficial Use Determination Materials	14,817.17					

Percent Alternative Operating Cover (AOC) Calculation

AOC Calculations: Total Tons AOC/Total Tons Waste Disposed x 100 = 25.29%

Please note the calculation **is**: Tons AOC (from table above)/Tons Solid Waste (from table in Section 6) x 100 and **Not**: Tons AOC / (Tons Solid Waste + AOC) x 100

SECTION 6 - SOLID WASTE DISPOSED

Provide the tonnages of solid waste disposed. Exclude Beneficial Use Material amounts reported in Section 5 and Recyclable Material amounts reported in Section 8. Specify the methods used to measure the quantities disposed and the percentages measured by each method:

100 % Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Type of Solid Waste	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Asbestos							
Ash (Coal)							
Ash (MSW Energy Recovery)							
Construction & Demolition Debris (mixed)	382.91	300.31	526.96	424.68	607.38	790.69	632.86
Industrial Waste (Including Industrial Process Sludges)							
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	2,726.72	2,777.66	3,340.15	3,370.10	3,768.25	5,020.96	3,347.06
Oil/Gas Drilling Waste							
Petroleum Contaminated Soil							
Sewage Treatment Plant Sludge	554.88	550.99	611.40	569.84	610.61	596.38	609.73
Treated Regulated Medical Waste							
Emergency Authorization Waste (Storm Debris)							
Other (specify)							
Total Tons Disposed	3,664.51	3,628.96	4,478.51	4,364.62	4,986.24	6,408.03	4,589.65

SECTION 6 - SOLID WASTE DISPOSED (continued)

Type of Solid Waste	Tip Fee ($/Ton)	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Asbestos								
Ash (Coal)								
Ash (MSW Energy Recovery)								
Construction & Demolition Debris (mixed)		706.20	1,223.64	619.41	397.41	527.36	7,139.81	23.41
Industrial Waste (Including Industrial Process Sludges)								
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)		4,088.36	3,735.56	3,289.64	3,313.87	3,534.44	42,312.77	138.73
Oil/Gas Drilling Waste								
Petroleum Contaminated Soil								
Sewage Treatment Plant Sludge		533.81	462.86	454.67	450.73	487.12	6,493.02	21.29
Treated Regulated Medical Waste								
Emergency Authorization Waste (Storm Debris)								
Other (specify)								
Total Tons Disposed		5,328.37	5,422.06	4,363.72	4,162.01	4,548.92	55,945.60	183.43

SECTION 7 – SERVICE AREA OF SOLID WASTE RECEIVED

Please identify where the waste is coming from. The total tons received reported below should equal the total tons received in Section 6 (Solid Waste Disposed). DO NOT REPORT IN CUBIC YARDS!

- If the waste ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the waste ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the waste was generated.

Specify transport method and percentages of total waste transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify:_____)

Explain which waste types and service areas below are included in these transport methods _____

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Asbestos					
Ash (Coal)					
Ash (MSW Energy Recovery)					
Construction & Demolition Debris (mixed)	Direct Haul	NY	Madison County	Madison County	7,139.81

Reprinted (12/22)

SERVICE AREA OF SOLID WASTE RECEIVED					
TYPE OF SOLID WASTE	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Industrial Waste (Including Industrial Process Sludges)					
Mixed Municipal Solid Waste (Residential, Institutional & Commercial)	Direct Haul	NY	Madison County	Madison County	38,307.95
	Madison County Transfer Stations	NY	Madison County	Madison County	3,808.43
	ARC Recycling Facility	NY	Madison County	Madison County	196.39
Oil/Gas Drilling Waste					
Petroleum Contaminated Soil					
Sewage Treatment Plant Sludge	Direct Haul	NY	Madison County	Madison County	5,310.14
	Direct Haul from City of Oneonta WWTP	NY	Otsego County	Otsego County	1,182.88
Treated Regulated Medical Waste (TRMW)*					
Emergency Authorization Waste (Storm Debris)					
Other (specify)					
				TOTAL RECEIVED (tons):	55,945.60

* List generators that provide you Certificates of Treatment forms and quantities of TRMW from each _____

SECTION 8 –LANDFILL RECYCLABLE & RECOVERED MATERIALS

Is your facility also a permitted or registered Recyclables Handling & Recovery Facility?

☐ Yes; Complete Section 9 for material recovered from the mixed solid waste stream. Complete a Recyclables Handling & Recovery Facility (RHRF) form for material received as source separated. The RHRF form is located at: http://www.dec.ny.gov/chemical/52706.html .

■ No; Complete Section 9 for material recovered from the mixed solid waste stream and for material received as source separated.

A. Service Area of Recyclable Material Received

Please identify where the recyclable materials are coming from. DO NOT REPORT IN CUBIC YARDS!

- If the materials ***WERE*** received from another solid waste management facility, please write in the name and address of the facility along with the appropriate state, county and planning unit/municipality.
- If the materials ***WERE NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the recyclables were generated.

Specify transport method, list type of material(s) and percentages of total waste transported by each:

100 % Road: Waste Type(s):_____ _____% Rail: Waste Type(s):_____

_____% Water: Waste Type(s):_____ _____% Other (specify: _____): Waste Type(s):_____

SERVICE AREA OF RECYCLABLE MATERIAL RECEIVED

MATERIAL	SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "Direct Haul"	SERVICE AREA STATE OR COUNTRY	SERVICE AREA COUNTY OR PROVINCE	SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECEIVED
Scrap Metal	Direct Haul	NY	Madison County	Madison County	416.75
	Madison County Transfer Stations	NY	Madison County	Madison County	261.60
Mixed Containers	Direct Haul	NY	Madison County	Madison County	99.26
Mixed Papers	Direct Haul	NY	Madison County	Madison County	195.77
Batteries & Bulbs	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	17.97
Mixed Yard Waste	Direct Haul and Cazenovia Tranfer Stations	NY	Madison County	Madison County	371.29
Brush, Branches, Trees, & Stumps	Direct Haul	NY	Madison County	Madison County	402.88
Textiles	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	83.71
Confidential Paper	Direct Haul	NY	Madison County	Madison County	5.00
Ink Cartridges	Direct Haul	NY	Madison County	Madison County	0.24
Tires	Direct Haul and Madison County Transfer Stations	NY	Madison County	Madison County	309.14
Cooking Oil	Direct Haul	NY	Madison County	Madison County	1.46
				TOTAL RECEIVED (tons):	2,165.07

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS

B. Material Recovered

Identify the name of the destination facility to which the material was sent from your facility, the corresponding State/Country, the County/Province, the NYS Planning Unit, and the amount of material transported. **Refer to the list of NYS Planning Units that can be found at the end of this report.** DO NOT REPORT IN CUBIC YARDS!

Specify transport method and percentages of total material transported by each:

100 % Road _____% Rail _____% Water _____% Other (specify: _____)

Explain which materials and destinations below are included in these transport methods _____

PAPER RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Commingled Paper (all grades)	ARC Recycling Facility	NY	Madison County	Madison County	195.77
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
Confidential Paper	ProShred, Syracuse, NY	NY	Onondaga County	Onondaga County (except	5.00
				TOTAL PAPER RECOVERED (tons):	200.77

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

GLASS RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass					
Industrial Scrap Glass					
Other Glass (specify)					
				TOTAL GLASS RECOVERED (tons):	

METAL RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal (from MSW)	Upstate Shredding	NY	Tioga County	Tioga	678.35
Bulk Metal (from CD debris)					
Enameled Appliances / White Goods					
Industrial Scrap Metal					
Tin & Aluminum Containers					
Other Metal (specify)					
				TOTAL METAL RECOVERED (tons):	678.35

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

PLASTIC RECOVERED					
RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Mixed Plastic (#1 - #7)					
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)					
				TOTAL PLASTIC RECOVERED (tons):	

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MIXED MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Containers (metal, glass, plastic)	ARC Recycling Facility	Madison County	Madison County	Madison County	99.26
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					
				TOTAL MIXED MATERIAL RECOVERED (tons):	99.26

SECTION 8 – LANDFILL RECYCLABLE & RECOVERED MATERIALS (continued)

B. Material Recovered

MISCELLANEOUS MATERIAL RECOVERED					
RECOVERED MATERIAL	**DESTINATION (Name & Address)**	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECOVERED (out of facility)**
Rechargeable Batteries	Call2Recycle	unknown	unknown	unknown	1.81
Vehicle Batteries	Interstate Battery	NY	Onondaga County	Onondaga County	7.85
Mixed Batteries & Bulbs	NLR				8.31
Textiles	Salvation Army	NY	Onondaga County	Onondaga County	83.71
Brush, Branches, Trees, & Stumps	Chipped on site for public use	NY	Madison County	Madison County	402.88
Yard Waste	Chipped on site for public use	NY	Madison County	Madison County	371.29
Ink Cartridges	Evolve Recycling	Unknown	Unknown	Unknown	0.24
Cooking Oil	JC Rendering	NY	Herkimer County	Oneida-Herkimer Solid Waste	1.46
Other (specify) Tires	Upstate Shredding - Tires on Rims	NY	Tioga County	Tioga	33.59
Tires	SGS Recovery LLC	NY	Niagara County	Niagara County	124.83
	Geiter Done of WNY Inc.	NY	Erie County	Erie County	278.03
				TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons):	1314

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET – flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET – baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC – styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE – baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 9 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ■ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

Radiation Monitoring

Does your facility use a fixed radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model RC2W34 of fixed unit.

Does your facility use a portable radiation monitor? __■__ Yes _____ No

Identify Manufacturer RadComm and Model MSpec of portable unit.

If the radiation monitors have been triggered give information below for each incident:

Incident Number	Received		Hauler	Origin	Truck Number	Reading	Disposal Status	Removed	
	Date	Time						Date	Time
	11/3/2022	1:20pm	Village Chittenango	Unknown - Village Solid Waste	1305	Identified as I-131	Disposed of on 11/17/22 at acceptable level.		
	11/17/2022	1:10pm	Village of Chittenango	Unknown - Village Solid Waste	1305A	Identified as I-131	Approved by DEC for same day disposal.		

SECTION 10 - WASTE IN PLACE

Summary by Waste Type and Year

Include all active and inactive sections of the landfill. Report waste disposed annually by type, if known, in tons per year. Report total waste disposed, if breakdown of types is not available. In the case where more than one landfill section operated in a given year identify each separately, if known. If the annual amount is not available, report the quantities for a range of years. If you include amounts from old, closed landfills then clearly identify them on the table and explain below. In each row, report quantities disposed each year (or group of years if individual years unknown) for each waste type. Report cumulative WIP at bottom (sum of annual quantities disposed). Add additional sheets as necessary.

Year	MSW (tons)	Asbestos Waste (tons)	Ash (tons)	C&D Debris (tons)	Industrial Waste (tons)	Petroleum Contaminated Soil (tons)	Sewage Treatment Plant Sludge (tons)	Other (tons)	Year(s) Total (tons)	Identify Landfill Section(s) Used
WIP Cumulative Total										

See Attachment 1 - Waste in Place Summary

Overall in place volume 1,959,209 cubic yards

Method for determining waste composition, if known. Scale Records

Explain if closed landfills are included above No closed landfills are included.

Waste Summary by Landfill Section

Provide waste in place information for all landfill sections.

Number of landfill sections: 3

Original* section used (years) from 1996 to 2012

Section Footprint 7.6 acres

Capped with approved final cover system Yes ■ No ____

Percent capped 61.8

Waste in Place: 401,658 Tons 536,985 Cubic Yards, if known

Next* section used (years) from 2003 to Present

Section Footprint 6.75 acres

Capped with approved final cover system Yes ____ No ■

Percent capped 0

Waste in Place: 452,041 Tons 558,075 Cubic Yards, if known

Section 3 - Used from 2009 to present, encompasses 12.65 acres, none of which being capped. It has approximately 629,453 tons in place (approximately 964,149 cubic yards)

SECTION 11 - LANDFILL GAS

Does the landfill have a landfill gas collection & control system?
Yes ■ No ____ If Yes: Active ■ Passive ___

Number of gas wells: 92

Total landfill footprint acreage 48.5

Total landfill acreage from which gas is collected 37.9

Landfill sections from which gas is collected Phase 1, 2, and 3 (West Side), Section II (East Side)

Landfill acreage from which gas is collected for energy recovery 0

Measured Methane Generation Rate*, k Default

Measured Potential Methane Generation Capacity*, L_o Default m^3/Mg

NMOC Concentration* 35 ppmv as hexane

Does the landfill require a Title V Permit? Yes ■ No ____

Name of Landfill Gas Recovery (gas to energy or other use) Facility: N/A

* Note: If Concentration NMOC, Lo and k are not known or included, default values will be used to calculate the NMOCs emissions from the Landfill.

Flare

Open and Enclosed Flares located at the Landfill and the Landfill Gas Recovery Facility:

Number of Flares: 1

Type of Flare: Opened Flare X Enclosed Flare _____

Please report units in cubic feet

Quantity of Gas Collected and Flared Annually 187,851,941 cubic feet
Flare Hours of Operation per Year 8,601 hours/year
Methane Percentage in Landfill Gas before flaring 43.1 %
Methane Destruction efficiency 99 %

Candlestick Flares:

Number of Candlestick Flares 0
Estimate of Gas Flared Candlestick Flare N/A cubic feet

Gas To Energy

Please report units in cubic feet

Number of Internal Combustion Engines: N/A

Quantity of Gas collected for Internal Combustion Engine Annually 0 cubic feet
Methane Destruction efficiency N/A %
Methane Percentage in Landfill Gas before combustion N/A %
Utility Company Receiving Electricity N/A

Gas Processed for Use (Other than gas to electricity)

Quantity of Gas Collected for Processing N/A cubic feet
Methane Percentage in Landfill Gas before processing N/A %
On-site or Off-site User of Gas N/A

Landfill Gas Recovery Facility/Landfill Data

Facility Contact N/A Phone # (_____)_____-_____

Contact e-mail address _____ Fax # (_____)_____-_____

Operation and maintenance cost for calendar year: $_____

Does the LGRF experience shut downs: _____Yes _____No

If yes, indicate reasons for shut downs. List required submissions that have been attached to this form or the reasons for not attaching a required piece of information:

_____

_____

_____

_____

Year landfill opened: 1974 Anticipated landfill closure date: 2146

Reprinted (12/22)

Results of Condensate Sampling

Submit (attached to this form) condensate quality monitoring results accomplished in accordance with condensate sampling. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Landfill Gas Utilized For Energy Recovery

Provide the following information for the landfill gas recovered for energy. **DO NOT INCLUDE THE GAS FLARED!**

	Landfill Gas Collected for Energy Recovery (Cubic Feet)	Steam* Generated (Cubic Feet)	Total Electricity* Generated for onsite and offsite use (K.W.H.)	Total Gas Processed for use other than electricity generation (Cubic Feet)	Condensate Generated (Gallons)	Facility Operation (Hours)
January						
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
ANNUAL TOTAL	N/A	N/A	N/A	N/A	N/A	N/A

* Provide where applicable.

Normal Weekdays of Operation N/A Normal Hours of Operation N/A

Electricity Generated and used/marketed offsite 0 KWH
Electricity Generated and used onsite 0 KWH
Gas Processed and used/marketed offsite 0 cubic feet
Gas Processed and used onsite 0 cubic feet

Describe the collection, storage, treatment and disposal techniques used in managing the condensate:

Condensate is collected and stored in a holding tank and is pumped out for co-treatment with site leachate.

Reprinted (12/22)

SECTION 12 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure and post-closure care?

☒ Yes ☐ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

Financial Assurance documents are submitted under separate cover after review by the County Treasurer.

SECTION 13 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 14 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 11 – LANDFILL OPERATOR TRAINING

Name of trained landfill operator: Gregory Gelewski

Name and location of training course: NYSASWM 2022 Landfill Operator Training (Niagara Falls, NY)

Date completed: 3/16/2022

SECTION 16 - ANALYTICAL RESULTS

Submit (attached to this form) tables showing the sample collection date, the analytical results [including all peaks even if below the Method Detection Limits (MDL)], designation of upgradient wells and location number for each environmental monitoring point sampled, applicable water quality standards, and groundwater protection standards if established, MDL's, and Chemical Abstracts Service (CAS) numbers on all parameters. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Reprinted (12/22)

SECTION 17 - COMPARING DATA

Submit (attached to this form) tables or graphical representations comparing current water quality with existing water quality and with upgradient water quality. These comparisons may include Piper diagrams, Stiff diagrams, tables, or other analyses. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 18 - DISCUSSION OF RESULTS

Submit (attached to this form) a summary of any contraventions of State water quality standards, significant increases in concentrations above existing water quality, any exceedances of groundwater protection standards, and discussion of results, and any proposed modifications to the sampling and analysis schedule necessary to meet the Existing, Operational and Contingency water quality monitoring requirements. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 19 - DATA QUALITY ASSESSMENT

Submit (attached to this form) any required data quality assessment reports. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 20 - SUMMARIES OF MONITORING DATA

Submit (attached to this form) a summary of the water quality information presented in Sections 16 and 17 for the year of operation for which the Annual Report is made, noting any changes in water quality which have occurred throughout the year. List submissions (required by this section) that have been attached to this form or the reasons for not attaching a required piece of information:

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

SECTION 21 - SURFACE IMPOUNDMENTS

Does this landfill have a surface impoundment?

☒ Yes ☐ No If yes, repeat Sections 15 through 18 above for Quarterly Reports and Section 19 above for Annual report. Attach additional submissions required by this section.

Refer to the "Fourth Quarter / Annual Review - Environmental Monitoring Report" for the Madison County Landfill submitted by Barton & Loguidice under separate cover.

Reprinted (12/22)

SECTION 22 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ■ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 23 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-7260
Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

Amy Miller
Signature

2/27/2023
Date

Amy Miller
Name (Print or Type)

Director of Solid Waste Management
Title (Print or Type)

amy.miller@madisoncounty.ny.gov
Email (Print or Type)

PO Box 27
Address

Wampsville
City

New York, 13163
State and Zip

(315) 361-8408
Phone Number

ATTACHMENTS: ☒ YES ☐ NO
(Please check appropriate line)

Reprinted (12/22)

Attachment 1 - Madison County West Side Landfill Annual Waste Tonnages

Year	In-County Waste Materials (tons)	Alternate Cover Materials (tons)	Sewage Treatment Plant Sludge (tons)	Treated Medical Waste (tons)	Total Tons Landfilled
1996	7,642	4,420			12,062
1997	30,545	20,431	952		51,928
1998	34,350	5,805	1,458		41,613
1999	39,770	11,258	1,466	1,815	54,309
2000	42,177	16,595	3,207	2,341	64,320
2001	32,366	9,321	855	2,141	44,683
2002	42,463	22,235	668	2,005	67,371
2003	46,048	10,860	648	1,747	59,303
2004	47,847	22,655	1,187	2,000	73,689
2005	51,477	12,032	1,022	1,274	65,805
2006	50,441	16,928	551	2,071	69,991
2007	50,473	9,758	3,803		64,034
2008	46,932	10,401	2,806		60,139
2009	45,486	11,481	2,378		59,345
2010	44,040	9,002	2,962		56,004
2011	43,985	9,953	2,642		56,580
2012	42,973	8,054	2,219		53,246
2013	43,418	17,809	2,623		63,850
2014	44,062	7,106	2,649		53,817
2015	46,244	12,986	8,719		67,949
2016	45,287	35,913	9,144		90,344
2017	47,772	13,582	7,745		69,099
2018	53,246	15,858	6,661		75,766
2019	46,827	11,516	6,332		64,675
2020	48,693	10,591	5,533		64,817
2021	50,965	9,218	6,640		66,824
2022	49,452	14,149	6,493		70,094
Totals	**1,174,982**	**359,918**	**91,364**	**15,394**	**1,641,657**

Madison County Leachate
Collection System
Cleaning

Leachate Lines	Flushed	Jetted	Date	Comments	Tech
Eastside from pump to manhole		x	7/27/22		Crane, Ernie
Eastside from manhole to pond		x	6/16/22	962'	Dekra, Ernie
Manhole 1		x	6/14/22	643'	Dekra, Ernie
Manhole 2		x	6/14/22	643'	Dekra, Ernie
Manhole 3		x	6/14/22	643'	Dekra, Ernie
Manhole 4		x	6/14/22	643'	Dekra, Ernie
Manhole 5		x	6/14/22	637'	Dekra, Ernie
Manhole 6		x	6/14/22	735'	Dekra, Ernie
Header between 1&2		x	6/15/22	120'	Dekra, Ernie
Header between 2&4		x	6/15/22	300'	Dekra, Ernie
Header bewtween 5&6		x	6/15/22		Dekra, Ernie
Main to pond from 2		x	6/15/22	75'	Dekra, Ernie
Main to pond from 5		x	6/15/22	650	Dekra, Ernie
Manhole 7		x	6/14/22	Pipe crushed at 600'	Dekra, Ernie
Header from Manhole 7 to Pump Station 7		x	6/15/22	500'	Dekra, Ernie
Main line to pond from Pump Station 7 to C/O		x	6/15/22	750'	Dekra, Ernie
Main line to pond from C/O to Pond		x	6/15/22	750'	Dekra, Ernie
Manhole 7 to Cell 8		x	6/15/22	425'	Dekra, Ernie
Cell 8 Sumps		x	6/17/22		Dekra, Ernie
Cell 8 Sumps to collection line		x	6/17/22		Dekra, Ernie
Cell 8 Cleanout into cell		x	6/15/22	680'	Dekra, Ernie
Header into Riser house 8 4"		x	6/16/22	50'	Dekra, Ernie
Cell 8 to 9 Header		x	6/15/22	750'	Dekra, Ernie
Cell 9 Sumps		x	6/17/22		Dekra, Ernie
Cell 9 Sumps to collection line		x	6/17/22		Dekra, Ernie
Cell 9 Cleanout into cell		x	6/15/22	616'	Dekra, Ernie
Header into Riser house 9 4"		x	6/16/22	50'	Dekra, Ernie

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

RECYCLABLES HANDLING & RECOVERY FACILITY ANNUAL REPORT

(If you need assistance filling out this form please email swmfannualreport@dec.ny.gov or call 518-402-8678.)

Complete and submit this form by March 1, 2023.

This annual report is for the year of operation from January 01, 2022 to December 31, 2022 SECTION 1 – GENERAL INFORMATION

FACILITY INFORMATION

FACILITY NAME:			
Alternatives Recycling Center			
FACILITY LOCATION ADDRESS:	**FACILITY CITY:**	**STATE:**	**ZIP CODE:**
6641 Buyea Rd	Canastota	NY	13032
FACILITY TOWN:	**FACILITY COUNTY:**	**FACILITY PHONE NUMBER:**	
Lincoln	Madison	315-363-2372	
FACILITY NYS PLANNING UNIT: (A list of NYS Planning Units can be found at the end of this report). Masifon County		**NYSDEC REGION #:** 7	

360 PERMIT #: (Refer to DEC Permit)	DATE ISSUED:	DATE EXPIRES:	NYS DEC ACTIVITY CODE OR REGISTRATION NUMBER: (Refer to DEC Registration)
	07/03/18	05/03/23	27R20001

FACILITY CONTACT:	☐ public ☑ private	CONTACT PHONE NUMBER:	CONTACT FAX NUMBER:
Darin Pearo		315-363-3389 Ext 7330	315-363-9205
CONTACT EMAIL ADDRESS:			

OWNER INFORMATION

OWNER NAME:	OWNER PHONE NUMBER:	OWNER FAX NUMBER:	
Arc Madison Cortland	315-363-3389	315-363-4286	
OWNER ADDRESS:	**OWNER CITY:**	**STATE:**	**ZIP CODE:**
701 Lenox Ave.	Oneida	NY	13421
OWNER CONTACT:	**OWNER CONTACT EMAIL ADDRESS:**		
Perry Courto	Perry.Courto@arcofmc.org		

OPERATOR INFORMATION

OPERATOR NAME: ☑ *same as owner* ☐ public ☑ private

PREFERENCES

Preferred address to receive correspondence: ☐ *Facility location address* ☑ *Owner address* ☐ *Other (provide):*

Preferred email address: ☑ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Preferred individual to receive correspondence: ☑ *Facility Contact* ☐ *Owner Contact* ☐ *Other (provide):*

Did you operate in 2022? ☑ Yes; Complete this form.

☐ No; Complete and submit Sections 1 and 11. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, also complete the "Inactive Solid Waste Management Facility or Activity Notification Form" located at: http://www.dec.ny.gov/chemical/52706.html .

SECTION 2 - MATERIAL RECEIVED

Please provide the tonnages of materials received. This includes all materials received at your facility regardless of their destination after processing. DO NOT REPORT IN CUBIC YARDS!

Specify the methods used to measure the quantities received and the percentages measured by each method:

100 % Scale Weight _____% Estimated

_____% Truck Count _____% Other (Specify: _____)

Material	Tip Fee ($/Ton)	January (tons)	February (tons)	March (tons)	April (tons)	May (tons)	June (tons)	July (tons)
Commingled Containers (metal, glass, plastic)		194.30	189.84	211.58	229.28	220.03	240.45	170.77
Commingled Paper (all grades)		171.92	30.60	113.06	64.96	78.60	69.93	73.29
Single Stream (total)								
Other (specify)								
Total Tons Received		366.22	220.44	324.64	294.24	323.31	310.38	244.06

Material	August (tons)	September (tons)	October (tons)	November (tons)	December (tons)	Total Year (tons)	Daily Avg. (tons)
Commingled Containers (metal, glass, plastic)	282.44	239.58	169.32	211.18	176.55	2535.32	211.27
Commingled Paper (all grades)	80.20	70.84	99.69	84.09	78.32	1015.50	84.63
Single Stream (total)							
Other (specify)							
Total Tons Received	393.25	310.42	269.01	295.27	254.87	3550.82	295.90

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 3 – SERVICE AREA OF MATERIAL RECEIVED

Please identify where the material is coming from. The total tons received reported below should equal the total tons received in Section 2 (Solid Waste Received). DO NOT REPORT IN CUBIC YARDS!

- If the material ***WAS*** received from another solid waste management facility, please write in the name *and* address of the facility along with the appropriate state, county and planning unit/municipality.
- If the material ***WAS NOT*** received from another solid waste management facility, please write in "***Direct Haul***" along with the appropriate state, county and planning unit/municipality where the material was generated.

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s): _____ _____ % Rail: Material(s): _____

_____ % Water: Material(s): _____ _____ % Other (specify: _____): Material(s): _____

SERVICE AREA OF MATERIAL RECEIVED (where the material is coming from)					
MATERIAL	**SOLID WASTE MANAGEMENT FACILITY FROM WHICH IT WAS RECEIVED (Name & Address) OR "*Direct Haul*"**	**SERVICE AREA STATE OR COUNTRY**	**SERVICE AREA COUNTY OR PROVINCE**	**SERVICE AREA NYS PLANNING UNIT (See Attached List of NYS Planning Units)**	**TONS RECEIVED**
Commingled Containers (metal, glass, plastic)	All Materials are direct haul, either from county transfer station or cubside pickup by trash haulers	NY	Madison County		1015.50
Commingled Paper (all grades)	All Materials are direct haul, either from county transfer station or cubside pickup by trash haulers	NY	Madison County		2535.32
Single Stream (total)					
Other (specify)					
				TOTAL MATERIAL RECEIVED (tons):	3550.82

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name. Reprinted (12/22)

SECTION 4 – RESIDUE

Total residue (tons) = 0 Residue destination (Name & Address) _____

Percent Residue Calculation: Total tons residue/Total tons material received x 100 = _____

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS

Please identify destination of recyclable materials. Indicate the name of the facility, address, corresponding State/Country, County/Province, Destination Planning Unit/Municipality and the amount of material recovered. DO NOT REPORT IN CUBIC YARDS!

Specify transport method, list type of material(s) and percentages of total material transported by each:

100 % Road: Material(s): _____ _____ % Rail: Material(s): _____

_____ % Water: Material(s): _____ _____ % Other (specify: _____): Material(s): _____

PAPER RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Paper (all grades)	Casella Recycling, LLC. 13-Gibson Rd. Scarborough, ME 04074	ME			2528.51
Corrugated Cardboard					
Junk Mail					
Magazines					
Newspaper					
Office Paper					
Paperboard / Boxboard					
Other Paper (specify)					
Gaylord Boxes	N.H. Kelmen, 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie (Town)	6.81
				TOTAL PAPER RECOVERED (tons):	2535.32

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

GLASS RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Container Glass	TOMRA NY Recycling, 1 Corporate Dr. Suite 710 Shelton, 06484	NY	Schenectady Cou	Schenectady	125.00
Industrial Scrap Glass					
Other Glass (specify)					
Aggregate Glass	Madison County Divison of Solid Waste Landfill, 6663 Buyea Rd, Canastota	NY	Madison	Madison	331.47
Redemtion Cans/ Bottles	Nickleback Redemtion, 379 Stafford Ave. Waterville 13480	NY	Oneida	Oneida County	21.28
				TOTAL GLASS RECOVERED (tons):	477.75

METAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Aluminum Foil / Trays					
Bulk Metal					
Enameled Appliances / White Goods					
Industrial Scrap Metal	(Steel Cans) - Ekman Group, 1800 Rt 34 Bldg. 4, Suite 401 , Lakewood	NJ			23.62
	(Steel Cans) - Upstate Shredding, PO BX 420 Owego 13827	NY	Tioga County	Tioga County	47.23
Tin & Aluminum Containers	(Cans & Foil) Conti Metals Inc. 1661 46th St, Brooklyn 11204	NY	Kings County	NYC	20.40
Other Metal (specify)	(Steel Cans) -TMS International LLC. 1155 Business Center Dr. #200, Horsham 19044	NJ			22.42
(Steel Cans) -	The Remm Group, 217 Terrace Hill St., Suite B10 Brantford, N3R1G8	ON			23.16
				TOTAL METAL RECOVERED (tons):	136.83

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

PLASTIC RECOVERED					
RECOVERED MATERIAL	**DESTINATION** (Name & Address)	**DESTINATION STATE OR COUNTRY**	**DESTINATION COUNTY OR PROVINCE**	**DESTINATION NYS PLANNING UNIT** (See Attached List of NYS Planning Units)	**TONS RECOVERED** (out of facility)
Commingled Plastic (#1 - #7)	Hamilton Polymers Company 3040 78th Ave SE 1445 Mercer Island	WA			45.45
	N.H. Kelmen, 41 Euclid St. Cohoes, NY 12047	NY	Albany County	Colonie (Town)	110.50
PET (plastic #1)					
HDPE (plastic #2)					
Other Rigid Plastics (#3 - #7)					
Industrial Scrap Plastic					
Plastic Film & Bags					
Other Plastics (specify)	(Commingled Plastic 1-7)Trigon Plastics, 17 Orlan Rd. New Holland 17557	PA			202.16
Commingled Plastic 1-7	The Remm Group, 217 Terrace Hill St., Suite B10 Brantford, N3R1G8	ON			42.81
				TOTAL PLASTIC RECOVERED (tons):	400.92

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

VOLUME TO WEIGHT CONVERSION FACTORS

MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT		MATERIAL	EQUIVALENT	
GLASS – whole bottles	1 cubic yard	0.35 tons	GLASS - crushed mechanically	1 cubic yard	0.88 tons	ALUMINUM – cans – whole	1 cubic yard	0.03 tons
GLASS - semi crushed	1 cubic yard	0.70 tons	GLASS - uncrushed manually	55 gallon drum	0.16 tons	ALUMINUM – cans – flattened	1 cubic yard	0.125 tons
PAPER - high grade loose	1 cubic yard	0.18 tons	PLASTIC – PET – whole	1 cubic yard	0.015 tons			
PAPER - high grade baled	1 cubic yard	0.36 tons	PLASTIC – PET - flattened	1 cubic yard	0.04 tons			
PAPER - mixed loose	1 cubic yard	0.15 tons	PLASTIC – PET - baled	1 cubic yard	0.38 tons	WHITE GOODS - uncompacted	1 cubic yard	0.10 tons
NEWSPRINT - loose	1 cubic yard	0.29 tons	PLASTIC - styrofoam	1 cubic yard	0.02 tons	WHITE GOODS - compacted	1 cubic yard	0.5 tons
NEWSPRINT - compacted	1 cubic yard	0.43 tons	PLASTIC – HDPE – whole	1 cubic yard	0.012 tons			
CORRUGATED – loose	1 cubic yard	0.015 tons	PLASTIC – HDPE – flattened 1	1 cubic yard	0.03 tons			
CORRUGATED - baled	1 cubic yard	0.55 tons	PLASTIC – HDPE - baled	1 cubic yard	0.38 tons	FERROUS METAL - cans whole	1 cubic yard	0.08 tons
			PLASTIC – mixed (grocery bags)	45 gallon bag	0.01 tons	FERROUS METAL - cans	1 cubic yard	0.43 tons

SECTION 5 – RECYCLABLES & RECOVERED MATERIALS (continued)

MIXED MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Commingled Containers (metal, glass, plastic)					
Commingled Paper & Containers					
Single Stream (total)					
Other (specify)					

TOTAL MIXED MATERIAL RECOVERED (tons): 0

MISCELLANEOUS MATERIAL RECOVERED

RECOVERED MATERIAL	DESTINATION (Name & Address)	DESTINATION STATE OR COUNTRY	DESTINATION COUNTY OR PROVINCE	DESTINATION NYS PLANNING UNIT (See Attached List of NYS Planning Units)	TONS RECOVERED (out of facility)
Electronics					
Textiles					
Other (specify)					

TOTAL MISCELLANEOUS MATERIAL RECOVERED (tons): 0

If the material type is not listed, use one of the "Other" lines and fill in the name of the material. If more "Other" lines are needed, cross out an unused type and fill in the other materials name. If still more "Other" lines are needed, attached another copy of this page, cross out an unused type, and fill in the other materials name.

SECTION 6 – UNAUTHORIZED SOLID WASTE

Has unauthorized solid waste been received at the facility during the reporting period?

☐ Yes ☒ No If yes, give information below for each incident (attach additional sheets if necessary):

Date Received	Type Received	Date Disposed	Disposal Method & Location

SECTION 7 - COST ESTIMATES AND FINANCIAL ASSURANCE DOCUMENTS

Are there required cost estimates and financial assurance documents for closure?

☐ Yes ☒ No If yes, attach additional sheets reflecting annual adjustments for inflation and any changes to the Closure Plan?

SECTION 8 – PROBLEMS

Were any problems encountered during the reporting period (e.g., specific occurrences which have led to changes in facility procedures)?

☐ Yes ☒ No If yes, attach additional sheets identifying each problem and the methods for resolution of the problem.

SECTION 9 – CHANGES

Were there any changes from approved reports, plans, specifications, and permit conditions?

☐ Yes ☒ No If yes, attach additional sheets identifying changes with a justification for each change.

SECTION 10 - PERMIT/CONSENT ORDER REPORTING REQUIREMENTS

Are there any additional permit/consent order reporting requirements not covered by the previous sections of this form?

☐ Yes ☒ No If yes, attach additional sheets identifying the reporting requirements with their respective responses.

SECTION 11 - SIGNATURE AND DATE BY OWNER OR OPERATOR

Owner or Operator must sign, date and submit one completed form to the appropriate Regional Office (See attachment for Regional Office addresses, email addresses and Materials Management Contacts).

The Owner or Operator must also submit one copy by email, fax or mail to:

New York State Department of Environmental
Conservation Division of Materials Management
Bureau of Solid Waste Management
625 Broadway
Albany, New York 12233-
7260 Fax 518-402-9041
Email address: SWMFannualreport@dec.ny.gov

I certify, under penalty of law, that the data and other information identified in this report have been prepared under my direction and supervision in compliance with a system designed to ensure that qualified personnel properly and accurately gather and evaluate this information. I am aware that any false statement I make in such report is punishable pursuant to section 71-2703(2) of the Environmental Conservation Law and section 210.45 of the Penal Law.

Signature

2/22/2023
Date

Darin Pearo
Name (Print or Type)

Director of Business Operations
Title (Print or Type)

Darinpearo@yahoo.com
Email (Print or Type)

701 Lenox Ave.
Address

Oneida
City

New York, 13421
State and Zip

(315) 363-3389
Phone Number

ATTACHMENTS: ☐ YES ☒ NO

Appendix E

Step 4. Municipal Solid Waste (MSW) Detailed Composition Analysis

Madison County 2021-2030

Material	Density Population Distribution		Rural			Suburban			Urban			MSW Materials Composition (%)
			54.66%			45.34%			0.00%			
			Residential	Comm/Inst.	Combined	Residential	Comm/Inst.	Combined	Residential	Comm/Inst.	Combined	
			58.00%	42.00%	100.00%	55.00%	45.00%	100.00%	58.00%	42.00%	100.00%	100.00%
	Newspaper		5.20%	1.90%	3.81%	5.00%	1.90%	3.61%	6.60%	2.00%	4.67%	3.72%
	Corrugated Cardboard		6.60%	13.90%	9.67%	6.60%	13.90%	9.89%	6.90%	13.70%	9.76%	9.77%
	Other Recyclable Paper	Paperboard	3.20%	1.10%	2.32%	3.30%	1.00%	2.27%	3.60%	0.90%	2.47%	2.29%
		Office Paper	0.80%	3.80%	2.06%	0.90%	4.20%	2.39%	1.10%	5.80%	3.07%	2.21%
		Junk Mail	3.00%	0.70%	2.03%	3.20%	0.70%	2.08%	3.50%	0.70%	2.32%	2.05%
		Other Commercial Printing	1.70%	2.30%	1.95%	1.70%	2.40%	2.02%	2.30%	2.60%	2.43%	1.98%
		Magazines	1.10%	0.90%	1.02%	1.00%	0.80%	0.91%	1.10%	1.00%	1.06%	0.97%
		Books	0.50%	0.30%	0.42%	0.50%	0.30%	0.41%	0.60%	0.40%	0.52%	0.41%
		Paper Bags	0.50%	0.20%	0.37%	0.50%	0.20%	0.37%	0.60%	0.20%	0.43%	0.37%
		Phone Books	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.20%	0.26%	0.30%
		Poly-Coated	0.20%	0.30%	0.24%	0.20%	0.20%	0.20%	0.30%	0.20%	0.26%	0.22%
	Other Recyclable Paper (Total)		11.30%	9.90%	10.71%	11.60%	10.10%	10.93%	13.40%	12.00%	12.81%	10.81%
	Other Compostable Paper		6.80%	6.80%	6.80%	6.40%	6.40%	6.40%	6.80%	6.80%	6.80%	6.62%
	Total Paper		***29.90%***	***32.50%***	***30.99%***	***29.60%***	***32.30%***	***30.82%***	***33.70%***	***34.50%***	***34.04%***	***30.91%***
	Ferrous/Aluminum Containers	Ferrous Containers	1.90%	1.00%	1.52%	1.20%	0.70%	0.98%	1.40%	0.70%	1.11%	1.27%
		Aluminum Containers	0.70%	0.40%	0.57%	0.60%	0.30%	0.47%	0.50%	0.40%	0.46%	0.52%
	Ferrous/Aluminum Containers (Total)		2.60%	1.40%	2.10%	1.80%	1.00%	1.44%	1.90%	1.10%	1.56%	1.80%
	Other Ferrous Metals		5.20%	5.40%	5.28%	5.00%	5.80%	5.36%	3.30%	3.70%	3.47%	5.32%
	Other Non-Ferrous Metals	Other aluminum	0.20%	0.30%	0.24%	0.20%	0.30%	0.25%	0.20%	0.30%	0.24%	0.24%
		Automotive batteries	0.80%	0.50%	0.67%	0.70%	0.40%	0.57%	0.20%	0.20%	0.20%	0.62%
		Other non-aluminum	0.50%	0.30%	0.42%	0.30%	0.40%	0.35%	0.40%	0.20%	0.32%	0.38%
	Other Non-Ferrous Metals (Total)		1.50%	1.10%	1.33%	1.20%	1.10%	1.16%	0.80%	0.70%	0.76%	1.25%
	Total Metals		***9.30%***	***7.90%***	***8.71%***	***8.00%***	***7.90%***	***7.96%***	***6.00%***	***5.50%***	***5.79%***	***8.37%***
	PET Containers		1.10%	0.80%	0.97%	0.90%	0.80%	0.86%	1.20%	1.00%	1.12%	0.92%
	HDPE Containers		1.10%	0.60%	0.89%	0.90%	0.70%	0.81%	1.00%	0.70%	0.87%	0.85%
	Other Plastic (3-7) Containers		0.20%	0.10%	0.16%	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.18%
	Film Plastic		5.70%	5.90%	5.78%	5.50%	5.80%	5.64%	5.80%	5.80%	5.80%	5.72%
	Other Plastic	Durables	3.10%	3.20%	3.14%	3.00%	3.20%	3.09%	3.20%	3.30%	3.24%	3.12%
		Non-Durables	1.60%	1.80%	1.68%	1.60%	1.80%	1.69%	1.80%	1.90%	1.84%	1.69%
		Packaging	1.40%	1.10%	1.27%	1.40%	1.10%	1.27%	1.50%	1.10%	1.33%	1.27%
	Other Plastic (Total)		6.10%	6.10%	6.10%	6.00%	6.10%	6.05%	6.50%	6.30%	6.42%	6.08%
	Total Plastics		***14.20%***	***13.50%***	***13.91%***	***13.50%***	***13.60%***	***13.55%***	***14.70%***	***14.00%***	***14.41%***	***13.74%***
	Glass Bottles, Jars and Containers		4.10%	3.80%	3.97%	3.90%	3.80%	3.86%	4.30%	3.80%	4.09%	3.92%
	Other Glass (Flat glass, dishware, light bulbs, etc.)		0.50%	0.40%	0.46%	0.30%	0.40%	0.35%	0.40%	0.40%	0.40%	0.41%
	Total Glass		***4.60%***	***4.20%***	***4.43%***	***4.20%***	***4.20%***	***4.20%***	***4.70%***	***4.20%***	***4.49%***	***4.33%***
	Food Scraps		12.70%	13.30%	12.95%	12.90%	15.50%	14.07%	17.20%	25.20%	20.56%	13.46%
	Leaves and Grass / Pruning and Trimmings		3.10%	1.10%	2.26%	11.30%	9.10%	10.31%	4.20%	1.50%	3.07%	5.91%
	Total Organics		***15.80%***	***14.40%***	***15.21%***	***24.20%***	***24.60%***	***24.38%***	***21.40%***	***26.70%***	***23.63%***	***19.37%***
	Clothing Footwear, Towels, Sheets		4.60%	3.00%	3.93%	4.40%	3.20%	3.86%	4.80%	2.50%	3.83%	3.90%
	Carpet		1.40%	1.30%	1.36%	1.70%	1.40%	1.57%	1.70%	0.90%	1.36%	1.45%
	Total Textiles		***6.00%***	***4.30%***	***5.29%***	***6.10%***	***4.60%***	***5.43%***	***6.50%***	***3.40%***	***5.20%***	***5.35%***
	Total Wood (Pallets, crates, adulterated and non-adulterated wood)		***4.10%***	***9.00%***	***6.16%***	***2.90%***	***4.10%***	***3.44%***	***2.00%***	***3.50%***	***2.63%***	***4.93%***
	DIY - Construction & Renovation Materials		8.00%	7.60%	7.83%	3.80%	2.70%	3.31%	4.40%	3.80%	4.15%	5.78%
	Diapers		1.90%	1.10%	1.56%	2.10%	1.20%	1.70%	2.30%	1.10%	1.80%	1.62%
	Electronics		1.30%	1.40%	1.34%	1.60%	1.70%	1.65%	1.30%	1.30%	1.30%	1.48%
	Tires		1.80%	1.80%	1.80%	1.70%	1.40%	1.57%	0.50%	0.40%	0.46%	1.69%
	HHW		0.60%	0.00%	0.35%	0.60%	0.00%	0.33%	0.50%	0.00%	0.29%	0.34%
	Soils and Fines		0.60%	0.60%	0.60%	0.10%	0.20%	0.15%	0.10%	0.10%	0.10%	0.39%
	Other Composite Materials - Durable and/or Inert		1.90%	1.70%	1.82%	1.60%	1.50%	1.56%	1.90%	1.50%	1.73%	1.70%
	Total Miscellaneous		***16.10%***	***14.20%***	***15.30%***	***11.50%***	***8.70%***	***10.24%***	***11.00%***	***8.20%***	***9.82%***	***13.01%***
	Total		***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***	***100.00%***

			2020			2021			2022			2023			2024			2025			2026		
		MSW Materials Composition (%)	MSW Generated (Tons)	MSW Diverted (Tons)	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
	Material	**100.00%**	**47,753**	**5,804**	**12.2%**	**47,671**	**5,850**	**12.3%**	**47,318**	**5,549**	**11.7%**	**46,969**	**5,557**	**11.8%**	**46,622**	**5,564**	**11.9%**	**46,277**	**5,568**	**12.0%**	**45,935**	**5,577**	**12.1%**
Paper	Newspaper	**3.72%**	1,776	318	17.9%	1,773	326	18.4%	1,760	299	17%	1,747	300	17.2%	1,734	302	17.4%	1,721	303	17.6%	1,708	304	17.8%
	Corrugated Cardboard	**9.77%**	4,663	1,404	30.1%	4,655	1,448	31.1%	4,621	1,326	29%	4,587	1,326	28.9%	4,553	1,325	29.1%	4,519	1,324	29.3%	4,486	1,323	29.5%
	Other Recyclable Paper (Total)	**10.81%**	5,161	925	17.9%	5,153	953	18.5%	5,114	875	17%	5,077	878	17.3%	5,039	882	17.5%	5,002	885	17.7%	4,965	889	17.9%
	Other Compostable Paper	**6.62%**	3,161	0	0.0%	3,155	0	0.0%	3,132	0	0%	3,109	0	0.0%	3,086	0	0.0%	3,063	0	0.0%	3,040	0	0.0%
	Total Paper	**30.91%**	14,761	2,647	17.9%	14,736	2,727	18.5%	14,627	2,500	17%	14,519	2,504	17.2%	14,412	2,508	17.4%	14,305	2,512	17.6%	14,199	2,516	17.7%
Metal	Ferrous/Aluminum Containers (Total)	**1.80%**	859	157	18.3%	857	135	15.8%	851	134	16%	845	135	16.0%	839	136	16.2%	832	137	16.4%	826	137	16.6%
	Other Ferrous Metals	**5.32%**	2,540	641	25.2%	2,535	474	18.7%	2,517	556	22%	2,498	557	22.3%	2,480	558	22.5%	2,461	559	22.7%	2,443	559	22.9%
	Other Non-Ferrous Metals (Total)	**1.25%**	598	146	24.4%	597	141	23.6%	592	126	21%	588	126	21.5%	584	127	21.7%	579	127	21.9%	575	127	22.1%
	Total Metals	**8.37%**	3,996	944	23.6%	3,989	750	18.8%	3,960	817	21%	3,931	819	20.8%	3,902	820	21.0%	3,873	822	21.2%	3,844	824	21.4%
Plastic	PET Containers	**0.92%**	439	133	30.3%	439	119	27.2%	435	207	48%	432	207	47.8%	429	206	48.0%	426	205	48.2%	423	205	48.4%
	HDPE Containers	**0.85%**	408	92	22.6%	407	82	20.2%	404	122	30%	401	122	30.5%	398	122	30.7%	395	120	4.8%	392	122	31.1%
	Other Plastic (3-7) Containers	**0.18%**	85	70	82.8%	84	64	75.4%	84	65	78%	83	65	77.9%	83	64	77.9%	82	64	16.4%	81	63	78.0%
	Film Plastic	**5.72%**	2,730	45	1.6%	2,725	22	0.8%	2,705	0	0%	2,685	0	0.0%	2,665	0	0.0%	2,645	0	0.0%	2,626	0	0.0%
	Other Plastic (Total)	**6.08%**	2,901	0	0.0%	2,896	14	0.5%	2,875	0	0%	2,853	0	0.0%	2,832	0	0.0%	2,811	0	0.0%	2,791	0	0.0%
	Total Plastics	**13.74%**	6,562	340	5.2%	6,551	301	4.6%	6,503	395	6%	6,455	394	6.1%	6,407	392	6.1%	6,360	389	6.1%	6,313	390	6.2%
Glass	Glass Bottles, Jars and Containers	**3.92%**	1,872	555	29.6%	1,869	497	26.6%	1,855	451	24%	1,841	451	24.5%	1,828	451	24.7%	1,814	452	24.9%	1,801	452	25.1%
	Other Glass (Flat glass, dishware, light bulbs, etc.)	**0.41%**	194	0	0.0%	194	0	0.0%	192	0	0%	191	0	0.0%	190	0	0.0%	188	0	0.0%	187	0	0.0%
	Total Glass	**4.33%**	2,066	555	26.9%	2,063	497	24.1%	2,047	451	22%	2,032	451	22.2%	2,017	451	22.4%	2,002	452	22.6%	1,988	452	22.7%
Organics	Food Scraps	**13.46%**	6,427	0	0.0%	6,416	0	0.0%	6,369	0	0%	6,321	0	0.0%	6,275	0	0.0%	6,228	0	0.0%	6,182	0	0.0%
	Leaves and Grass / Pruning and Trimmings	**5.91%**	2,822	758	26.9%	2,817	1,147	40.7%	2,796	872	31%	2,776	872	31.4%	2,755	871	31.6%	2,735	870	31.8%	2,715	869	32.0%
	Total Organics	**19.37%**	9,249	758	8.2%	9,233	1,147	12.4%	9,165	872	10%	9,097	872	9.6%	9,030	871	9.6%	8,963	870	9.7%	8,897	869	9.8%
Textiles	Clothing Footwear, Towels, Sheets	**3.90%**	1,861	147	7.9%	1,858	69	3.7%	1,844	83	5%	1,830	86	4.7%	1,817	89	4.9%	1,804	92	5.1%	1,790	95	5.3%
	Carpet	**1.45%**	693	0	0.0%	692	0	0.0%	687	0	0%	682	0	0.0%	677	0	0.0%	672	0	0.0%	667	0	0.0%
	Total Textiles	**5.35%**	2,554	147	5.8%	2,550	69	2.7%	2,531	83	3%	2,512	86	3.4%	2,494	89	3.6%	2,475	92	3.7%	2,457	95	3.9%
Wood	***Total Wood*** **(Pallets, crates, adulterated and non-adulterated)**	**4.93%**	2,352	0	0.0%	2,348	0	0.0%	2,331	0	0%	2,314	0	0.0%	2,296	0	0.0%	2,279	0	0.0%	2,263	0	0.0%
Miscellaneous	DIY Construction & Renovation Materials	**5.78%**	2,760	0	0.0%	2,755	0	0.0%	2,735	0	0%	2,715	0	0.0%	2,694	0	0.0%	2,675	0	0.0%	2,655	0	0.0%
	Diapers	**1.62%**	775	0	0.0%	774	0	0.0%	768	0	0%	762	0	0.0%	757	0	0.0%	751	0	0.0%	746	0	0.0%
	Electronics	**1.48%**	706	101	14.3%	705	128	18.2%	700	116	17%	695	116	16.7%	690	116	16.8%	685	116	16.9%	680	116	17.0%
	Tires	**1.69%**	809	302	37.3%	807	220	27.3%	801	305	38%	795	305	38.4%	790	306	38.7%	784	306	39.0%	778	306	39.3%
	HHW	**0.34%**	162	10	6.2%	162	10	6.0%	161	10	6%	160	10	6.2%	158	10	6.3%	157	10	6.4%	156	10	6.5%
	Soils and Fines	**0.39%**	188	0	0.0%	188	0	0.0%	186	0	0%	185	0	0.0%	184	0	0.0%	182	0	0.0%	181	0	0.0%
	Other Composite Materials - Durable and/or inert	**1.70%**	811	0	0.0%	809	0	0.0%	803	0	0%	797	0	0.0%	791	0	0.0%	786	0	0.0%	780	0	0.0%
	Total Miscellaneous	**13.01%**	6,211	413	6.6%	6,200	358	5.8%	6,155	431	7%	6,109	431	7.1%	6,064	431	7.1%	6,019	431	7.2%	5,975	431	7.2%

	2020	2021	2022	2023	2024	2025	2026
Population	#N/A	68,016	67,513	67,015	66,520	66,028	65,540
MSW Generated (tons)	47,753.00	47,671	47,318	46,969	46,622	46,277	45,935
Per Capita MSW Generated (lbs/person/year)	#N/A	1,402	1,402	1,402	1,402	1,402	1,402
MSW Diverted (tons)	5,804.00	5,850	5,549	5,557	5,564	5,568	5,577
Per Capita MSW Diverted (lbs/person/year)	#N/A	172	164	166	167	169	170
MSW Disposed (tons)	41,949.00	41,821	41,769	41,412	41,058	40,709	40,359
Per Capita MSW Disposed (lbs/person/year)	#N/A	1,230	1,237	1,236	1,234	1,233	1,232
Per Capita MSW Disposed (lbs/person/day)	#N/A	3.37	3.39	3.39	3.38	3.38	3.37

			2027			2028			2029			2030			2031			2032		
		MSW Materials Composition (%)	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted	MSW generated (Tons)	MSW Diverted	% MSW Diverted
	Material	100.00%	45,596	5,583	12.2%	45,259	5,592	12.4%	44,925	5,597	12.5%	44,593	5,601	12.6%	44,263	5,685	12.8%	43,936	5,656	12.9%
Paper	Newspaper	3.72%	1,696	305	18.0%	1,683	306	18.2%	1,671	307	18.4%	1,659	308	18.6%	1,646	309	18.8%	1,634	310	19.0%
	Corrugated Cardboard	9.77%	4,453	1,322	29.7%	4,420	1,321	29.9%	4,387	1,320	30.1%	4,355	1,319	30.3%	4,387	1,338	30.5%	4,291	1,317	30.7%
	Other Recyclable Paper (Total)	10.81%	4,928	892	18.1%	4,892	895	18.3%	4,856	898	18.5%	4,820	901	18.7%	4,856	918	18.9%	4,749	907	19.1%
	Other Compostable Paper	6.62%	3,018	0	0.0%	2,996	0	0.0%	2,973	0	0.0%	2,951	0	0.0%	2,973	0	0.0%	2,908	0	0.0%
	Total Paper	30.91%	14,095	2,520	17.9%	13,990	2,523	18.0%	13,887	2,526	18.2%	13,784	2,529	18.3%	13,862	2,565	18.5%	13,582	2,535	18.7%
Metal	Ferrous/Aluminum Containers (Total)	1.80%	820	138	16.8%	814	138	17.0%	808	139	17.2%	802	140	17.4%	808	142	17.6%	802	143	17.8%
	Other Ferrous Metals	5.32%	2,425	560	23.1%	2,407	561	23.3%	2,389	561	23.5%	2,372	562	23.7%	2,389	571	23.9%	2,372	572	24.1%
	Other Non-Ferrous Metals (Total)	1.25%	571	127	22.3%	567	127	22.5%	562	128	22.7%	558	128	22.9%	562	130	23.1%	558	130	23.3%
	Total Metals	8.37%	3,816	825	21.6%	3,788	827	21.8%	3,760	828	22.0%	3,732	829	22.2%	3,760	843	22.4%	3,732	844	22.6%
Plastic	PET Containers	0.92%	420	204	48.6%	416	203	48.8%	413	203	49.0%	410	202	49.2%	413	204	49.4%	410	203	49.6%
	HDPE Containers	0.85%	389	122	31.3%	386	122	31.5%	384	122	31.7%	381	121	31.9%	384	123	32.1%	381	123	32.3%
	Other Plastic (3-7) Containers	0.18%	81	63	78.0%	80	63	78.1%	80	62	78.1%	79	62	78.1%	80	62	78.2%	79	62	78.2%
	Film Plastic	5.72%	2,606	0	0.0%	2,587	0	0.0%	2,568	0	0.0%	2,549	0	0.0%	2,568	0	0.0%	2,549	0	0.0%
	Other Plastic (Total)	6.08%	2,770	0	0.0%	2,750	0	0.0%	2,729	0	0.0%	2,709	0	0.0%	2,729	0	0.0%	2,709	0	0.0%
	Total Plastics	13.74%	6,266	389	6.2%	6,220	387	6.2%	6,174	386	6.3%	6,128	385	6.3%	6,174	389	6.3%	6,128	388	6.3%
Glass	Glass Bottles, Jars and Containers	3.92%	1,787	452	25.3%	1,774	456	25.7%	1,761	456	25.9%	1,748	456	26.1%	1,761	463	26.3%	1,748	463	26.5%
	Other Glass (Flat glass, dishware, light bulbs, etc.)	0.41%	185	0	0.0%	184	0	0.0%	183	0	0.0%	181	0	0.0%	183	0	0.0%	181	0	0.0%
	Total Glass	4.33%	1,973	452	22.9%	1,958	456	23.3%	1,944	456	23.5%	1,929	456	23.6%	1,944	463	23.8%	1,929	463	24.0%
Organics	Food Scraps	13.46%	6,137	0	0.0%	6,091	0	0.0%	6,046	0	0.0%	6,002	0	0.0%	6,046	0	0.0%	6,002	0	0.0%
	Leaves and Grass / Pruning and Trimmings	5.91%	2,695	868	32.2%	2,675	867	32.4%	2,655	866	32.6%	2,635	864	32.8%	2,655	876	33.0%	2,635	875	33.2%
	Total Organics	19.37%	8,831	868	9.8%	8,766	867	9.9%	8,701	866	9.9%	8,637	864	10.0%	8,701	876	10.1%	8,637	875	10.1%
Textiles	Clothing Footwear, Towels, Sheets	3.90%	1,777	98	5.5%	1,764	101	5.7%	1,751	103	5.9%	1,738	106	6.1%	1,751	110	6.3%	1,738	113	6.5%
	Carpet	1.45%	662	0	0.0%	657	0	0.0%	652	0	0.0%	647	0	0.0%	652	0	0.0%	647	0	0.0%
	Total Textiles	5.35%	2,439	98	4.0%	2,421	101	4.2%	2,403	103	4.3%	2,385	106	4.4%	2,403	110	4.6%	2,385	113	4.7%
Wood	*Total Wood* (Pallets, crates, adulterated and non-adulterated)	4.93%	2,246	0	0.0%	2,229	0	0.0%	2,213	0	0.0%	2,196	0	0.0%	2,213	0	0.0%	2,196	0	0.0%
Miscellaneous	DIY Construction & Renovation Materials	5.78%	2,635	0	0.0%	2,616	0	0.0%	2,596	0	0.0%	2,577	0	0.0%	2,596	0	0.0%	2,577	0	0.0%
	Diapers	1.62%	740	0	0.0%	735	0	0.0%	729	0	0.0%	724	0	0.0%	729	0	0.0%	724	0	0.0%
	Electronics	1.48%	675	115	17.1%	670	115	17.2%	665	115	17.3%	660	115	17.4%	665	116	17.5%	660	116	17.6%
	Tires	1.69%	772	306	39.6%	766	306	39.9%	761	306	40.2%	755	306	40.5%	761	310	40.8%	755	310	41.1%
	HHW	0.34%	155	10	6.6%	154	10	6.7%	153	10	6.8%	152	10	6.9%	153	11	7.0%	152	11	7.1%
	Soils and Fines	0.39%	180	0	0.0%	178	0	0.0%	177	0	0.0%	176	0	0.0%	177	0	0.0%	176	0	0.0%
	Other Composite Materials - Durable and/or inert	1.70%	774	0	0.0%	768	0	0.0%	763	0	0.0%	757	0	0.0%	763	0	0.0%	757	0	0.0%
	Total Miscellaneous	13.01%	5,931	431	7.3%	5,887	431	7.3%	5,843	431	7.4%	5,800	431	7.4%	5,843	437	7.5%	5,800	437	7.5%

	2027	2028	2029	2030	2031	2032
Population	65,056	64,575	64,098	63,625	63,155	62,688
MSW Generated (tons)	45,596	45,259	44,925	44,593	44,263	43,936
Per Capita MSW Generated (lbs/person/year)	1,402	1,402	1,402	1,402	1,402	1,402
MSW Diverted (tons)	5,583	5,592	5,597	5,601	5,685	5,656
Per Capita MSW Diverted (lbs/person/year)	172	173	175	176	180	180
MSW Disposed (tons)	40,014	39,668	39,328	38,992	38,579	38,281
Per Capita MSW Disposed (lbs/person/year)	1,230	1,229	1,227	1,226	1,222	1,221
Per Capita MSW Disposed (lbs/person/day)	3.37	3.37	3.36	3.36	3.35	3.35