

WILL COUNTY, ILLINOIS



Solid Waste Management Plan Update 2007-2016



Prepared by
Will County Staff

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Original 20-Year Solid Waste Plan: 1991
First Update: 1996
Second Update: 2001
Third Update: 2007

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**Will County
Solid Waste Management Plan
2007-2016 Update**

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Will County Solid Waste Plan Update 2007-2016

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Executive Summary

Since 1988, the Resource Recovery & Energy (RR & E) Division (f.k.a. Waste Services Division) of the Will County Land Use Department has been responsible for handling the County's solid waste planning efforts. The Solid Waste Management Plan was created and first adopted in 1991 to clearly direct the goals and programs associated with responsible handling of all waste generated in and traveling through Will County. The first plan and four subsequent updates provide informational status reports on solid waste management programs, waste and recycling data, and demographics and projections to clarify county needs into the future. This Update was delayed to allow decisions to be finalized on two significant waste disposal options (Prairie View RDF late 2014 and Laraway RDF late 2016).

Many traditional and innovative solid waste technologies are currently available to the residents of Will County, but some are not economically feasible. Solid waste disposal options that are covered include: Anaerobic Digestion, Biogas as a resource, Clean Construction & Demolition Debris (CCDD) & Uncontaminated Soil Facilities, Construction & Demolition (C&D) Recycling Facilities, Compost and Land Application sites, Gasification, Pyrolysis, Transfer Stations, and Material Recovery Facilities (MRF), along with Landfills. Landfilling is still the most economic disposal option for municipal solid waste in this area. Once the waste is reduced through participation in recycling or composting, the leftover waste is brought to a landfill. The Prairie View RDF provides a disposal option for the Will County Service Area's municipal solid waste, while Laraway Landfill accepts primarily contaminated soil and industrial waste, from the northeastern Illinois area. Lastly, Renwick and Lincoln Stone Quarry accept coal combustion ash.

Since the 1991 Plan, Will County's solid waste management system has adapted to changing economic conditions, markets and demographics. Over this time, landfills and incinerators throughout the State and the entire Midwest, have closed. In 2004 Will County opened the new Prairie View landfill. Small companies have been acquired by larger competitors and some of the largest businesses have internalized the flow of waste and recyclables. These market changes have affected waste disposal options, including recycling, composting, the use of transfer stations, and the direction of waste to the County owned landfill.

In response to growing residential, governmental, institutional and commercial sectors, the RR&E Division found themselves implementing new programs and expanding existing ones. This includes, but is not limited to: Collection/Recycling of Household Hazardous Waste (HHW), Electronics, Tires, Pharmaceuticals, Traditional Recyclables, Books, Textiles, and Food Scraps for Composting, Lightbulbs and Batteries. There has been a dramatic increase (100% in some cases) in participation rates for these collection events.

The County has also maintained a Delegation Agreement with the IEPA to enforce the cleanup of open dumps, curtail open burning and inspect IEPA permitted sites, while continuing partial state funding for this work through a grant. RR&E has become involved with a Brownfield site (Old Joliet Prison) and obtained free sampling and assessment with the USEPA's Targeted Brownfield Assistance program and has looked at Brownfield sites countywide for possible solar deployment or other Brownfield grant assistance. Outreach programs to schools have been maintained and expanded to include teacher seminars, community workshops, community clean-ups, and greater involvement with higher education groups. Through the Energy Efficiency & Conservation Block Grant, the County was able to establish the www.willcountygreen.com website, which provides a plethora of solid waste management options and education.

At the time of the last Plan Update (2001-2007), the Prairie View RDF Service Area (Will County and municipalities fully or partially within Will County) had been growing at a rapid rate. The Great Recession, beginning shortly after that period dramatically slowed waste and recycling rates for years. Today, growth has begun to rebound and is again forcing change in waste generation and business projections. New demographic, waste & recycling projections are included in this Plan Update, with the Prairie View RDF Service Area generating a projected 3,049,696 tons (without recycling) by 2040. This assumes a generation rate of 7.56 lbs/capita/day. According to the latest waste hauler reports, the county recycling rate is 43%. Should the County continue development of more recycling and diversion programs,

it should continue to dispose of a smaller percentage of the waste generated by 2040, preserving disposal capacity. This reduction in waste could allow for a longer life of Prairie View landfill and push the need for new landfills or other disposal options farther into the future.

Major legislative changes and local policy decisions have occurred since the 2001-2007 Plan Update. In late 2014, the Federal Government changed the closure date of the county owned Prairie View RDF from 2027 to 2042. To continue to make the Prairie View landfill economically viable, the County may also consider requesting the Federal Government remove the In-County (and municipalities partially or wholly in Will County) service area waste restriction. If the In-County service area restriction were lifted, the landfill may be restricted to a certain annual volume. Furthermore, the County may consider expanding the Prairie View landfill's capacity in the future once deemed necessary. Additionally, C & D Recycling Facilities are now allowed to operate Statewide without siting but with an IEPA permit. CCDD Facilities have new rules and regulations and food scraps are now accepted in some municipal and commercial hauling contracts and accepted at compost and farm sites. Pharmaceutical waste is allowed to be collected through manufacturers, pharmacies and other entities according to DEA rules. The County Board approved two expansions of the Laraway RDF, allowed leachate to be recirculated at the Prairie View RDF, along with a Gas to Energy Plant, which provides renewable energy and a new source of non-taxpayer revenue to the County. The County maintains its policy of allowing those two landfills as the only landfills needed in the County, but allowing the private sector to develop a transfer station network as needed and according to the conditions listed in the Plan Update. The County's solid waste funding mechanisms remain intact, and have now added additional host fees, CCDD fees, grants and gas payments since the last Plan Update. This funding allows for flexible solid waste programming into the future.

The County's RR&E staff will continue to plan for and meet the solid waste needs of its residents, local governments, institutions and commercial sector entities. The director and staff of eight RR & E employees continually educate themselves on the latest enforcement, waste reduction, and recycling programs to create the best programs for the residents of Will County.

Chapter 1 Introduction and Background

The Illinois Solid Waste Planning and Recycling Act (415 ILCS 15/1 et seq.) was approved on August 23, 1988, and requires all Illinois counties to plan for the management of solid waste generated within the county for a 20-year planning period. Counties typically update their plans every five years. The plan must describe the current and proposed facilities for the management of the waste stream and evaluate the proposed solid waste facilities and programs. Finally, the plan must include a recycling program designed to recycle 25% of the waste generated within the County by its fifth year.

The State requires that all County plans conform to the State of Illinois waste management hierarchy, listed in descending order of preference (415 ILCS 20/1 et seq.):

1. Volume Reduction
2. Recycling and ReUse
3. Combustion with Energy Recovery or for Volume Reduction
4. Disposal in Landfill Facilities

Will County Solid Waste Plan – 1991

The Will County Board approved the first Will County Solid Waste Plan in January 1991. The County was then home to ten landfills. Seven communities had curbside recycling collection while five more offered drop-off recycling service to residents. This resulted in approximately 7% of the County's waste stream being recycled. Landscape waste had just been banned from landfills (Public Act 85-1430), and was expected to increase the overall recycling rate to 21% when added to recycling figures.

Prepared by Becker Associates, Inc. and consisting of seven total volumes, the Plan included seven major goals with 22 objectives to guide the development of recycling. It targeted residential and non-residential waste streams and calculated a 30-40% recycling rate with the implementation of more recycling and waste diversion programs.

Will County committed to ten actions to achieve the State and County recycling goals over 20 years:

- Public Education
- Economic Incentives
- Technical Assistance
- Demonstration Programs
- Grant and Loan Assistance
- General Use Material Preparation
- Elected Official Support
- Site Approval Support
- Government Implementation
- Market Development

Additionally, the County recognized the need for long-term disposal within its 849 square mile jurisdiction. With support from the Municipal Advisory Committee, the County assumed the lead role in the development of a new landfill to provide a discounted price structure for waste generated within Will County borders. The plan concluded with a call for strong County leadership and cooperation with both the private sector and other units of government to meet both waste and recycling goals.

**“Each plan must include a description of the volume of solid waste generated within the County’s borders with a projection of the volume of waste that will be generated over the next 20 years.”
Per the Illinois Solid Waste Planning and Recycling Act**

Will County Solid Waste Plan Update – 1996

When it came time to prepare the 1996 Plan Update, it was apparent the past five years had been a time of great change and improvement in the solid waste sector. Weekly curbside service was available in 23 communities with seven of those communities offering drop-off recycling for residents and businesses not serviced through the curbside contract. An additional seven communities offered a stand-alone recycling drop-off service. There were four composting facilities operating in Will County and three on-farm land-application operations recycling yard waste.

Several more materials had been banned by the Illinois General Assembly from landfills, including: appliances with CFCs, lead-acid batteries and whole tires. On a national scale, the ability to direct waste to a single facility was successfully challenged resulting in “no flow control” authority for the County. This meant that pursuit of a County landfill would be done without a guarantee of waste material. However, with population growth outpacing previous projections, five landfills closed since the previous plan, and the change in “flow control”; these changes did not alter the need to seek and obtain site approval for a County landfill.

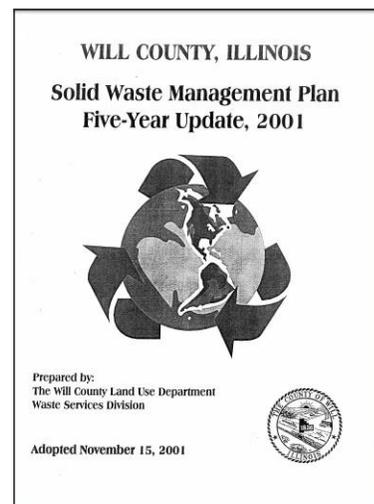
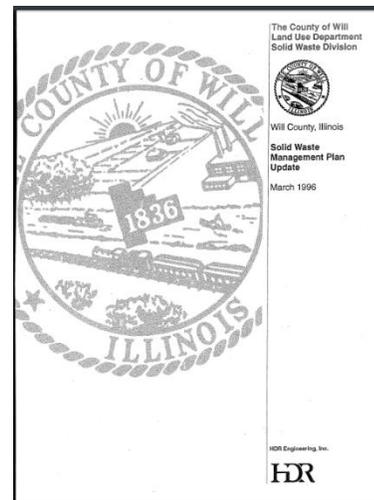
The County was served by four permitted transfer stations, with a fifth station under construction, two operating Municipal Solid Waste (MSW) landfills, a temporarily closed MSW landfill, a special waste/MSW landfill and a fly ash landfill. Overall disposal capacity had diminished and a 455-acre site on a portion of the Joliet Arsenal was under consideration to be developed into a Will County landfill. The County Board approved the 1996 Will County Solid Waste Plan Update in March 1996.

Will County Solid Waste Plan Update – 2001

Over the five years between Updates, landfill disposal capacity had diminished considerably. The Wheatland Prairie Landfill, which had been temporarily closed, re-opened, filled to its permitted capacity and, ultimately, closed. Other MSW landfills closed or were reaching capacity. As the County relied on transfer stations to carry waste outside its borders, population growth continued to out-pace past projections and the possibility of a third airport in the southeast area of the County further increased waste generation estimates. The County continued to pursue a County owned landfill at the Joliet Arsenal. Now named the Prairie View Recycling and Disposal Facility, it had passed the local siting process in March 1999. A deed restriction, added later that same year, restricted the facility’s ability to accept out-of-county waste (acceptable waste included waste generated from all areas of the County and the municipalities within Will County, including all waste from communities partially within Will County.) Although primarily designed for in-county waste, lack of “flow control” and other factors temporarily threatened the financial feasibility of the project.

The County had undertaken a dynamic education program to increase school and residential recycling and had successfully reached a 25% recycling rate. An ordinance required all waste haulers, landscapers and recyclers to report amounts collected within Will County every six months. This requirement resulted in more reliable and enhanced data collection.

This was the first plan update to include information on the County’s Delegation Agreement with the Illinois Environmental Protection Agency (IEPA), which had



been in effect since 1988. The Plan Update summarized and described the staff's many duties, including inspections of IEPA-permitted facilities and illegal dumpsites.

Will County Solid Waste Plan Update – 2007

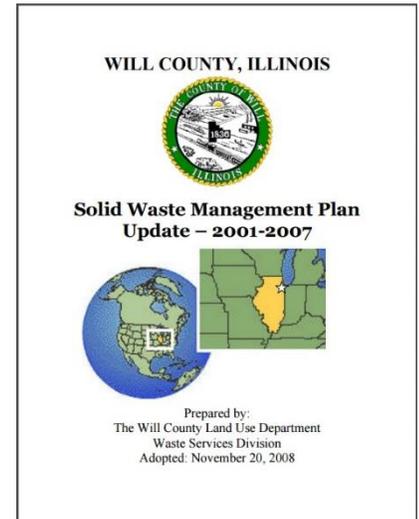
The County delayed the next update one year as a study of the expansion of a private landfill was completed. In 2007, the new Solid Waste Plan included demographic information that demonstrated Will County was among the top ten fastest growing counties in the United States.

The Plan covered:

- New state laws that impacted inspections and addressed construction and demolition recycling.
- Demonstrated implementation of intergovernmental agreements to increase access to traditional recycling while also providing year-round electronic recycling services to residents for the first time.
- Addressed the need for promotion of commercial recycling, increased service for household hazardous waste collection along with an innovative new approach to year-round collection of medication working with private pharmacies, the Illinois EPA and local police departments.
- Expressed a desire to improve electronics recycling by switching from once a year, one-day collections to permanent collection sites located throughout the County.
- A record 36% average diversion rate.
- Continued School Education outreach activities.
- Continued outreach and collection service to residents and government organizations for the collection of books, textiles, tires and other hard-to-handle materials.

This was the first plan to include outreach to pharmacies and show an interest in developing permanent electronics collection sites. The Update set a goal of 40% diversion while continuing the approach of utilizing the Prairie View RDF as the means for meeting the next five years of disposal needs.

The 2007-2016 Plan Update shall demonstrate the many ways the goals established and adopted in the last Plan Update were achieved. The County has implemented and improved programs, been actively involved in legislation, and addressed issues to protect the health of the people of Will County. Please see Chapter 4 for the goals achieved from the past Plan, along with the new goals for the next five years.



Chapter 2 Legislative Changes

The Solid Waste and Recycling field tends to draw legislative attention. This may be attributed to the fact that while all people, throughout the history of civilization, have needed to dispose of unwanted materials and did not want to live near the disposal location. Residents take a keen interest in the location of landfills, transfer stations, recycling facilities and more. Couple this with the environmental impacts associated with disposal practices and laws applying to these facilities and practices are being created or tweaked on a regular basis at the state level, as well as occasionally at the federal and local levels.



The following information provides a synopsis of significant legislation or other actions that have impacted Will County. A more extensive list of laws and court decisions and other actions are in Appendix A and B.

Federal Legislative Changes. The federal Environmental Protection Agency (EPA) was created in 1970. Beginning with the passage of the Resource Conservation and Recovery Act (RCRA) in 1976, the subsequent 1984 passage of EPA regulatory authority over solid waste and the subsequent acceptance of Subtitle D regulations, the federal government established its role in the solid waste industry. Over the years many federal solid waste bills have been proposed that relate to a variety of solid waste issues including waste-to-energy, interstate transportation of waste, landfill gas credits, and recycling. Other offices of the federal government that can impact the solid waste and recycling industry include, Department of Transportation (DOT), the Drug Enforcement Agency (DEA), the Food and Drug Administration (FDA) and the Occupational Health and Safety Administration (OSHA). Table 1-1 lists some of the most recent legislation and rulemaking concerns. Since 2007, there have been few rules or legislative changes that have impacted local operations at the federal level. The federal action that impacted Will County the most was:

- **National Defense Authorization Act** passed in 2014 that extended the closure date of Prairie View Landfill from 2027 to 2042. It had been determined the landfill would not be filled to capacity by 2027, the original federally mandated closure date. This law allows Will County and the federal government to utilize the landfill for MSW disposal purposes until it is truly expected to reach capacity.

State Legislative Changes. The past nine years have kept Resource Recovery and Energy staff busy as a variety of legislation has been pursued in Springfield. The laws that impacted Solid Waste Management since 2007 are listed in Appendix A with a brief summary. This is not a comprehensive list but does include the most important waste and recycling legislation that has been passed by the General Assembly and signed into law by the Governor of Illinois. Of special significance are:

- **Electronics Products Recycling and Reuse Act**, passed in 2008, began a disposal ban on a variety of electronic devices on January 1, 2012. This resulted in greater participation in Will County's residential electronics recycling collection program. The program was expanded from a single one-day annual event to four permanent sites with a one-day events in 2007. More permanent sites were added each year for several years,



Governor Quinn Signed Electronic Legislation in 2008 resulting in a ban of many electronic items in 2012. The law continues to be refined with active Will County involvement.

reaching a record 13 permanent sites and one or more one-day collection events. Electronics recycling pressures resulted in staff being heavily involved in legislative fixes over the past nine years.

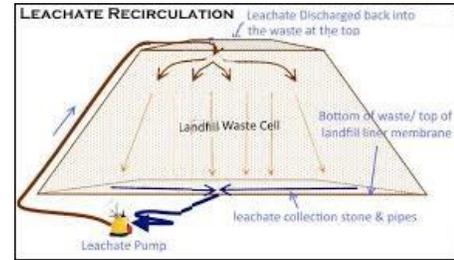
- **C&D Facilities allowed statewide** as of 2009. This law allows construction and demolition recycling facilities to operate statewide without siting but with zoning approval or meet state set-back requirements and obtain a permit from the IEPA. It also requires time limits on material storage and C&D items considered recyclable.
- **CCDD permits are required** as of July 1, 2008. All CCDD facilities must obtain a permit from the IEPA. Passage of a law on July 30, 2010, created a new set of regulations for CCDD sites, including record keeping, certifications, fees to be assessed by Counties and the State, and County ability to inspect sites under IEPA authority. Defines clean construction/demolition debris. Defines uncontaminated soil. Separates waste from recycled materials. Clarifies the definition of clean construction or demolition debris will not be considered “waste” if it is separated or processed and returned to the economic mainstream in the form of raw materials or products within 4 years of its generation.
- **Several Laws addressing Food Scraps** were passed to define food scraps as compostable, allow farms to accept food scraps for land application, and encourage collection programs.



County Ordinances. Since 2008, Will County and several other collar counties have passed ordinances impacting solid waste and recycling programs. Here are a few of significance:

- In 2012 Alameda County, California, became the first County in the United States that passed an ordinance requiring any drug manufacturer whose products were sold in the County to implement and fully fund a take-back program for residents.
- In 2016 Cook County adopted an ordinance anticipated to provide over five million residents with convenient access to safe drug disposal. The ordinance makes Cook County the largest county in the U.S. to require drug companies to safely dispose of unwanted medications, and adds to the two states, nine counties, and three cities in the U.S. with similar drug take-back laws.
- In Cook County, an ordinance requiring fees be paid by transfer stations based on volume throughput resulted in a court ruling siting the Solid Waste Plan Authority as the means that allowed the fees to be implemented. (Sec. 30-826. – **Municipal solid waste transfer station fees and exemptions.**) Due to the courts upholding this ordinance, Senate Bill 1561 was introduced in 2017 to limit the authority within the Solid Waste Planning Act.
- In 2015 McHenry County utilized IL Statute P.A. 091-111 (which allows Counties to enter into agreements with municipalities, private entities and citizens for refuse service and recycling services) to create an ordinance and bid a contract for comprehensive collection services for specific unincorporated areas of the County. This is a program Will County is interested in pursuing as stated in several of the past Solid Waste Plans.
- In 2007 and 2015 the Will County Board approved expansions of the Laraway RDF 2015 (finalized in late 2016), which primarily accepts contaminated soils and construction and demolition waste. The owner and operator, Waste Management, agreed through a Host Agreement to cap a former Phosphogypsum Stack next to the facility.

- In February, 2010, the Will County Board approved a Gas Purchase Agreement with Waste Management Renewable Energy and Waste Management to purchase landfill gas from the County's Prairie View RDF to be used in the renewable Gas-To-Energy Plant.
- In February, 2010, the Will County Board approved allowing Waste Management to recirculate leachate at the County owned, Prairie View RDF. The recirculation of leachate is expected to produce additional gas to be used at the Gas-To-Energy Plant and decompose the waste faster, resulting in better utilization of the landfill air space. Alternatively, Will County could choose to allow the use of the additional gas as fuel, such as compressed natural gas, or possibly other uses.



Will County approved leachate recirculation in 2011 at Prairie View RDF to extend the life of the landfill.

Judicial Rulings. Since 2008, there have only been a few significant judicial rulings in both the federal and state courts that may affect solid waste management in Will County. During this same time frame, the Illinois Pollution Control Board has issued important opinions and orders with regards to solid waste management. Appendix B summarizes the most important solid waste-related judicial rulings from the courts as well as opinions and orders of the Illinois Pollution Control Board.

- **United Haulers Assn. v. Oneida-Herkimer Solid Waste Mgmt. Auth.** (Supreme Court of the United States Decided 2007) A not-for-profit corporation, United Haulers, sued the New York counties of Oneida and Herkimer, claiming that county ordinances required all solid waste and recyclables to be delivered to one of several waste processing facilities owned by the Authority. The Court concluded that the Counties' flow control ordinances, which treat in-state private business interests exactly the same as out-of-state ones, do not discriminate against interstate commerce.
- **CCDD Ruling** by the Illinois Pollution Control Board (IPCB) proposed Amendments to Clean Construction or Demolition Debris (CCDD) Fill Operations: Proposed amendments to 35 Ill.Adm.Code 1100.R12-9 dated June 7, 2012. IPCB ruled that groundwater monitoring at CCDD and Uncontaminated Soil Fill operation sites was not required due to sufficient regulations being promulgated to protect ground water.
- **Will County Appealed** to the Illinois Third District Appellate Court. Will County and the Illinois Attorney General pleaded to the Appellate Court after the IPCB denied requirements for groundwater monitoring at CCDD and Uncontaminated Soil Fill Operations. The appeal was filed on September 14, 2015.



Summary Analysis of Legislation. The Will County Solid Waste Plan adjusts to most legislative actions with ease because of the Plan's focus on waste reduction, recycling and proper handling of hazardous waste. In fact, Will County was very active on electronic recycling legislation due to its long standing residential electronic recycling programs. In 2011, Will County, in partnership with Waste Management, utilized one million dollars from a federal government grant to start producing electricity at Prairie View Landfill. This effect was assisted by a variety of federal and state laws which make the methane gas, produced by the anaerobic decomposition of the waste, as a revenue generating, alternative energy source.

Will County established a Medication Take-Back program to reduce pharmaceuticals in the waste stream in 2007 and has followed DEA and Illinois legislation as interest in this material has increased. A 2013 rule issued by the Federal Drug Enforcement Agency (DEA) resulted in Will County requesting retail partners to expand their existing programs. Walgreens voluntarily began accepting all types of medications under the new DEA rules in 2014 at several, but not all, of their pharmacies.

One major rule that could affect Will County sometime in the future would be the USEPA's final rule on Bioreactor Landfills and Research, Demonstration and Development permits. That ruling could allow the County's Landfill to develop as a bioreactor, should the operator and Will County believe it would be worthwhile, given that the site has a fixed closure date. The bioreactor could create additional airspace with a more rapid decomposition of the waste (settling), resulting in higher gas generation earlier, and thus, lower closure costs later. Federal legislation was passed that extended tax credits for landfill gas-to-energy projects through December 31, 2016. To date, this legislation has not been renewed.

In 2012 the Illinois Pollution Control Board indicated that requiring groundwater monitoring could be an unreasonable expense for quarry owners, but Will County and the Illinois Attorney General warned any extra cost for quarries would not compare to the extremely high cleanup costs if groundwater becomes contaminated. The Illinois Pollution Control Board did decide to impose more stringent regulations on the dirt and debris dumped in quarries in lieu of groundwater monitoring. Will County and the Illinois Attorney General took the lead on calling for groundwater monitoring and filed an appeal with the 3rd District Illinois Appellate Court to better protect the water that residents and businesses of Will County and the State of Illinois depend upon.

While the County has not pursued flow control to direct waste to the County owned landfill, it is important to know that Court action on the Federal level allows flow control for solid waste authorities under certain circumstances. Will County municipalities and businesses determine their waste disposal site through a competitive bidding process. This means that the County is subject to changes in the marketplace that may increase or decrease the amount of waste disposed of at the Prairie View Waste and Recycling Facility.

After the passage of Public Act 96-1416, Will County adopted in 2011 "An Ordinance Authorizing the County of Will, Illinois to Assess and Collect Fees from the Owners of Clean Construction or Demolition Debris Operations". Along with collecting this new fee, Will County began inspecting Clean Construction and Demolition Debris (CCDD) sites and Uncontaminated Soil Only Operations with delegated authority from the IEPA. This action has allowed Will County to have the authority to regulate the CCDD and Uncontaminated Soil Only Operations within its borders.

As previously noted, in 2007 and again in 2015, the Will County Board approved expansions of the Laraway RDF facility, a very active landfill, which primarily accepts contaminated soil, industrial and Construction & Demolition (C&D) waste. The Will County Board also passed Host Agreements for both expansions which



Medication Take-Back programs began opening at pharmacies and police departments throughout Will County in 2007 and have continued to expand to offer year-round safe disposal options.

required Waste Management to cap the nearby Olin Chemical Phosphogypsum Stack, with conditions on site operations and to also pay specified Host Fees that depend upon the waste volume accepted.

On the State level, food scrap collections and increasing composting opportunities have become important issues. Landscape waste was banned in 1990 from Illinois landfills. A Waste Characterization Study and Economic Value study strongly indicated compostable items in landfills should gain increased focus. Coupled with a national call for Zero Waste goals by the US Mayors, and some grass roots activism, Illinois has passed legislation to lighten IEPA regulation on small composting and land application sites. Will County has responded by offering Compost Bins through a third party vendor, hosting a pumpkin collection event each November since 2014, encouraging composting at community gardens, providing vermicomposting bins with worms to school classrooms since 2014, and increasing education on this topic in our educational presentations.

In the next Chapter, the plan shall provide information on past data collection. This data lays the foundation of an analysis of waste diversion practices over the past several years along with demographic and disposal projects into the future.



Will County partnered with Lewis University Physics Department on a Pumpkin Collection with a catapult in 2016!

Chapter 3 Waste Needs Assessment

The purpose of this chapter is to provide information from several sources on Will County’s material generation, disposal and recycling needs. This is done through the presentation of past, present and projected demographic trends; employment data and disposal/recycling information.

Demographic Trends

Waste generation is directly related to an area’s population, housing, and employment. Will County, Illinois had experienced dramatic growth in both its resident and business populations from 2000-2007. This was slowed by the national recession in 2008, which caused many businesses to cut back, some to file bankruptcies and many residents to lose their homes through foreclosures.

Over the last few years, the economy has slowly recovered and growth has continued. Over the next 20 years, the County remains a strong candidate for economic development due to its location and features, which include diverse power sources (coal, nuclear, natural gas, and alternatives such as solar, wind, and methane gas-to-energy). In addition, Will County is home to the largest Inland Container Port in the United States. The County’s transportation access includes several national highway systems, rail, water, and air.

With this in mind, the Resource Recovery and Energy Division of the Will County Land Use Department gathered current demographic data from the Chicago Metropolitan Agency (CMAP), Will County Land Use Department Planning Division, and the 2010 U.S. Census. CMAP is responsible for the regional 2040 transportation plan and provided additional population and employment data through 2040. This data is the foundation for the projected rates of waste generation used in this Solid Waste Plan Update.

There are 38 communities within the Will County service area, some of which are “border communities,” that are shared with neighboring counties. Two data sets are created: The area within Will County and the portion of the “border communities” outside of Will County. These are added together to create the Will County Service Area and the resulting total is utilized to establish the estimates for waste and recycling volume generation. The following is a list of all the communities that are eligible to utilize Prairie View RDF:

Aurora	Crete	Lockport	Orland Park	Steger
Beecher	Diamond	Manhattan	Park Forest	Symerton
Bolingbrook	Elwood	Matteson	Peotone	Tinley Park
Braceville	Frankfort	Minooka	Plainfield	University Park
Braidwood	Godley	Mokena	Rockdale	Wilmington
Channahon	Homer Glen	Monee	Romeoville	Woodridge
Coal City	Joliet	Naperville	Sauk Village	
Crest Hill	Lemont	New Lenox	Shorewood	

Population. According to U.S. Census data and the Will County Land Use Department/ Planning Division’s 2014 Population Estimates, Will County has

2010 US Census notes the five largest cities in Illinois are:

Chicago	2,695,598
Aurora	197,899
Rockford	152,871
Joliet	147,433
Naperville	141,853

(3 of the 5 are located in the Will County Service Area)

The Great Recession of 2008 slowed population and economic growth in Will County but it has steadily recovered.

Will County remains a strong candidate for economic development due to its location and features, which include diverse power sources and transportation options.

a population of 685,419, up from 572,119 in 2010. Depending on whether 1) a third Chicago metropolitan airport is constructed near Peotone, 2) a highway is constructed connecting the intermodal area to Indiana; and 3) various other redevelopment situations, CMAP estimates that Will County's population will increase to approximately 1,175,218 by 2040. Table 3-1 depicts the projected population growth for the County and the Service Area through the year 2040.

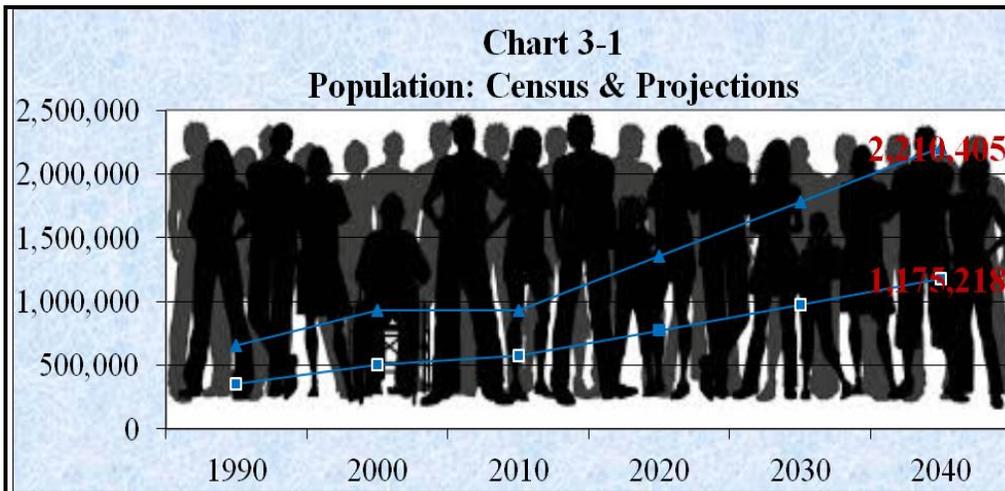
Area	1990 ¹	2000 ¹	2010 ¹	2040 ²
Will County	357,231	502,266	667,560	1,175,218
Border Area	297,673	430,937	503,949	1,035,187
Prairie View Service Area	654,904	933,203	1,076,068	2,210,405

Source: 1. U.S. Census, Published 1991, 2001, 2011
2. CMAP

Prairie View RDF Service Area Population. According to 2010 U.S. Census data, the population in the remainder of the Service Area amounted to an additional 503,949 people. Thus, the entire Service Area included 1,076,068 people in 2010 (572,119 Will County residents plus 503,949 non-Will County residents). The Service Area population is projected to increase to 1,035,187 by 2040 (doubling in thirty years) based on projections of population prepared by CMAP.

	Population in Households			
	2010	2040	CHANGE	GROWTH
Cook	5,104,393	5,960,242	855,849	16.8%
DuPage	904,784	1,104,089	199,305	22.0%
Kane	508,482	789,295	280,813	55.2%
Kendall	114,528	228,530	114,002	99.5%
Lake	682,753	896,341	213,588	31.3%
McHenry	307,113	508,918	201,805	65.7%
Will	669,013	1,175,218	506,205	75.7%
REGION	8,291,066	10,662,633	2,371,567	28.6%

Regional Information from CMAP



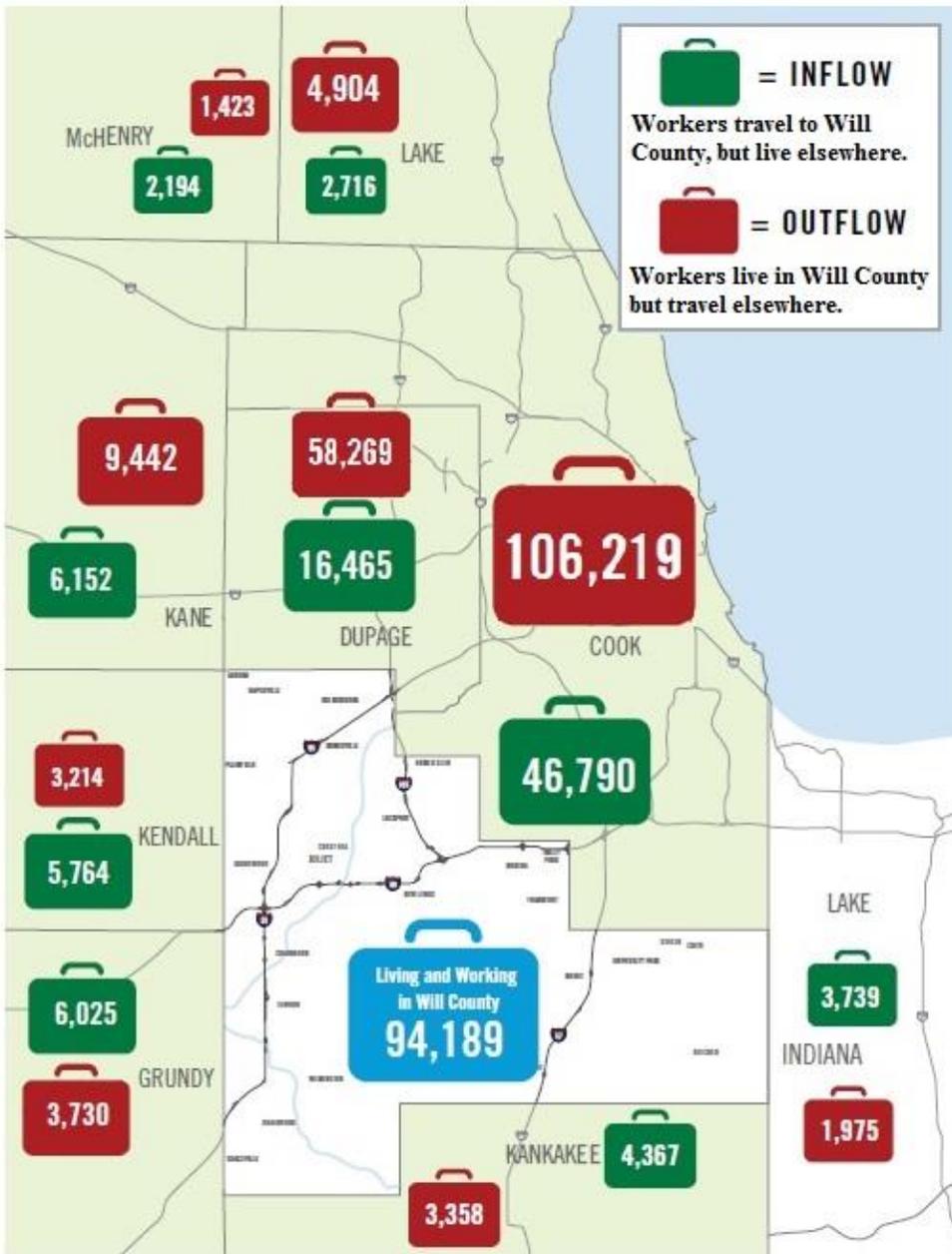
Employment. According to CMAP’s estimates, 169,317 persons were employed in Will County in 2000 (not including self-employed or family workers). This increased to an estimated 205,076 in 2010. CMAP’s projections of employment nearly double by 2040 to 399,837. Table 3-2 presents the most recent CMAP estimates for Will County employment growth.



Prairie View RDF Service Area Employment. According to CMAP, employment in the remainder of the Service Area amounted to 213,610 persons in 2000 but dropped due to the recession to 189,974 by 2010. CMAP expects employment to rise by 2040 to 297,596. Thus the entire Service Area employment was 382,927 in 2000. Projections of employment for the entire Service Area suggest a total of 939,806 employed persons by 2040.

TABLE 3-2			
WILL COUNTY/BORDER & SERVICE AREA			
EMPLOYMENT PROJECTIONS, 2000-2040			
	2000	2010	2040
Will County	169,317	205,076	399,837
Border Area	213,610	189,974	297,596
Prairie View Service Area	382,927	395,050	697,433
Sources: U.S. Bureau of the Census; CMAP (2040 Projections)			

COMMUTING PATTERNS FOR COUNTY RESIDENTS AND COUNTY WORKERS (2014)



2014 Commute to Work

192,534 (50.5%)
 Will County residents work outside of Will County.

94,212 (24.7%)
 People Employed in Will County but live elsewhere.

94,189 (24.7%)
 Will County residents work within Will County.

Source: US Census Bureau, Longitudinal Employer-Household Dynamics (LEHD) Program.

According to Will County’s 2040 Transportation Plan, in 2014 192,534 people that lived in Will County traveled to other areas to work, while, 94,212 people that lived outside Will County traveled to the area for work. Lastly, 94,189 people that lived in Will County remained in Will County to work. Out of a total of 380,935 employed people, 50.5% commuted outside the County for work while the remaining percent are evenly split.

Solid Waste Generation and Management

Over the years, methods to determine waste generation based on population and employment information have been evolving. Since the 1980s, solid waste professionals have developed various estimation techniques. The US EPA had national generation data but it was not considered applicable to local planning needs due to the variations in consumer behavior across the country.

The waste generation rates used in both the 1991 Solid Waste Management Plan and the 1996 Five-Year Update were based on limited sampling information (four Will County communities [Bolingbrook, Joliet, Lockport and Romeoville] for residential and two dozen estimates from haulers and generators for commercial/industrial information).

In 1999, Will County began receiving waste generation reports every six months from waste and recycling collection service providers (due to the passage of a County ordinance). The report requests a breakdown of waste recycled and disposed. In 2000, the County received reports from seventy different haulers offering the most accurate, detailed data obtainable regarding the County's waste generation and management. This impacted the generation rates used in the 2001 Plan Update.

The County continued to utilize the self-reporting offered every six months from over two hundred waste, recycling, construction and landscape haulers to create a database unique to Will County. This database was the foundation of the last update in 2007.

However, the Great Recession of 2008 created difficulties in the gathering of data and has made this method less reliable. Many companies in the waste and recycling business filed bankruptcies with restructures, some failed to report, while others went completely out of business. Due to delays in reports being received from contractors, 2014 is the last year data totals were completed for inclusion and consideration within this SW Plan Update. Table 3-3 illustrates the variations in reports to the County:

**Various Waste Generation
Pounds Per Person
Per Day
Averages**

2014 US EPA - 4.44
2014 IL Study – 8.20
2014 IL Study Will Co – 7.56
2006-14 Will Co Rpts – 5.37

TABLE 3.3

Will County Solid Waste Generation Reports

(Reports from contractors are often delayed causing a delay in data totals)

Report Data	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential Disposed	243,608	202,430	214,730	154,070	235,613	203,566	142,037	207,580	199,321
Residential Recycled	112,522	98,094	100,337	60,336	113,318	113,569	87,334	99,023	95,234
Commercial Disposed	147,097	143,562	129,027	131,932	124,724	112,878	105,674	67,064	63,584
Commercial Recycled	52,814	38,367	58,135	44,858	80,422	85,914	35,158	80,341	111,477
Industrial MSW Disposed	62,099	35,560	63,003	48,336	89,924	44,447	19,030	3,669	873
Industrial MSW Recycled	28,964	21,362	45,297	9,152	40,279	37,463	41,683	1,223	1,434
Institutional Disposed	543	2,979	1,027	1,524	2,703	4,544	1,447	27	1,422
Institutional Recycled	6,905	10,749	20,043	5,295	22,483	18,429	3,362	8,840	446
Construction/Demolition Disposed	59,762	34,187	12,907	10,127	29,405	31,910	28,452	9,602	17,321
Construction/Demolition Recycled	53,276	54,375	41,448	28,500	56,151	34,973	24,745	26,058	65,537
Landscape Waste Collected/Recycled	53,743	63,682	45,156	35,805	58,973	43,877	41,040	40,086	41,926
TOTAL WASTE GENERATION	821,333	705,347	731,110	529,935	853,995	731,570	529,962	543,513	598,575

(Discrepancy totals are bolded)

Staff, in discussions with the vendors concerning from the discrepancy in the data reports, learned that institutional and industrial data could easily be reported as part of commercial data based on the internal records of a given hauler. Upon further investigation of institution data, staff determined that past reporting for solid waste from schools was dramatically under reported, because it was mixed with commercial weight. Consider the following:

Report Data	2006	2007	2008	2009	2010	2011	2012	2013	2014
Institutional Disposed	543	2,979	1,027	1,524	2,703	4,544	1,447	27	1,422
Institutional Recycled	6,905	10,749	20,043	5,295	22,483	18,429	3,362	8,840	446
Institutional Diversion	93%	78%	95%	78%	89%	80%	70%	100%	24%

Not a single school has a recycling rate as high as the data indicated. Every school Resource Recovery & Energy staff interviewed stated their waste hauling needs exceeded their recycling collection service. While many schools had adequate service for paper, they lacked service for cardboard, chipboard and containers. Even the schools that had all the services did not have diversion rates over 50%. A combination of 28 schools and school districts were able to provide totals for garbage and recycling for 2012, 2013 and 2014:

Report Data	2012	2013	2014
Institutional Disposed	23,442	23,551	23,438
Institutional Recycled	12,026	12,030	12,046
Institutional Diversion	34%	34%	34%



It should also be noted that for more than 20 years a recycling company offered schools, churches and libraries paper collection, paying a five dollar per ton rate to the host organization. The company made paper for the newspaper industry and were in a unique closed loop situation, buying the paper throughout the Northern Illinois suburbs, recycling it in St. Charles, Illinois and selling it to the newspaper presses. Over the past decade, there has been a dramatic decline in newsprint as people increasingly utilized the internet for information. In the past few years, this program has nearly disappeared. This has negatively impacted reporting and school recycling.

In light of both, the data discrepancies (shown as bolded numbers in Table 3.3) and the decline in services related to the Great Recession and newspaper industry consolidation, staff recommends a reconfiguration of the data table. By mixing the commercial, institutional and industrial municipal solid waste and recycling data into one category, which is presented as Table 3.5. Food taken for donation (seen to the right) is not included in this data and demonstrates waste that would otherwise be landfilled.

**Food Taken for Donation
(Not Included in Data)**

2013 – 1,882 Tons
 2014 – 2,272 Tons
 2015 – 2,471 Tons
 2016 - 2,751 Tons

**This program helps to
address Food Waste**

TABLE 3.5
Will County Solid Waste Generation Reports
(discrepancies in data are bolded)

Report Data	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential Disposed	243,608	202,430	214,730	154,070	235,613	203,566	142,037	207,580	199,321
Residential Recycled	112,522	98,094	100,337	60,336	113,318	113,569	87,334	99,023	95,234
Commercial/Industrial MSW/Institut. Disposed	209,740	182,101	193,057	181,792	217,351	161,869	126,151	70,760	65,879
Commercial/Industrial/Institutional Recycled	88,682	70,478	123,475	59,305	143,184	141,806	80,203	90,404	113,357
Construction/Demolition Disposed	59,762	34,187	12,907	10,127	29,405	31,910	28,452	9,602	17,321
Construction/Demolition Recycled	53,276	54,375	41,448	28,500	56,151	34,973	24,745	26,058	65,537
Landscape Waste Collected/Recycled	53,743	63,682	45,156	35,805	58,973	43,877	41,040	40,086	41,926
TOTAL WASTE GENERATION	821,333	705,347	731,110	529,935	853,995	731,570	529,962	543,513	598,575
Pounds Per Person Per Day	6.86	5.76	5.95	4.30	6.91	5.89	4.26	4.36	4.79

Even after adjusting data to mix the three sources (commercial, industrial and institutional), discrepancies continued to arise. Steep decreases related to the recession's drop in development and a drop in the recycled commodity market values may account for some of the changes. Based on this data, a solid waste generation table was developed that runs over the course of nine years and is included here as Table 3-6.

TABLE 3-6
PRAIRIE VIEW RDF SERVICE AREA
SOLID WASTE GENERATION, Reports from 2006 - 2014 (TONS)

Sector	Tons Generated – 9 yrs	Percent of Total	Generation Rate ¹
Residential	2,682,722	44.4%	2.85 PCD
Commercial/Institutional/Industrial	2,319,594	38.4%	3.57 PED
Construction/Demolition	618,736	10.2%	0.66 PCD
Landscape Material Collection	424,287	7.0%	0.45 PCD
Total Waste Generation	6,045,350 ²	100.0%	5.37 PCD

Notes:

1. PCD refers to pounds per capita per day; PED refers to pounds per employee per day. Will County's residential; commercial & institutional & industrial; construction/demolition generation; and landscape collection information was used to determine material generation in the Will County Service Area.
2. Municipal waste generation refers to the sum of residential and commercial/institutional/industrial/C&D/landscape waste generated.

Source: Will County Land Use Department, Resource Recovery and Energy Division, 2015

While the reports from contractors have provided a strong level of confidence as a foundation for the material generation rates of the Will County service area, there are some additional data on the waste stream generation that should be considered. Since the last Solid Waste Update, the State of Illinois Department of Commerce and Economic Opportunity funded two Waste Characterization Studies through the Illinois Recycling Association. These studies were conducted by CDM in 2009 and in 2014. Will County’s Prairie View RDF was one of the many sites where materials were sorted to learn what was being sent to the landfill and if it was a recoverable commodity material.

This report included a methodology for local areas that combined economic data with local landfill study data to arrive at generation rates specific to Will County. Information from the most recent report is included in this Solid Waste Plan Update, as Table 3-7, to provide a better understanding of the material being generated by residents and businesses in our area.

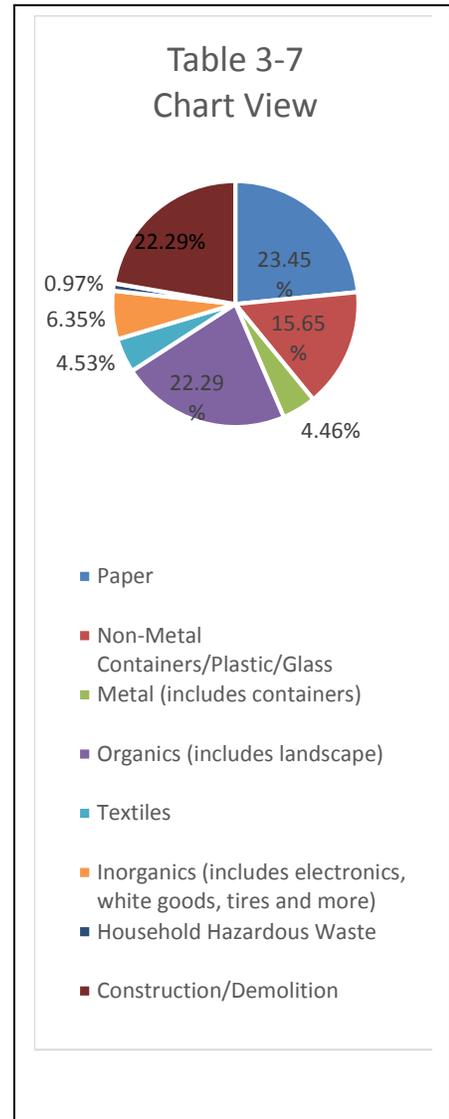


TABLE 3-7 PRAIRIE VIEW RDF SERVICE AREA TOTAL MSW GENERATION FOR WILL COUNTY, 2014 (TONS)			
Sector	Tons Generated	Percent of Total	Generation Rate ² PCD
Paper	221,500	23.45%	1.77
Non-Metal Containers/Plastic/Glass	147,880	15.65%	1.18
Metal (includes containers)	42,160	4.46%	0.34
Organics (includes landscape)	210,580	22.29%	1.68
Textiles	42,820	4.53%	0.34
Inorganics (includes electronics, white goods, tires and more)	60,000	6.35%	0.48
Household Hazardous Waste	9,210	0.97%	0.07
Construction/Demolition	210,590	22.29%	1.68
Total Waste Generation	944,740	100.0%	7.56 PCD¹

Notes:

- PCD refers to pounds per capita per day
- Municipal waste generation refers to the sum of residential and commercial/institutional/industrial MSW materials generated.

Source: State of Illinois 2014 Waste Characterization Study conducted by CDM utilizing Franklin Associates Generation coupled with data from Prairie View RDF specific to Will County

Obviously there are differences in the generation rates between Table 3-6 and Table 3-7. While there is significant value in the bi-annual reporting by local companies, particularly in regard to breaking out residential materials from commercial, there is also significant value in the snap shot data offered by the State Study that included an audit at our own Prairie View landfill.

Staff’s conclusion, given the economics of the service area, is that generation is most likely 7.56 PCD. This is the amount the Plan will utilize on moving forward, but RR&E shall continue to rely on reports and other data that is collected to center those efforts in schools, businesses and residential areas.

Waste Generation Projections

Population and Employment Projections

The population and employment projections used in this plan come from CMAP (Chicago Metropolitan Area Planning) and US Census Data. “The Chicago Metropolitan Agency for Planning *2040 Forecast of Population, Households and Employment* was developed in support of the GO TO 2040 comprehensive regional plan adopted in October 2010. GO TO 2040 was updated in accordance with federal law in October 2014, with an adjusted forecast.” CMAP GO TO 2040 did not include Grundy County so it is possible that portions of Channahon, Coal City, Diamond, Godley, and Minooka are not reflected in these projections.

The Illinois Solid Waste Planning and Recycling Act (415 ILCS 15/1 et seq.) requires that, among other things, all counties:

- 1) Estimate the amount of waste to be generated within its boundaries for the next 20 years
- 2) Describe the variables affecting the generation of waste; and
- 3) Review and update the Plan at least every five years.

Under the timeframe of the last update, population and employment levels in the Chicago metropolitan area had been increasing at an extremely accelerated rate. Will County was recognized as one of the fastest growing counties in the United States and had recently experienced a major highway expansion (I-355). Since then, the Great Recession of 2008 hit the area, resulting in extremely high home foreclosure rates as a result of subprime lending and job losses. The economy has shown significant recovery and Will County continues to see growth in home building and new business. In addition, there remains an area near Peotone in eastern Will County that is being considered as the site of a third regional airport which could impact job and residential growth.

CMAP calculates growth without the third airport impact. Under the agency’s most recent projections, Will County’s population would increase to approximately 1,175,218 by 2040. The Prairie View Service Area (includes parts of Cook, DuPage, Kane, Kendall, and Grundy) population projection is 2,210,405. Employment is expected to increase to a total of 437,110 employment opportunities inside Will County by 2040. The employment projection for the Prairie View Service Area is 697,433 jobs.

Waste generation is affected primarily by changes in population and employment. Using projections of population and employment from Tables 3-1 and 3-2, respectively, and the waste generation rate calculated by the State of Illinois 2014 Waste Characterization Study (conducted by CDM utilizing Franklin Associates Generation coupled with data from Prairie View RDF specific to Will County, as shown in Table 3-8) Will County and the Service Area will generate approximately 3,049,696 tons annually by 2040. These projections are derived on an annual basis through 2040 using the following formulas:

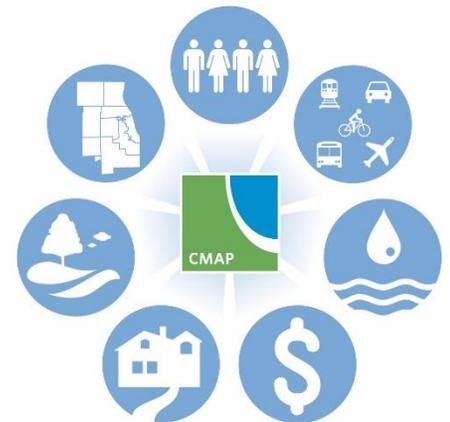


Table 3-8 Waste Generation Projection	2040 Annual Tons
7.56 PCD multiplied by Will County Only Population multiplied by 365 days divided by 2000 lbs equals TOTAL TONS Generated in 2040	1,621,448 Tons
7.56 PCD multiplied by the full Prairie View Service Area Population multiplied by 365 days divided by 2000 lbs equals TOTAL TONS Generated in 2040	3,049,696 Tons

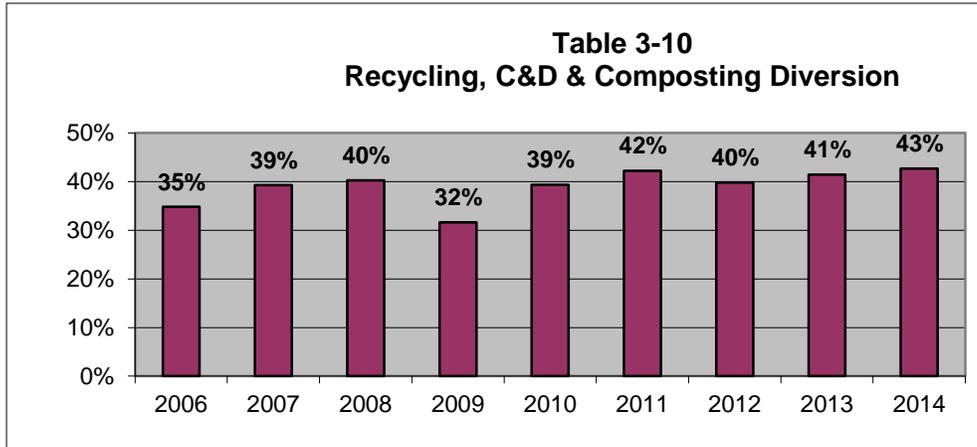
Assuming the waste stream remains stable, Table 3-9 offers a glimpse at the volume of materials broken down by type that will be generated in 2040. When compared to the 2014 data in Table 3-7, the percentages remain the same but the volume increases significantly (example: HHW increases from 9,210 tons annually to 29,582 tons annually).

TABLE 3-9 (based on Table 3-7) PRAIRIE VIEW RDF SERVICE AREA Breakdown of MSW in 2040 (TONS)			
Sector	Tons Generated	Percent of Total	Generation Rate ² PCD
Paper	715,154	23.45%	1.77
Non-Metal Containers/Plastic/Glass	477,277	15.65%	1.18
Metal (includes containers)	136,016	4.46%	0.34
Organics (includes landscape)	679,777	22.29%	1.68
Textiles	138,151	4.53%	0.34
Inorganics (includes electronics, white goods, tires and more)	193,656	6.35%	0.48
Household Hazardous Waste	29,582	0.97%	0.07
Construction/Demolition	679,777	22.29%	1.68
Total Waste Generation	3,049,696	100.0%	7.56 PCD¹

Assuming the waste stream will stay the same is unrealistic. As noted, the amount of paper in the waste stream has decreased over the past decade. The amount of electronics generated as waste has increased. Technology and innovation will impact the generation rate of various materials. Regardless, viewing the possibility of sharp increases in these streams is of value when planning for alternatives to disposal.

When curbside collection of recyclables began in the 1980s and 1990s, many types of paper could not be recycled (Example: envelopes with windows, sticky notes, tissue boxes were not accepted). Today, very few paper items face rejection (Example: wax coated paper cups, paper contaminated with grease). Innovation in recycling is responsible for the increase in recoverable materials from paper to wood to plastics. Recycling and reuse opportunities for these streams will continue and will most likely expand.

Primary Waste Disposal: Sanitary landfills continue to be the most common method of disposal for the vast majority of waste generated in Will County. Based on reporting data, over the past nine years, 68% to 57% of the unwanted MSW materials generated by the residential, commercial, institutional and industrial sectors were disposed in sanitary landfills (3,405,052 tons). **Table 3-10 depicts the remaining 32%-43% taken to traditional recycling centers, C&D facilities or compost/land application sites (2,171,320 tons).**



Material Collection. All solid waste collection in Will County is performed by the private sector, except for some small quantities of landscape material that is collected by municipal, township and county crews. From document destruction firms to cooking grease recyclers and solid waste haulers, over three hundred different companies reported waste collection activity in Will County between 2006 and 2014. The waste haulers offering municipal collection are listed as a reference.

Several of these firms operate under more than one name:

1. Advanced Disposal (formerly Veolia, Onyx)
2. Environmental Recycling and Disposal
3. Groot Industries (a.k.a. Crown Recycling and Disposal)
4. Homewood (a.k.a. Heartland, NuWay, Star)
5. Republic (a.k.a. Allied Waste, BFI, Groen, Citiwaste)
6. Waste Management

Other service providers collect waste and recyclables from the commercial sector, the unincorporated areas of the County, and those municipalities without contracts/franchised collection. Since the last Plan Update, Homer Glen, Monee, Steger and University Park have added curbside garbage, recycling and landscape collection services for residents of their communities. The Village of Crete recently added curbside recycling to their garbage collection contract. While Rockdale added a recycling Drop-off to their garbage service agreement. This leaves Godley as the only community relying on residents to individually contract for garbage and



Homewood/NuWay, along with other haulers, are changing their fleet to Compressed Natural Gas (CNG) fuel, making them quiet, less polluting and efficient.

recycling service. The Park District of Godley partnered with Will County to offer Drop-Off recycling for traditional materials. It must be noted that customers located in unincorporated areas of the County do not have access to landscape collection services from their waste haulers and many still lack adequate access to curbside recycling collection.

Beyond the improvements made to the curbside collection of both refuse and recyclables, there have been improvements made in Construction and Demolition Recycling. A few firms offer shingle recycling, wood recycling, and, for a brief time, when oil prices were high, carpet recycling. Since the recession, a Chinese enforcement program against contaminated recyclables and the ever fluctuating value of commodities has held recycling back, none of these forces could stop its growth and increasing economic importance.

Over the past five years, the US EPA and institutions, communities, and businesses in the State of Illinois have called for efforts to reduce food waste, either through better purchasing habits or diverting the scraps and spoils to composting. There is a privately owned and operated compost site in Will County that changed its permit to allow food waste to be accepted and processed. This is an example of a commercial compost site, capable to composting biodegradable utensils, plates and cups. Lewis University and several grocery stores are currently paying for this additional service. Markets for compost must improve to make this option more economically viable. On the residential side, efforts are being made to add this service as an item to landscape collection programs. To date, Naperville is offering it at an additional fee to residents through their municipal contract.

Nationwide. In the late 1990s the US EPA noted electronics were the fastest growing waste stream. An effort was made to recycle them, resulting in 25 states, including Illinois passing legislation that bans many of them from disposal. In recent years, the US EPA has noted organics, specifically landscape and food scrap materials, as a significant source of methane gas issues in landfills and a nutrient rich material better composted than buried or burned. While the State of Illinois already banned landscape materials from landfills, it has responded with several laws designed to make composting of food scraps easier.

Various Types of Solid Waste Facilities

Transfer Stations

Collection vehicles often utilize transfer stations rather than direct hauling to disposal and recycling sites for higher efficiency. A Transfer Station is a permitted facility where municipal solid waste or landscape waste is unloaded from collection vehicles and reloaded onto larger long-distance transport vehicles for shipment to disposal facilities, such as regional landfills or compost sites. Some recycling collection vehicles go to non-permitted transfer sites where recyclables can also increase efficiency by placing several loads into one semi-trailer to take to a Material Recovery Facility (MRF). By combining the loads of several individual collection trucks into a single shipment, money can be saved on the labor and operating costs of transporting the material to a distant disposal site.

Job Creation

Recycling creates more jobs than disposal. Dumping 10,000 tons of waste in a landfill creates six jobs

Recycling 10,000 tons of waste creates 36 jobs.

There are currently three transfer stations in Will County, all of which are permitted by the Illinois Environmental Protection Agency (IEPA). They are: Rockdale Transfer and Recycling facility (which only accepts recyclables and landscape waste, operated by Waste Management, Inc.), the Joliet Transfer Station/Material Recycling Facility accepts MSW and is operated by Waste Management, Inc., and Citiwaste, Inc. also located in Joliet, which is restricted to handling only construction and demolition waste, landscape waste, and recyclables and is operated by Republic Services, Inc.. Table 3-11 lists these transfer stations along with transfer stations located outside of Will County that may also take materials from Will County homes and businesses.

Table 3-11 Operating Transfer Stations Serving Will County

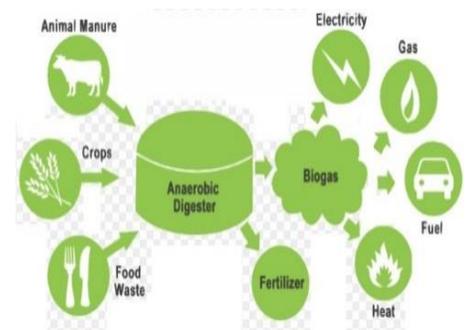
Facility Name Operator	Operator	Location
Alsip Transfer Station	Waste Management	Alsip
DisposAll	Heartland Recycling	Forest View
Joliet Transfer Station/Material Recycling Facility	Waste Management	Joliet
Citiwaste Transfer Station	Republic Services	Joliet
Prairie Lakes	Waste Management	Matteson
Homewood	Homewood Disposal	Park Forest
Eldamain Transfer Station	Groot	Plano
Tri-State Disposal	Tri-State Disposal	Riverdale
Rockdale Transfer Station	Waste Management	Rockdale

* Moen Transfer Station (Does not have an operating permit) Rockdale

Anaerobic Digestion

Anaerobic digestion is a biological conversion technology whereby microorganisms digest organic material in the absence of oxygen, producing a solid byproduct (digestate), a gas (biogas), and reclaimed water. The fundamental objectives of anaerobic digestion are to produce a large quantity of methane-rich biogas (for production of electricity or for use as a fuel), and to produce a small quantity of well-stabilized digestate (which can be used to produce compost).

Anaerobic digestion technologies are considered emerging technologies for the conversion of municipal solid waste in the United States. There are a variety of controlled systems where anaerobic technology is currently utilized in the United States, including wastewater treatment facilities and dairy manure digesters. In other countries (Canada and some European nations), anaerobic technology is utilized in municipal solid waste digesters to produce energy and to reduce the volume of solid waste that must be landfilled. Anaerobic digestion may offer certain potential environmental advantages as a waste conversion technology when compared to traditional technologies. California is actively encouraging development of the technology for organic materials. Will County is currently not home to any known dairy farms where AD systems are commonly located as the manure they generate can be turned into a significant amount of biogas for energy.



The anaerobic digestion process occurs in an enclosed, controlled environment. The process may be either "wet" or "dry", depending on the percent of solids in the digester. The biogas produced from anaerobic digestion is primarily methane and carbon dioxide. Biogas is commonly burned in an internal combustion engine to generate electricity, similar to the production of electricity from combustion of landfill gas.

Subject to regulatory approval, digested material may be used as a soil conditioner, or compost, after a period of aerobic stabilization. However, high-volume markets for compost produced from municipal solid waste are not yet well established in the United States. The quality of the compost, including concentration of metals and presence or absence of man-made foreign material (e.g., small pieces of plastic and glass), will impact the marketability of the compost and approval by the Illinois EPA. Anaerobic Digestion, apart from some agricultural implementation, has not been adopted in Illinois due to the low cost of landfilling material and low energy prices.

Biogas

Biogas is the gas vapor produced when matter is heated without the presence of oxygen. Biogas may be considered a renewable energy source as it can be produced from regionally available raw materials and waste. Biogas is produced by the anaerobic digestion of degradable materials such as manure, sewage, municipal waste, green waste, plant material, and crops. Biogas is comprised primarily of methane and carbon dioxide. The gases methane, hydrogen, and carbon monoxide (CO) can be combusted or oxidized with oxygen. This energy release allows biogas to be used as a fuel. Biogas can be compressed, the same way natural gas is compressed to CNG and used to power vehicles. Because Biogas is considered a renewable fuel, it may qualify for renewable energy subsidies.



Clean Construction & Demolition Debris (CCDD) and Uncontaminated Soil Facilities

CCDD facilities are allowed to accept uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, reclaimed or other asphalt pavement, and soil generated from construction/demolition activities. Uncontaminated Soil Fill sites accept only soil (CCDD sites can accept uncontaminated soil, too) that does not contain contaminants in concentrations that pose a threat to human health and the environment. The CCDD Facilities and Uncontaminated Soil Fill Sites are within inactive/active quarries and former borrow pits. These types of Facilities are not required to go through the siting process but have become more regulated in the past 9 years, with the IEPA requiring a permit (or, at minimum, to register with the IEPA) to operate, implement screening procedures for incoming loads, have a closure plan and to place final cover. Will County and the Illinois Attorney General's Office had been expecting the IPCB and now the Illinois Appellate Court 3rd District to require groundwater monitoring at these sites. Will County currently has nine IEPA permitted CCDD facilities and three IEPA registered Uncontaminated Soil Only Operations.

<u>CCDD Site</u>	<u>Incorporated</u>	<u>Location</u>	<u>Operator</u>
Bennitt Uncontaminated Soil	No	Rockdale	Kennecott Land Company
Black Forest Uncontaminated Soil	Yes	Joliet	Black Forest Investments
Chicago St. CCDD	Yes	Joliet	Chicago St. CCDD
Elmhurst Chicago Stone CCDD	Yes	Bolingbrook	Elmhurst Chicago Stone
FJV Development	Yes	Joliet	FJV Development
H&H Stone Uncontaminated Soil	Yes	Bolingbrook	Dave Hamman
Hanson Material Services CCDD	Yes	Romeoville	Hanson Material
Land & Lakes Clean Fill Site	No	Romeoville	JMC Operations
Orange Crush CCDD	Yes	Romeoville	Pal Group Inc.
Richard St CCDD	No	Joliet	PT Ferro Construction
Vulcan Bolingbrook Quarry CCDD	No	Naperville	Vulcan
WillCo Green, LLC	No	Plainfield	WillCo Green, LLC

Compost Sites and Land Application Sites

Since 1990 the State of Illinois has banned landscape materials, such as grass clippings, limbs, brush, and leaves from landfill disposal. Compost sites are permitted by the IEPA to accept these materials. Odors from the compost sites may vary from an earthy smell similar to a freshly planted garden to an offensive odor from high nitrogen concentrations. The offensive odors tend to occur in the summer when grass is mowed and can take a week to be collected. The grass begins to decompose without oxygen or carbon (anaerobic conditions). Compost sites that are well maintained will cover fresh loads quickly with leaves or brush (carbon materials). When these are mixed, an act that introduces oxygen (aerobic conditions), the odor improves. Some compost sites also use liquid sprays to reduce odors.



Will County currently has three IEPA permitted compost sites, with two sites that accept only landscape waste, and one that accepts both landscape waste and food waste. One of the landscape only compost sites (Christiansen Farms) has a Special Use Permit from the County that allows them to accept food waste, however, they have decided not to accept food waste yet.

Land Application Sites are different from compost sites in that they are on farms and not subject to the same level of regulations. However, they are limited in the amount of landscape or food organic material they may accept. A farm will spread organics over the fields and may also till the material into the soil, depending on the time of the year. Odor issues from these sites are less common. Will County currently has five compost and land application sites.

<u>Site Name</u>	<u>Location</u>	<u>Operator</u>	<u>Materials Accepted</u>
Christensen Farms*	Peotone	Larry Christiansen	Landscape
Plum Valley	Crete	Tim Van Baren	Land Appl. Landscape
Smits Farms	Beecher	Carl Smits	Land Appl. & vegetables
Willow Ranch*	Romeoville	Waste Management	Landscape
Willow Ranch Quarry*	Romeoville	Waste Management	Landscape & Food

(* Indicates Compost Facilities)

Construction and Demolition (C&D) Recycling Facilities

General C&D Recycling Facilities are IEPA permitted sites that accept materials from construction or demolition projects and are designed to sort through materials that are recyclable (required to achieve a 75% recycling rate) within certain specified timeframes and transport waste and recyclables offsite within the requirements of Section 22.38 of the Illinois Environmental Protection Act. These facilities do not need to go through the siting process, however local zoning or setback requirements do apply. Will County now has three of these types of facilities. (Some Transfer Stations recycle C&D material, too)

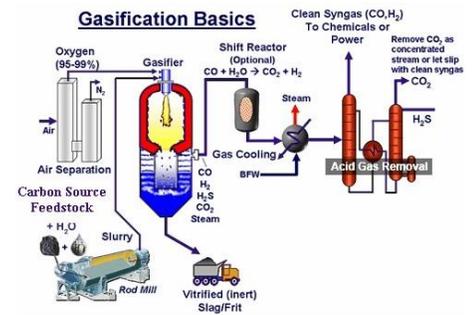
<u>Company</u>	<u>Permit Number</u>	<u>Location</u>
Alpha LM, Inc	2012-085-OP	Joliet
Lockport Recycling & Scrap Services	2012-209-DE/OP	Lockport
WillCo Green, LLC	2002-035-OP	Plainfield

Gasification

Gasification is a thermal conversion technology. Thermal technologies encompass a variety of processes that use or produce heat to change the composition of waste, resulting in the production of energy. Common descriptors for emerging thermal technologies include gasification, pyrolysis, thermal cracking and plasma. For the purpose of this review, the common descriptor of "gasification" is used.

Gasification technologies are emerging for the management of municipal solid waste. Gasification is not currently in commercial use in the United States for municipal solid waste, but is being used in some areas of Europe and Japan. In general, gasification occurs in a high-temperature reaction vessel. Air or oxygen may be intentionally added to or omitted from the reaction vessel to influence the composition of the resulting products. The inorganic fraction of the waste (including certain recyclables such as glass, ferrous metal and aluminum) may be sorted out prior to treatment or may be treated along with the organic fraction. Within the reaction vessel, the organic fraction of the waste is converted to a synthesis gas ("syngas") composed of hydrogen, carbon monoxide and carbon dioxide gases. The syngas (and other products of the gasification process) represent un-oxidized or incompletely oxidized compounds, which in most cases differentiate the innovative thermal technologies from the more complete combustion attained in traditional waste-to-energy projects.

In addition to syngas, the gasification process may produce char, which is a carbon-based solid residue, and organic liquids such as light hydrocarbons. If the inorganic fraction of waste is also processed in the reaction vessel, additional byproducts will be generated such as vitrified silica (slag or aggregate), mixed metals, salts and chemicals. These byproducts may comprise up to 20% by weight of the incoming MSW, depending on the characteristics of the waste delivered. These byproducts may have beneficial uses, with slag potentially used as a sand substitute in concrete or bituminous paving material (subject to regulatory approval), and metals, salts and chemicals marketed to various industries. Such beneficial uses would require acceptance by the marketplace and in some cases, approval by Illinois EPA. Market development work is required. Depending upon product characteristics and market conditions, some of these products could still require landfill disposal.



Landfill

The placement of waste materials in a designated area is as old as civilization. Putrescible waste is a health concern and it is every government's basic responsibility to ensure that residents and businesses have safe collection and disposal options for the waste that they generate. In the 1970s the US EPA promulgated rules, known as RCRA (Resource Conservation and Recovery Act). These rules turned dump sites into engineered landfills. Contrary to popular belief, most garbage placed in a landfill does not get buried below ground level. Instead, protection of the land and water, such as an engineered and modern bottom liner system consisting of compacted clay, a synthetic liner, drainage layer and drainage pipe and sump system, is placed within the excavated area before the waste. The waste is placed in "cells" and covered daily to prevent birds and animals from reaching it. The cells eventually build a hill on the site causing more waste to be above ground level than below, thus utilizing air space allowed by permits associated with the siting of a landfill.



The landfill is monitored throughout its use and for a minimum of 30 years after its closure. Groundwater monitoring wells surround the site to detect leaks. Leaks were common in old sites, prior to RCRA, when liners and pipe systems were not used. Modern landfills are far less likely to leak. The rain water that falls on the top of an open and operating landfill is collected in pipes and pumped to be treated in the same way wastewater from homes and businesses is treated. In more recent years, some operating landfills have taken to recirculating this water, known as leachate, to increase the speed that the waste in the landfill decomposes. This can lead to greater production of methane gas, which is flared off or captured for energy conversion or as a fuel source. Furthermore, rain water that falls on a closed landfill or landfill cell with a modern final cover system is diverted off the top of the landfill as storm water and never comes in contact with any waste.

Will County owns a landfill on the former Joliet Arsenal site. It is projected to meet the needs of Will County residents and businesses for the next twenty-five years utilizing leachate recirculation and relying on increasing reuse and recycling by all in Will County. The cost to site a landfill is daunting and the loss of the land for most other uses is rarely calculated in that cost. Will County is fortunate to have a local solution on a parcel of land that otherwise was contaminated with munitions waste.

Manure Management

Manure is generally generated at farms with livestock. Such sites usually have enough space to utilize the material as a fertilizer on fields. In the few locations producing excess manure, the material is sent to the landfill or a compost site.

Material Recovery Facility (MRF)

Recyclables are taken from homes and businesses then delivered to a sorting facility, known as a MRF. The mix of paper, plastic containers, glass bottles, aluminum cans, steel cans and aseptic packaging is placed on a series of conveyors where a variety of methods is employed to sort them into marketable material categories. Once they are sorted, they are usually baled (like a large a hay bale) and placed into semi-trailers then sent to manufactures or additional processing facilities depending on the level of contamination and market demands. Most of

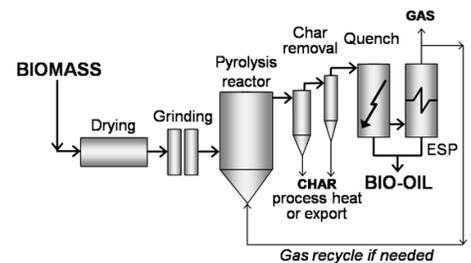
the recyclables in Will County travel outside of county borders to be sorted. Commonly used facilities include:

<u>MFR Owner/Operator</u>	<u>Location</u>
Homewood/NuWay	Homewood
Groot	McCook
Recycle America (Waste Management)	Calumet City
Resource Management Companies	Plainfield
Resource Management Companies	Chicago Ridge

Pyrolysis

Pyrolysis is the heated decomposition of organic material in the absence of oxygen (or any halogen). It involves the simultaneous change of chemical composition, and is irreversible. It refers to separating through heat basis elements of a product and results in returning an item to its basic chemical composition.

In general, pyrolysis of organic substances produces gas and liquid products and leaves a solid residue richer in carbon content. Extreme pyrolysis, which leaves mostly carbon as the residue, is called carbonization. The process is used heavily in the chemical industry, for example, to produce charcoal, activated carbon, methanol, and other chemicals from wood, to convert ethylene dichloride into vinyl chloride to make PVC, to produce coke from coal, to convert biomass into syngas and biochar, to turn waste into safely disposable substances, and for transforming medium-weight hydrocarbons from oil into lighter ones like gasoline. These specialized uses of pyrolysis may be called various names, such as dry distillation, destructive distillation, or cracking.



Pyrolysis differs from other high-temperature processes like combustion and hydrolysis in that it usually does not involve reactions with oxygen, water, or any other reagents. *(In practice, it is not possible to achieve a completely oxygen-free atmosphere. Because some oxygen is present in any pyrolysis system, a small amount of oxidation occurs.)* In the solid waste and recycling context, Pyrolysis is being explored for the recovering of resources from mixed waste and from specific difficult to recycle items, such as contaminated plastic. The University of Illinois in Champaign has demonstrated its use on a small scale to recover oil and natural gas from plastic grocery bags. This technology has not been proven cost effective on a large scale nor evaluated from an energy consumption basis. It is not expected to be competitive with landfill disposal within the timeframe of this Solid Waste Plan. It has shown promise as a next step option for MRFs with plastic bales of contaminated materials that cannot be marketed for recycling. Dirty bags and food encrusted plastic items could be sent through a Pyrolysis system to recover the oil and natural gas. Costs still remain a hurdle to implementation.

Chapter 4

Solid Waste Management System

Chapters 1 through 3 lay the foundation of the Solid Waste Plan Update by providing a history of Will County’s approach to planning, the demographics and employment numbers that generate a projection of solid waste disposal and recycling needs into the future, along with a list of laws that provide authority for the steps to be taken. Chapter 4 explains the current practices and future goals based in the political, social and economic realities of 2017. (Appendix D offers a summary matrix of all the previous Plans and current goals.)

In 2011 the Will County Land Use Department’s Waste Services Division changed its name to the Resource Recovery and Energy Division. Under either title, it is the designated portion of the Will County government entity responsible for implementing this Plan on behalf of the County. Since 1988 it has enforced Illinois solid waste regulations through a delegation agreement with the Illinois Environmental Protection Agency (IEPA). RR&E is also responsible for coordinating the review of applications for local siting in unincorporated areas of Will County, pursuant to the Illinois Environmental Protection Act (415 ILCS 5/39.2).

This Solid Waste Management Plan Update 2007 – 2016 conforms to the waste management hierarchy established in the Illinois Solid Waste Management Act [415 ILCS 20/2(b)]. All recommendations listed in this Plan are contingent upon adequate funding and staffing levels. This updated Plan includes the following sections:

- Funding Mechanisms
- Tasks (Administrative, Programming, Reduction Recommendations)
- Pollution Control Facility Recommendations
- Goals for 2017-2022

FUNDING MECHANISMS

The Resource Recovery and Energy (RR&E) Division of Land Use is not funded through property taxes. Operational expenses are covered by a combination of landfill and CCDD disposal fees, grant funds, cost sharing agreements and Host Agreement Contractual fees.

Under the operating agreement for the Will County Prairie View RDF the operator, Waste Management of Illinois, pays the County the maximum allowable fee for every ton of “commercial solid waste” received in the form of a permanent disposal surcharge fee. Pursuant to the Illinois Environmental Protection Act [415 ILCS 22.51b], Will County has also enacted an ordinance to collect a fee on CCDD material permanently disposed of within the County. In the future, Will County intends to collect the maximum tip fee surcharge allowed by State of Illinois for all pollution control facilities as well as continuing to collect any applicable host fees.

Pursuant to financial assistance provided by the Illinois EPA, the County is reimbursed on a quarterly basis for work performed under the delegation agreement; including partial cost sharing for vehicles used for inspection purposes. Occasionally other revenue is received from the State of Illinois, the Federal Government or local governments within Will County. These funds are offered in

Required Goals

Provide sufficient detail and direction to facilitate the efficient and effective implementation of the waste reduction and final disposal components detailed in this Plan.

Allow enough flexibility to accommodate new, expanded or modified programs and facilities.

a cost-sharing format and used for a myriad of recycling and reclamation programs and administrative costs related to such programs. When these funds are available, RR&E is able to provide a greater assortment of programs to a wider variety of residential and business constituents.

Other possible sources of program funding include surcharges at various collection events, grants, franchise fees for waste collected in designated unincorporated areas of the county, donations, and other untapped resources. One funding source that is not used by the RR&E Division, but is used for energy efficiency capital improvements are the funds collected from the generation of electricity from the gas generated at the County's Landfill Gas to Energy Plant. This funding is through a Gas Purchase Agreement with Waste Management Renewable Energy and Waste Management.

TASKS

There are several administrative tasks expected to be done as part of the performance of the Resource Recovery and Energy Division's normal duties that relate directly to the Solid Waste Plan. These include:

1. Assistance to Local Government
2. Assistance to Schools, School Districts and Institutions
3. Assistance to Non-Profits and Private Commercial Businesses
4. Brownfield Program
5. Burning and Illegal Dumping Complaints
6. Collection Programs
7. Construction and Demolition Recycling
8. County Office Waste and Recycling Program
9. Data Collection
10. Delegation Agreement Inspection and Enforcement
11. Disposal Capacity Monitoring
12. Education and Outreach
13. Groundwater Monitoring
14. Legislative Involvement and Tracking
15. Procurement



The following is an explanation of current practices related to these tasks and recommendations for actions over the course of the next five to twenty years.

Assistance to Local Government – The Recycling Program Specialist is certified to assist municipalities, townships and school districts with bidding and contract documents addressing solid waste, recycling and landscape waste collection needs. This position has and will continue to assist units of local government with promotional materials, with a goal of consistent education on acceptable items, as well as unacceptable items and alternatives. This may include pursuit of Special Service Areas, Solid Waste Districts or Subdivision Collection Service Agreements to meet the needs of all area residents and businesses. Staff will be available to attend village, township or other community meetings to present information on recycling and disposal services.

Goals for municipal contracts:

- Weekly Curbside Collection of Garbage, Recyclables, Landscape

- Recycling Carts of equal or greater size than Garbage Carts
- Inclusion of White Goods Service
- Inclusion of Christmas Tree Collection for Chipping or Composting
- Inclusion of Food Scraps as part of Landscape Collection
- Inclusion of Recycling Service at all Municipal Buildings
- Inclusion of Downtown Street Garbage and Recycling collection
- Consideration of Modified Volume Based System
- Consideration of inclusion of all apartment buildings in service
- Consideration of franchises for businesses to encourage recycling

In 2015 RR&E began placing the most current municipal contracts on the WillCountyGreen.com website. Since 2007 the Recycling Program Specialist has kept a list of all available community contract pricing and services to assist municipalities with improving their collection service agreements. The data is updated every few years.

In the past RR&E offered a printed Waste and Recycling Guide for residential, municipal and township use offering a comprehensive listing of recycling and disposal services available. Today, residents of all incorporated and unincorporated areas are encouraged to access this information from the website www.willcountygreen.com where it is available 24 hours, seven days a week and updated regularly.

Assistance to Schools, School Districts and Institutions – In 1997 Will County hired an Illinois Certified Teacher to provide educational programs to students on proper disposal, recycling and composting. Since then, the Environmental Educator offers all public and private schools an opportunity to earn an Earth Flag. Approximately 50 schools earn this distinction each year. Part of the requirements include a presentation to a single grade level. Since there can be a hundred or more students per grade, this may require multiple presentations at a school. With 170 K-12 schools and additional learning centers, the program has plenty of room for growth. Even those that are familiar with the program often ask for presentations on additional environmental topics, from resiliency to climate changes to energy efficiency and water conservation.

Composting is also encouraged at Will County schools. Since 1998, the Environmental Educator has supplied classrooms with vemi-composting bins when the opportunity presented itself, but in 2012 a formal application was created and promoted to all schools. This has greatly increased demand and encouraged more students to bring the concept of composting to their own homes.

In 2013 the Environmental Educator began working with Trex, a company that makes decking, benches and picnic tables from recycled plastic and sawdust. The schools voluntarily join the plastic bag collection program and the most successful school is awarded a prize from the corporation. This has encouraged plastic bag recycling in many schools, as well as at the County Building.

In addition to providing programs in schools, the County also offers programs at park districts and libraries. Scout troops, summer camps and others have also received presentations. Topics have included native plants, rain gardens, food scrap



composting and community edible gardens. Presentations may be scheduled during normal weekday hours or in the evening and even on weekends. The goal remains to educate our next generation to use our resources wisely.

Today two RR&E staff offer technical assistance to colleges, universities, schools and school districts to address solid waste, recycling, landscape waste, food scraps and special collection needs. Under Illinois law, all school districts are required to have a solid waste plan but surveys by RR&E reveal that none of the school districts have completed one. Staff will provide a “boiler plate” plan, as well as assist with bid and service documents. The Environmental Educator recently began offering forums for educators and administrators that include information on energy efficiency, recycling, and composting. The Recycling Program Specialist offers one on one assistance as well as presentations to groups. Since 2015, the Recycling Program Specialist and division interns have conducted surveys of facility managers to encourage data collection and adoption of a Solid Waste Plan. Staff have and will make themselves available to attend board of director or district meetings to present information on recycling and disposal services. Additionally, when plans become available, they will be listed on the County’s WillCountyGreen.com website as examples for others to adopt and follow.

Finally, a newsletter is created at least twice a year and printed, then mailed to all schools within Will County. The newsletter is also placed on the WillCountyGreen.com website and promoted through the division’s social media outlets. It offers information on upcoming collection programs, invites participation in the Earth Flag program, the vemi-composting classroom program and in the annual Book or Textile collections. These printed newsletters are often placed on bulletin boards in schools or passed around faculty breakrooms, encouraging great participation and education in all RR&E programs.

Assistance to Non-Profits and Private Commercial Establishments – Staff has and will provide technical assistance to non-profit organizations and businesses to address solid waste, recycling, food scrap and landscape waste collection needs. Staff will provide “boiler plate” bid and service proposal documents and/or individual assistance with contracts to those interested in implementing and/or renewing contracts for waste management services with private-sector service providers. Additionally, RR&E created a comprehensive database of service providers on the WillCountyGreen.com website. On the website there is a function specifically designed to allow B2B searches for providers that only work with large volumes of material. Staff will continue to update and refine the website’s Green Guide Database to offer 24/7 service to all that utilize it.

Furthermore, several years ago staff created a recognition program for businesses throughout Will County called Green Business Star. It encourages businesses that are recycling, reducing waste, composting or saving energy to complete an application and, if verified, be listed on the WillCountyGreen.com website and featured in an Electronic Newsletter. Promotion of this program expands and contracts as staff time is available.

Goals for Private and Non-Profit Organizations:

- Purchase recycled content paper, letterhead, envelopes, construction materials, office furnishings, etc.



- Purchase Recycling Services with Garbage Service
Targeting: Paper, Cardboard primarily, Cans and Plastic secondarily
- Double side copy policy
- Discourage the printing of emails
- Encourage electronic billing and processing of bills

In order for the business community to reach greater diversion goals, staff expects to explore the possibility of passing ordinances that encourage commercial recycling. Some communities in other counties have used franchise agreements to provide recycling to all the organizations within the city. Some counties have passed ordinances requiring all haulers to offer services. Others have required all businesses to contract for services. Will County has consistently reached the 40% diversion goal from the last Solid Waste Plan through voluntary efforts; but for the County to reach the 55% diversion goal by 2022 set in this plan, stronger action is required. The increase in diversion shall result in extending the life of the Prairie View RDF until it reaches the federally set closure year of 2042.

Brownfields Program – Brownfields are contaminated sites, not currently in use and that are hampered by real or perceived contamination problems, unable to generate tax revenue. They are in need of some remediation before being utilized as recreational areas or as productive tax-bases in the industrial and commercial sectors. Will County shall continue to be dedicated to facilitating the remediation of these sites.

The County obtained some free technical assistance a few years ago through the USEPA, IEPA, CMAP and the National Renewable Energy Lab (NREL), providing targeted sampling and selected sites and an assessment of deploying solar power on Brownfield sites. The IEPA, through funding with the USEPA, helped the County and the Forest Preserve assess areas of contamination for the Old Joliet Prison site on Collins Street. This was done in conjunction with a County hired Environmental Consultant to see what portions could be utilized as a tourist attraction or for recreational use. The Solar Study performed by NREL and the USEPA determined that the energy markets were not good enough to provide an economic benefit, however, due to a significant Illinois Energy Bill (SB2814) being passed in late 2016, solar companies are now flocking to Illinois as the energy market appears to be vastly improved. This new development could change the situation at the Prison site and many other Brownfield sites in Will County assessed by CMAP for solar deployment, and could place these sites back into productive use. The County continues to be actively involved in the Collins Street Task Force, which desires to see the prison site utilized in a productive manner once transferred from the State of Illinois.

Burning and Illegal Dumping Complaints – The RR&E Division inspectors respond to numerous citizen complaints regarding burning and dumping each year. Division inspectors respond to each complaint and determine whether the complaint is justified. Complaints resulting in a determination of violation are considered justified. Larger amounts and more toxic types of waste burned or dumped on a property result in a notice of violation of state regulations being sent to the responsible party. Whereas, less significant amounts or types of waste result in a notice of violation of the County Nuisance Ordinance being sent to the

2012	124
2013	79
2014	133
2015	105
2016	95

responsible party. As an example, a property with evidence of burned tires, large amounts of dumped debris, or hazardous waste containers would be considered to be potentially more toxic. Whereas, a property with evidence of cardboard or grass clippings being burned would more likely be sent an ordinance notice.

The State of Illinois regulations allow the burning of onsite generated landscape waste only, such as tree debris, leaves, grass, & bushes grown on the property. The County Nuisance Ordinance further restricts all burning to only dry leaves, branches, and bushes originating on an owner’s property if specific requirements are met. Small recreation fires are allowed by the Ordinance if specific requirements are met. Furthermore, the State of Illinois allows prescribed burns for habitat restoration and agricultural waste to be burned if certain criteria are met.

Smoke from burning leaves, grass, brush and most plants contain high concentrations of pollutants such as carbon monoxide, particulate matter and photochemically reactive chemicals. Some of these are known carcinogens and some contribute to smog formation. Exposure to carbon monoxide can result in reduced oxygen flow. Particulate matter can become embedded in lung tissue. Smoke from leaves contains some chemicals that are commonly found in cigarette smoke and linked as a major factor in lung cancer. In response to this health threat and to better manage the waste stream, modification to the County Nuisance Ordinance may be considered for implementation in the future to further restrict open burning in densely populated, unincorporated areas.



The following communities prohibit garbage, leaf, grass and brush burning, while most allow recreational fires (those bolded enacted ordinances since the last Solid Waste Plan Update): Aurora, **Beecher**, Bolingbrook, **Crest Hill**, Crete, Frankfort, Joliet, Lemont, Lockport, **Manhattan**, Mokena, Monee, Naperville, New Lenox, **Orland Park**, Peotone, Plainfield, Romeoville, **Sauk Village**, Shorewood, Steger, **Tinley Park**, University Park, Wilmington, and Woodridge. The RR&E Division and the Sheriff’s Office commonly respond to complaints where residents are burning landscape materials, which generate smoke or airborne particulate matter that is a nuisance and can inflame respiratory ailments, such as asthma and emphysema. Residents of these areas may usually only burn dry twigs and logs for small recreational fires. Wet landscape materials should not be burned because wet materials increase smoke and may cause increased respiratory irritation to neighbors. Burning of wet landscape materials is prohibited by the County Nuisance Ordinance.

Table 4-1: Will County Non-Permitted Open Dumping and Burning Inspections

Report Data	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Open Dumps/Illegal Burning*	189	182	169	200	146	322	186	141	152	145	194
Sites Restored to Compliance	36	39	42	51	45	168	79	66	71	62	63
Clean-Up Yards	2,622	3,670	2,638	2,902	7,528	8,660	7,034	7,125	11,610	4,504	35,265
Tires Cleaned-up from sites	n/a	n/a	n/a	n/a	n/a	120	585	722	55	1,370	2,283

**Indicates the number of Open Dump or Illegal Burning inspections that resulted in the generation of a formal Illinois EPA inspection report or notice of violation. This number does not include the numerous inspection activities conducted that are follow-up inspections, site meetings, result in an unjustified complaint outcome, or result in enforcement of County Nuisance Ordinance.*

Many attempts have been made by the County Board and its Committees to place limitations on the burning of landscape waste in the County. Currently, the County's Nuisance Ordinance allows burning of dry leaves, branches or bushes generated onsite as long as certain setback requirements and conditions are met.

Collection Programs – Staff offers a variety of collection programs each year as opportunities present themselves through available funding, grants, community group requests, etc. The following is a list of programs offered over the past nine years:

- Battery Recycling for Rechargeable Batteries
- Book Reuse & Recycling Event
- Carpet and Padding Collection
- Collection Site
- Compact Fluorescent Lamps (CFLs)
- Composting and Gardening Programs
- Electronics Recycling
- Foam Plastic (Styrofoam) Recycling
- Home Goods Collection for Reuse
- Household Hazardous Waste Collection
- Medical Equipment Collection for Reuse
- Pharmaceutical Take-Back
- Pumpkin Compost Collection
- Scrap Metal Collection
- Shredding Event
- Textile Collection for Reuse and Recycling
- Thermostat Collection
- Tire Recycling
- Traditional Recycling Drop-Offs
- Wood Recycling

Battery Recycling for Rechargeable Batteries: Unwanted rechargeable batteries are considered hazardous waste and must be recycled. They have always been accepted in the Household Hazardous Waste Collection programs. Manufacturers of these batteries created a non-profit organization to voluntarily collect and recycle these batteries. It is currently found on the internet as Call2Recycle.org and for many years offers collection containers at no charge that doubled as pre-paid mailing boxes. Under these terms, Will County set up collection boxes at several buildings and partnered with multiple libraries to offer the service.

In 2017 the manufactures announced a change to the program that results in fees to participants. Currently staff are evaluating options with the goal of maintaining the network of drop-off sites established.

Book ReUse & Recycling Event: Each year, since 1999, staff has organized and managed a book collection event. Over the years, the event has become a consistent three day drop-off and take away program held at the Joliet Park District's Nature Center. Outreach to schools and libraries has resulted in a dramatic increase of donated books, the establishment of

a room full of children’s books and two large rooms displaying tables filled with a variety of other books.

Over the course of the three days it is estimated that up to nearly 2,000 people visit to drop-off, take or do both activities at the event. Volunteers often come to gather books for nursing homes, hospitals and other organizations that may benefit from offering customers books. Whatever remains is recycled, and that is estimated to be less than 20% of the books received. This means the event averages 80% reuse and 20% recycling with Zero Waste. The total cost for the event is under \$1,500 including contracting with a vendor capable of removing the bindings from hardcover books and receiving use of the park district site free of charge.

Curbside and commercial recycling programs allow softcover books to be recycled but do not permit hardcover books. Resources are saved when books are offered for reuse. This program benefits a variety of organizations and residents.

Since 2007, an independent community group known as Sharefest has been offering a book reuse event in the fall in New Lenox that is open to all Will County residents. RR&E assists with promoting the event, which has grown in participation. The group often distributes books to a variety of people and organizations. Recently they began year round distributions and are working toward finding a space where they can collect and distribute books year round.

Carpet & Padding Collection: Carpet recycling has been struggling since the late 1990s. Nylon carpet has been recycled internally because it has superior longevity and can withstand the recycling process after years of being used. PET carpet, or polyester, has a much shorter life as a flooring material and because much of it has already been recycled from 2 liter bottles, it has proven to be more difficult to recycle. For two years, the Recycling Program Specialist worked with the carpet recycling companies to take back all floor-to-floor carpet that came into the Recyclepalooza event at JJC in 2014 and the Sharefest collection events of 2013 and 2014. The carpet was taken to a facility where the PET and Nylon were separated and then sent for recycling. However, the price of plastic fell in 2015 and destabilized the market. Some flooring businesses continue to recycle carpet and padding. Some Construction and Demolition Recycling companies also recycle the padding. Commercial installations are often nylon because of its durability and are the prime target of recyclers. Until markets or technology improve, carpet recycling will be promoted to businesses but no collection programs will be offered to residents.

Collection Site: Will County has successfully partnered with municipalities, townships, school districts, park districts and pharmacies to offer a variety of recycling collection sites. In recent years, the County partnered with the City of Joliet to offer an electronics collection site on the County’s property with municipal oversight. In the future, the County is exploring the possibility of offering a collection on County property with County staff oversight. Such a site may be able to meet a diverse group of

2006	530
2007	550
2008	600
2009	675
2010	1,000
2011	1,200
2012	1,300
2013	1,500
2014	1,500
2015	1,600
2016	1,800

collection needs while operating in an efficient and effective manner. Items being considered for such a program include a few select hazardous waste items, textiles, traditional recyclables, electronics, foam plastic and wood.

Compact Fluorescent Lamps (CFLs): Energy efficient alternatives to traditional incandescent lamps, known as CFLs were invented in 1976 in response to the oil crisis. They were not marketed heavily until the 1990s when manufacturing costs made them more price competitive. Due to a small amount of mercury inside the bulb, consumers were asked to recycle them. In Illinois the cost of this recycling was paid by utilities or manufacturers through retail take-back programs offered at Ace Hardware and Home Depot locally. Will County and the IEPA have always accepted them as part of the Household Hazardous Waste stream and funded the recycling independently while promoting the retail options. In 2016, with LED lamp pricing becoming increasingly competitive, retail funding for CFL recycling ended and now some retailers are charging to take the CFLs while others have dropped the program. Will County recently announced LED lamps will also be accepted at Household Hazardous Waste events due to their lead content. Will County shall continue to accept CFLs as long as they remain on the market.

Composting and Gardening Programs: Backyard composting has been encouraged since the 1990s when landscape materials were banned from the landfill. For several years in the early 2000s, Will County sold Backyard Compost Bins directly to residents. Over the past five years, staff has partnered with a non-profit conservation organization and for-profit company to allow residents to order compost bins and rain barrels year round. The Environmental Educator has increased vermi-composting classroom educational efforts and offered presentations on both backyard and vermi-composting. In addition, several RR&E staff have encouraged the Adult Detention Facility, the Juvenile Detention Center, Sunny Hill Nursing Home and other large food waste generation locations to consider contracting for food waste composting services or install an Anaerobic digestion system.

Promotion of backyard composting increases during leaf season as this is the best time of year to start a compost pile. Leaves are often cited as the reason people burn landscape waste but staff encourage alternatives from mowing leaves, mulching, and composting.

Electronics Recycling: Will County has collected a variety of electronic items at one-day events since 2000. These include CPUs, keyboards, hard drives, compact disc devices, typewriters, adding machines, telephones, stereo components, speakers, cameras, VCRs, televisions, cables, and other similar devices. In 2007, Will County opened four permanent collection sites in partnership with the Village of Bolingbrook, Channahon Township, Troy Township and Washington Township. In 2008, the state of Illinois passed a law establishing manufacturer funding for residential electronics recycling to begin in 2010 and a ban on many electronic items to begin in 2012. Will County opened several more permanent electronic collection

List of Permanent Sites Open in 2015

Bolingbrook Public Works
Channahon Township
Forest Preserve – Laraway
Forest Preserve - Monee
Godley Park District
Homer Township
Lockport Public Works
Manhattan Township
Mokena Public Works
New Lenox Township
Romeoville
Troy Township Highway
Washington Township

sites while continuing to offer one-day collections. By 2013, Will County had 13 permanent sites, a front-door program option for people unable to bring their TVs to a drop-off site and a few one-day collections. All the recycling costs were funded by the electronics manufacturer through a contract with a recycler located within Will County. The County paid for promotional costs, shared costs with partners on telephone and email inquires about the program and paid for storage containers at sites that requested them. Residents seeking front-door service paid \$25 to the recycler to cover the cost of sending two people to take electronics from an entrance.

Many areas of the State lacked service and Will County advocated for higher weight based goals as the goals were met part way through a calendar year, resulting in neighboring counties losing their programs and Will County's program being hit with more participation. In 2015, Will County took in more electronics than any County in the State, topping four million pounds. In February of 2016, the County's recycler failed to get manufacturer funding and the entire collection program closed. At that same time, Best Buy and Goodwill ceased collecting TVs leaving residents without any manufacturer funded options. Neighboring Counties lost their programs and turned to residential funding of TV collection, averaging \$25-\$35 per TV. Illegal dumping of TVs increased dramatically.

By May of 2016, Will County and the City of Lockport reopened a permanent collection site under new terms with a new recycler, with facilities in Indiana. Under available manufacturer funding, all permanent sites had to host a semi-trailer, have a pallet jack, have a fork-lift or equivalent equipment to load items into the trailer and staff to sort, stack and wrap the electronic devices. Will County's costs to provide this manufacturer funded program increased from \$10 to \$20,000 a year to over \$80,000. During the year, a few municipalities worked with their waste hauler to add electronic recycling to their collection programs. Without manufacturer funding and coupled with the convenience of curbside collection, the communities that added the service passed additional fees on to their residents through the garbage/recycling bills. Will County partnered with the Village of Peotone, New Lenox Township, the Village of Romeoville and the City of Joliet to offer recurring recycling events. These free-to-residents two-hour collections held in the same location twice a month made a huge difference to the public. Illegal dumping fell significantly and, as RR&E supplemented the collections with two one-day events, residents and officials were pleased to see 2.2 million pounds of electronics collected.

In 2017, RR&E is adding two more recurring collection sites in Channahon and Wilmington and offering 5 one-day collections, while continuing to advocate for a change in the state legislation to ensure programs continue to be funded by the manufacturers. The highest cost item to recycle are the televisions. CRTs contain leaded glass and recycling options are few on a global basis. The good news is CRTs are expected to become less of an issue over the next few years, with all CRT TVs projected to reach end of life by 2033 and all CRT monitors are projected to reach end of life as soon

**Total Electronics Accepted
(pounds)**

2007	–	238,438
2008	–	409,990
2009	–	1,124,021
2010	–	1,508,673
2011	–	1,687,675
2012	–	3,329,018
2013	–	3,828,440
2014	–	3,530,741
2015	–	4,362,994
2016	-	2,160,019

**List of Permanent Sites
Open as of July 2017**

- Channahon Twn/Church
- Joliet/Will County
- Lockport Public Works
- New Lenox Township
- Peotone Police Department
- Romeoville Public Works
- Wilmington City Hall

as 2023. All CRTs are being replaced by flat screen TVs and monitors with some replaced by hand held devices that meet people's viewing needs. The bad news is flat screen TVs are labor intensive to dismantle and face lead issues since many utilize energy efficient LEDs. It is also important to note that CRT TVs are durable, lasting 20-30 years easily while flat screen TVs are not and last only 5-7 years. They will contribute more in the long run to the waste stream than the CRTs.

Will County's Electronic Recycling Program accepts more items than are banned under Illinois' Electronic Recycling Act. Microwaves that are neither a "White Good" nor an "Electronic" have always been accepted, as have old telephones, cassette recorders and more. There are cost effective recycling options for all these items and RR&E shall continue to offer programs that include them.

Foam Plastic (Styrofoam) Recycling: Dart, a plastic manufacturer with facilities in North Aurora has consented to provide a collection trailer at no charge to the County during all September Sharefest events and at one Recyclepalooza event in 2014. This has encouraged residents to bring many foam plastic items from meat trays to drink cups for recycling. In addition, a company in Channahon, Verdecos, allows residents and businesses to drop-off these items during weekday business hours. Due to the lightweight nature of foam plastic, the goal for collection events is to fill a semi-trailer. This has happened once over the last several years. RR&E continues to address disposable plastic #6 utensils, plates and trays in schools and residential settings. Durable items are always encouraged and contracting for recycling service is also promoted when feasible. Some schools and cafeteria service providers are moving to compostable flatware, plates, cups and bowls on durable, washable trays. As food scrap composting becomes more widely utilized, perhaps more organizations will switch to vegetable-based compostable items.



Home Goods Collection for Reuse: In 2007 Will County began partnering with an organization known as Sharefest of New Lenox. Eventually the organization grew to cover most of Will County. As part of its mission, it collects a variety of items, including home goods, and gives them away for free. The County added home goods to collections of textiles in May in years where the partnering organization was able to accept these items. RR&E promotes garage sales and offering items on-line or through the newspaper to keep usable materials out of the landfill. RR&E will continue to promote reuse of toys, knick-knacks, picture frames, small furniture, utensils, and more whenever possible.

Household Hazardous Waste Collection: This program addresses a variety of products used in homes such as cleaning fluids, pesticides, lawn and pool chemicals, drain cleaners, oil-based paint, stains, varnishes, strippers, automotive fluids, batteries, medications, mercury containing lamps (CFLs), thermostats and thermometers, etc. These items may cause fires, explosions, toxic gases or other unsafe conditions if placed in the regular garbage.



In 1996, Will County began hosting one-day HHW collection events with the IEPA. In 1998, the Prairie View operating contractor, Waste Management, began paying for at least two HHW events each year. In 1999, Will County approved funding for the Regional Permanent HHW in the State of Illinois, located in Naperville and open every weekend. Occasionally, the IEPA has awarded a one-day event to the Will County area. In 2006, the City of Chicago opened a permanent HHW site in partnership with the IEPA. That facility does not receive any funding from Will County, but some residents that work in Chicago have utilized the site's services.

While the regional site in Naperville serves the most densely populated area of Will County, many rural or distantly located residents request one-day collection events closer to their communities. In order to meet some of the demand, RR&E began partnering with communities to fund collection events. First New Lenox Township, and then the Village of New Lenox and the Village of Homer Glen. This has resulted in \$7,500 to \$10,000 worth of funding towards events held in these communities. Homer Glen has elected to offer the event every other year while New Lenox partners with Sharefest every September to offer the collection.

In 2014, RR&E elected to add latex paint back to the mix of items collected after dropping it in 2001 at the IEPA's request. Latex paint is the most common item in homes taken as part of the HHW list of items, but it is not hazardous. It can be recycled and RR&E pays a slightly higher fee for this service but residents have praised the addition. (Latex paint remains off the list of accepted items at the Regional sites)

Table 4-2: Will County Household Hazardous Waste Programs

Report Data	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
# One-Day Events	3	3	5	4	4	5	5	5	6	5	5
Participants	1,635	1,261	3,030	2,251	1,999	1,868	2,262	2,509	3,332	3,683	5,095
Pounds Collected	149,128	81,188	164,449	173,457	152,304	143,759	137,637	175,202	220,903	264,952	356,203
Total Cost	\$67,195	\$55,878	\$134,380	\$90,452	\$104,675	\$105,377	\$118,292	\$129,757	\$157,110	\$188,731	\$259,732
Naperville											
Total Participants	11,233	n/a	n/a	n/a	n/a	14,776	15,890	16,428	16,073	17,582	20,762
Will County Only	1,867	n/a	n/a	n/a	n/a	2,432	2,659	2,661	2,744	3,026	3,699
Est. Will Co Lbs	80,654	90,750	74,203	84,788	93,016	99,691	118,031	125,819	139,345	98,526	159,797
Will Co Cost	\$25,000	\$0	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000

In 2013, RR&E worked with New Lenox Township and Sharefest to create a pilot program for recycling latex paint. Latex paint that has never been frozen is reusable. Sharefest has a mission of assisting people and has volunteers from various trades that repair homes. They agreed to collect latex paint and sort the paint by color, combine it and make it available to residents, businesses, and organizations, as well as use it for Sharefest projects. The program runs from April through October and any accidentally accepted oil-based paint or unusable latex is taken back during the September Sharefest collection event. The program cannot handle all Will County residents so it is open only to the New Lenox area and is considered experimental given the dependence on volunteer labor. This site took in nearly 900 cans in 2014 and more in subsequent years. Each year the site has increased reuse of the paint and hopes others will begin similar programs.

In 2016, the Village of Plainfield and Elwood added HHW service to their garbage and recycling contracts. All residents pay an increased fee and call their contractor when they have items to dispose. Most often, a box is mailed to the residential home, filled by the resident and collected soon after. While RR&E sees this as possibly convenient, it is not offered by all haulers. Municipalities are encouraged to consider all options and evaluate the level of service carefully.

Service for HHW and Electronics continue to be the number one requests RR&E receives from residents. 3 of the 5 most populated communities in Illinois are part of Will County and RR&E continues to see a need for a permanent collection site to be established for these items. RR&E hopes to pursue IEPA funding of a Regional site but even without that, there are some items that could be addressed, such as latex paint and motor oil. RR&E will bring proposals forward as they are developed to make more progress on this goal.

Medical Equipment Collection for Reuse: As part of Celebrating Sustainability and Sharefest, residents have been encouraged to bring wheelchairs, crutches, and other home medical devices for donation and reuse. A religious group from Springfield participated in some events, while others were handled locally. Eyeglasses are taken by the Lions Club with collection stations throughout the County, mostly at banks and eyewear retail locations. Whenever the opportunity has arisen to encourage the donation and reuse of these items, RR&E has done so, and shall continue to do so to keep these valuable items from being wasted.

Pharmaceutical Take-Back: After learning the detrimental impact of pharmaceutical waste in waterways at conference in 2006, Will County became the first to partner with the Illinois EPA in 2007 to provide Medication Take-Backs at pharmacies. The first collection was held as a part of Sharefest in New Lenox. Will County then partnered with several pharmacies and police departments to collect non-controlled medications year round. While it should be noted that medications have always been accepted as part of the Household Hazardous Waste programs, this initiative is also seen as a means of addressing drug theft, accidental use of



Girl Scouts volunteer to sort paint in New Lenox for ReUse! (One of several groups to volunteer through Sharefest.)



expired medications and general safety. In 2013 the DEA offered rules to allow pharmacies to take back all medications. Police have always had this ability, however, solid waste programs were not included in the DEA policy and, as a result, cannot easily obtain a permit to dispose through incineration, controlled medications such as Vicodin, Codeine, etc. In 2016, Walgreens began offering customers a full service take-back program but only at some locations. RR&E will continue to work with the various stakeholders to provide service. As the opioid overdose situation continues to worsen, more needs to be done to keep pain killers from being stolen or misused.

Pumpkin Collection: As a way to encourage food scrap recycling awareness and composting, Will County began offering a pumpkin collection a week after Halloween each November. The first event was held at the County Building on a Friday morning. Subsequent events have been held at Lewis University in Romeoville as a way of featuring the University's food scrap composting program offered year round. In 2016, the Lewis Physics department provided participants the option of catapulting pumpkins into a dumpster that was being used to haul the pumpkins to a compost site. RR&E expects to continue this program as it is a fun way to introduce residents and businesses to the concept of food scrap composting as an alternative to landfill disposal.



Scrap Metal Collection: From car parts to window screens, scrap metal is destined to become part of the typical residential waste stream. While some residents are willing to take these spare metal items to a scrap yard, many more are unwilling to use these facilities. RR&E has made scrap metal recycling an option at Sharefest and Recyclepalooza events for many years, filling 20 and 30 yard dumpsters in a day. The Recycling Program Specialist is working to establish some year round collection sites at locations with oversight.

Shredding Event: Residents expressed a desire for document destruction events due to fear of identity theft. Paper placed in recycling carts and dumpsters may not be the sole focus of criminals that wish to steal credit card and social security numbers. Identity theft most often occurs at the point of purchase or on-line. RR&E responded to resident requests and added a document collection program to the Book Reuse & Recycling Event. While many residents found the secure containers offered beneficial, others asked that they be able to witness the shredding. RR&E offered on-site document destruction at two Bluestem festivals. Again, while this satisfied some residents, the general turn-out was not nearly as high as the rest of the event and not as high as it had been at the Book Event. RR&E reached out to the community and began promoting bank and accountant firms that agreed to be publicized as a means to provide residents with opportunities to shred documents free of charge. A list of companies that provide the service to residents was added to the WillCountyGreen.com Green Guide Database. In 2016, Document Destruction was added to the pumpkin collection event as a means to increase awareness of the food scrap collection event in general. RR&E will continue to keep the WillCountyGreen.com event calendar up to date



on shredding opportunities, and the Green Guide Database up to date on customer paid shredding services, as well as offer at least one annual on-site document destruction event.

Textile Collection for Reuse and Recycling: In event with Gym Shoes in 2006, expanded to all shoes in 2007 and by 2010, it was all textiles. Every May, at the Will County Office Building, for one week, residents, schools and businesses are invited to bring clothing and shoes in any condition to be reused or recycled. The program educates residents on the ability to recycle all clothing, regardless of condition. It enhances reuse because people often discard items they wouldn't wear again even though someone in a different economic situation would be grateful to have the item. Clothing is donated to reuse organizations such as Goodwill, St. Vincent DePaul, and USAgain. The Recycling Program Specialist works with different vendors to highlight the variety of reuse organizations working in the County and each year, the event ends with a live radio broadcast featuring the WJOL AM1340 Morning Crew. This event occasionally accepts home goods when the vendor is able to reuse those materials as well.

This event has served to inspire other collections. Both Sharefest and the Really, Really Free Market offer collections, but before donating to non-profit donation organizations, they give much of the clothing and shoes away to the public at no charge.

Thermostat Recycling: In 2014 the Illinois EPA began a thermostat recycling take-back program. This offered Will County an opportunity to join the effort and since then, a box is available to residents and contractors at the Land Use office to properly recycle mercury containing thermostats. (Digital thermostats are recycled with electronics.) The IEPA also worked with several retailers (An Ace Hardware in northern Will County was the only one local) to pay \$5 per thermostat in the form of a coupon in 2015-2016. While this program remains in place, and serves to increase awareness that mercury thermostats should not be placed in the garbage, it has not resulted in any significant participation. It should be noted that mercury containing items have always been accepted in the Household Hazardous Waste one-day collections and at the permanent site in Naperville. Far more thermostats have been taken in through those programs.

Tire Recycling: The State of Illinois banned whole tires from landfills in 1992 and required all tire retailers to collect a fee on every tire sold to cover the cost of cleaning up tires and recycling them. (Illinois P.A. 87-727) While residents are expected to return tires when purchasing tires, often they do not. Rather, the tires are saved to be used as spares or other purposes. Some residents accumulate them and enforcement complaints require they be recycled as they become mosquito breeding areas, contributing to the spread of West Nile Virus and other mosquito borne illnesses.

2006	438
2007	600
2008	2,050
2009	1,791
2010	2,060
2011	2,266
2012	1,800
2013	3,891
2014	5,124
2015	3,800
2016	4,095



Since the 1990s, the Illinois EPA has offered tire recycling events to counties. Over the past nine years, these event funds have become difficult to receive as the State swept money from various agency budget areas to cover other portions of the budget. Will County paid for residential collections occasionally using solid waste funds from Prairie View RDF. Working with the IEPA, the County secured events to cover illegally dumped tires collected by municipal and township government offices in years when no residential collection funds were available.

RR&E will continue to periodically provide tire collection programs for County residents either independently or in conjunction with the IEPA's Tire Cleanup Program. These events will continue to be open to all county residents or municipal public works and township highway departments. Will County will continue to assist businesses in locating disposal options for tires, but will not pay for the disposal of tires from businesses. A listing of tire retailers that accept used tires from the general public is offered on the WillCountyGreen.com website, under the Green Guide Database. All retailers willing to accept tires for a fee regardless of a customer's purchase situation is also listed in the Green Guide Database, accessible 24/7. Whenever possible, Will County will work with the State and the private sector to develop additional end markets for used tires.

Traditional Recycling Drop-Offs: Will County encourages all residents to utilize curbside recycling, however many unincorporated areas lack the option or find the increase cost too much to pay. Residents in apartments consistently lack service. Even residents in municipalities that provide curbside recycling may only receive the service every two weeks leaving them with no space for all their recyclables. Therefore, RR&E partners with municipalities, townships and park districts to offer public recycling drop-offs that accept cardboard, chipboard, paper, glass bottles, aluminum and tin cans, plastic containers, and aseptic containers. There are currently eight recycling drop-offs in Will County. Six are operated in partnership with the County paying for collection service and the host site supervising participation. Waste Management, Inc. services one site through the County's Prairie View RDF operating contract. The Village of Crete is home to the oldest Recycling Drop-off in Illinois and the Crete Lions Club operates it. The City of Naperville operates a site on the DuPage County side of the community.

In unincorporated rural areas, curbside recycling continues to be poorly established, and this is also true in urban areas, where apartments and small businesses continue to find recycling service to be overly expensive or difficult to accommodate due to parking space limitations. For these reasons, there continues to be a need for more recycling drop-offs or ordinances that require recycling services for these specific areas.

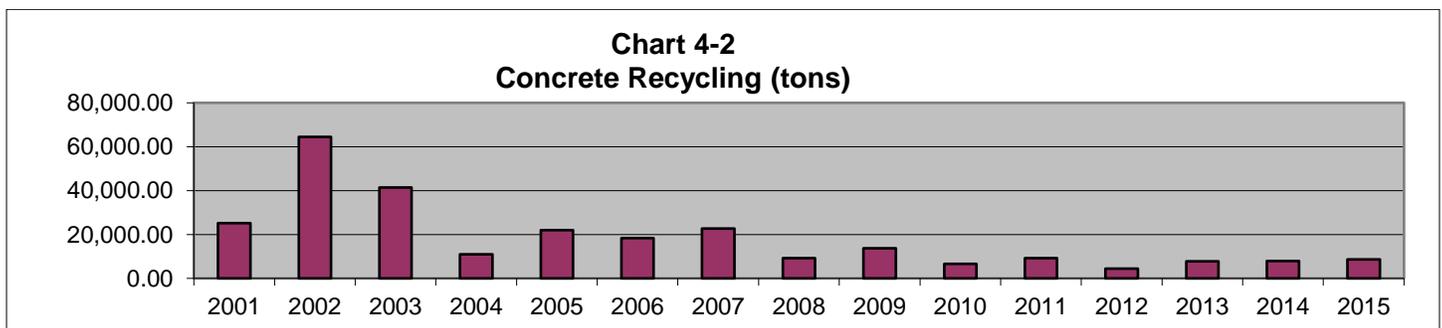
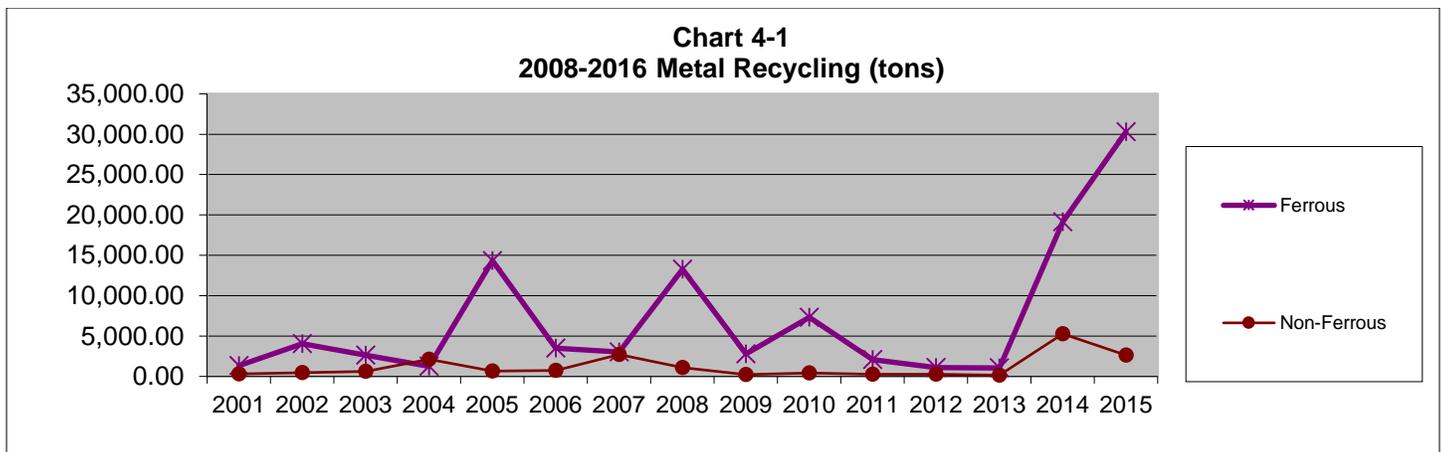


Wood Recycling: Will County began accepting all types of wood in September of 2011 as part of Sharefest. The program’s vendor mulches the clean wood, recovering wood with nails and screws as well as lumber scraps. The painted, stained and treated lumber is taken to a biomass generator where it is used to make electricity. This program has expanded from one 30-yard dumpster to three 30-yard dumpsters and requests for it have increased. It may be added to a Spring Event in the future and a permanent collection site is also being sought by RR&E staff. Commercial recycling access is increasing through the opening of more C&D facilities. Some of these may also allow residents to receive service for a fee.

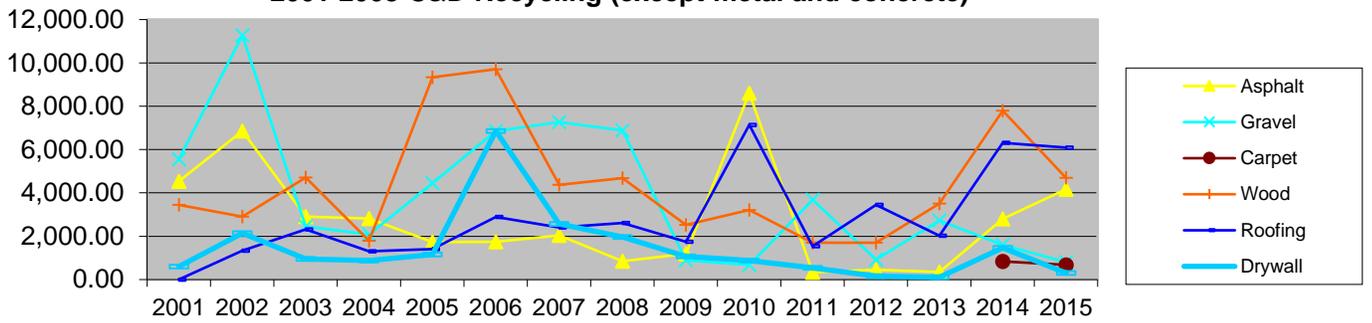


Construction and Demolition Program – Population growth coupled with business growth over the next twenty years will continue to produce large volumes of construction and demolition materials (C&D). RR&E will continue to list outlets for these materials on the WillCountyGreen.com website. Land Use staff will encourage those seeking building permits in unincorporated areas to contract C&D recyclers rather than simply send everything to the landfill.

Staff has tracked C&D recycling through the semi-annual waste hauler reports (Waste Hauler Reporting Ordinance #00-398). Below are three charts showing some of the recycling of construction and demolition materials that has occurred from 2007 through 2016 as reported to Will County.



**Chart 4-3
2001-2008 C&D Recycling (except metal and concrete)**



County Office Waste and Recycling Program – County Resolution 02-537 requires all County employees to recycle. In some cases recycling bins have been lost, in others cleaning staff place recyclables and garbage in the same collection container, making all the contents garbage. RR&E staff have undertaken an inventory of recycling containers to establish a one-for-one program where practical. In 2007, a grant funded a cardboard baler at the Adult Detention Facility which has relieved pressure on the facility’s garbage compactor, possibly extending its life while also saving the facility money. Efforts to market paper from the Records management area have not yet worked out but will continue to be pursued when time is available. Another area of improvement that could result in savings is at the Sunny Hill Nursing Home due to the volume of waste generated. A compactor for waste, as well as possible on-site AD system would greatly reduce the current fees. RR&E will continue to work with Building Maintenance and contractors to receive accurate record keeping and cost-effective service in all future county waste/recycling collection contracts.

Data Collection – The Will County Waste and Recycling Ordinance (#00-398) requires all organizations involved in hauling waste or recyclables to report every six months. The purpose of this ordinance is to ensure that RR&E maintains accurate and timely waste generation, collection, and disposal records from Will County service providers. This data is then utilized to track the County’s progress towards the waste reduction goals found in this Plan and the State of Illinois Solid Waste Planning and Recycling Act (415 ILCS 15/1 et seq.). This information allows the County to provide complete listings to residents and businesses of the services and providers available. In addition, this data aids in the determination of adequate service supply and allows RR&E staff to target areas that need service improvement. Since the last Plan Update, the number of electronics recyclers, C&D recyclers and plastics recyclers has grown. At the same time, RR&E witnessed the rise and fall of carpet recycling along with a decrease in residential electronic recycling services. The challenge this tool presents is related to the fact that the County does not permit any haulers and often many don’t report even after receiving reminder phone calls. RR&E has added the reporting form to our website to make it easier yet we still require an intern to doggedly track the missing data down. Even then, we fail to receive some reports. Staff believes serious consideration should be given to a permit system which would require annual report submission with a small fee and stiffer penalty as a means to receiving reliable data.



Delegation Agreement with the IEPA – Will County will continue to maintain a delegation agreement with the IEPA to conduct inspections and enforce provisions of the Illinois Environmental Protection Act (415 ILCS 5/1 et seq.) at the IEPA-permitted facilities and numerous open dump and burning sites. The RR&E Division conducts inspections at: Clean Construction & Demolition Debris (CCDD) Facilities, Uncontaminated Soil Only sites, Construction & Demolition Recycling Facilities, landfills, transfer stations, landscape waste and food waste compost and on-farm compost/land application facilities. Through these efforts, since the Delegation Agreement program began in 1988, RR&E has enforced the cleanup of hundreds of thousands of cubic yards of material and tires (along with IEPA contractor assistance when available) while attempting to keep all permitted facilities in compliance. The delegation agreement provides an enforcement program of state regulations that is more accountable to local residents due to increase familiarity with the local area and community, which results in a more prompt response to citizen complaints or concerns and an expedient clean-up of potentially harmful situations.

Disposal Capacity Monitoring – RR&E maintains a list of all permitted disposal options in and around Will County. Each year, the Illinois EPA releases a Disposal Capacity Report for the State. In addition to reviewing this document, RR&E staff monitor available disposal capacity at pollution control facilities in northern Illinois and northwest Indiana that currently service or may service the residents and businesses of Will County.

TABLE 4-3: LIST OF WILL COUNTY PERMITTED LANDFILLS

FACILITY	PERMIT STATUS	CURRENT DATE CLOSURE
Beecher Landfill, Units I and II	Closed	
Beecher Landfill, Unit III	Closed	
CDT Landfill, 005	Closed	
CDT Landfill, 006	Closed	
Joliet Arsenal Ammunition Plant	Closed	
Laraway Recycling and Disposal Facility <i>Accepts contaminated soils, industrial waste and contaminated demolition debris.</i>	Operating	2026
Lincoln Stone Quarry/Midwest Generation <i>Accepts only on-site generated fly ash</i>	Operating	TBD
Prairie View Recycling & Disposal Facility <i>Accepts municipal solid waste, construction & demolition waste, industrial waste and sludge.</i>	Operating	2042
Renwick Landfill (formerly Mineral Solutions) <i>Accepts fly ash from coal combustion facilities.</i>	Operating	TBD
Wheatland Prairie Landfill	Closed	
Willow Ranch Landfill	Closed	
Wilmington Municipal Landfill	Closed	

It should be noted that while Will County has disposal capacity, some of the waste generated in the County goes to landfills outside the County. These landfills may have fees lower than those in Will County or they be owned by companies that haul refuse and cost internalization may make the longer distance economically viable.

FACILITY	COUNTY	EXPECTED CLOSURE YEAR
DeKalb County Landfill	DeKalb	2054
Livingston Landfill	Livingston	2036
Environtech Inc.	Grundy	Closed in 2016
LandComp Landfill	LaSalle	2030
Newton County Landfill	Newton, IN	2034

Education and Outreach – Both the Environmental Educator and Recycling Program Specialist are tasked with developing and conducting educational programs for park districts, community groups and service organizations. The topics vary based on the interests of the groups and the programs of concern to Resource Recovery and Energy. In 2012, when electronics were banned from disposal, staff did many presentations on the state law and opportunities for recycling. In other years, butterfly and fresh food gardening was promoted. Backyard composting, updates on recycling, avoiding hazardous products, proper disposal of medication and much more has been covered in these presentations in 15 to 40 people group settings.

Brochures: Double-sided, tri-fold pamphlets on specific programs, as well as one on the RR&E Division, are created and printed in-house. These are provided at various outreach events from collections to table displays, as well as in many local government offices. The printed brochures cover why a program exists and what options residents have to access the program. The division’s direct phone line and address are always included, along with the website, on all printed materials.



Booths: Throughout the year, opportunities are offered to RR&E staff to be part of a program or event hosted by another organization. Over the years these have included: Joliet Chamber Expo at the Louis-Joliet Mall in February, Bolingbrook Park District in April, Frankfort Square Park District’s Earth Day Fair in April, Frankfort Park District’s Earth Day Fair in April, JJC’s Earth Day event on campus in April, Joliet’s Celebrating Sustainability Fair in May, Homer Glen’s Earth Day/Arbor Day celebration in May, University of St. Francis’ Bluestem Festival in May, Joliet’s Kidzfest in August, Plainfield Methodist Church’s Really, Really Free Event in August, Will County Fair in August, and New Lenox Sharefest in September plus events at the Four Rivers Education Center and Plum Creek Nature Center offered by the Forest Preserve. These events may include a collection program of some sort when requested and possible, but they always include a table where one to two staff members are stationed to provide information on proper disposal, recycling options and conservation practices. Residents are encouraged to sign up for the RR&E newsletter, take printed brochures, pencils or other low cost recycled content items



with the website and logo printed on them. RR&E staff, Land Use staff, or volunteers familiar with the programs staff these booths.

Social Media: In September of 2010 the division launched several social media outreach efforts: Facebook (currently at 1,650 page likes), LinkedIn (155 connections), Twitter (currently at 307 followers, following 129, 2,211 tweets), YouTube (used for several in-house videos and many outside digital film likes), and as of 2015, RR&E launched an Instagram account. The social media efforts have proven to assist the County in promoting collection events and in highlighting local undertakings in recycling, water conservation, composting, energy efficiency, gardening, solar installations, and other local environmental happenings. Facebook users are the most engaged: They share events, ask questions, invite friends to collection events and make use of this media channel daily.

Website: In November of 2010, timed with America Recycles Day, the RR&E Division launched the WillCountyGreen.com website. In the past, the division's information was listed on the Land Use Department's website and brochures, as well as the popular Waste and Recycling Pages and the 2007 Business Recycling Pages were featured as .pdf links. The division's portion of the website received about 2,000 hits per year. The new website, funded by a federal grant, featured all the information on brochures as separate pages on the website. The Recycling Pages catalogs were turned into a searchable database of information on nearly every unwanted item and environmental topic of concern. The use of the WillCountyGreen.com website has grown substantially, receiving over 40,000 hits annually.

The website also features games for children and adults to teach recycling, composting and energy efficiency. In addition, teachers and community groups enjoy the virtual tour features on the website, the most popular of which is seeing what happens to curbside recyclables once they leave the curb. The Recycling Program Specialist updates pages and events on the website weekly. The site allows haulers to report data in a paperless manner. Residents also use the Frequently Asked Question section to find answers as well as ask questions which are promptly answered.



Newsletter: In the past, the Division printed and mailed a newsletter to residents periodically but the cost kept this effort very minimal, less than once a year. In 2010, an electronic newsletter was created and well received. Now, utilizing Constant Contact, the Recycling Program Specialist writes and emails electronic newsletters nearly every month to over 2,000 people that have signed up to receive it along with sending it to all County employees.

In addition, the Environmental Educator creates a newsletter one to three times a year in a printed and mailed format to all the schools along with specific teachers. These newsletters are then placed on the WillCountyGreen.com website for anyone to access.

Both newsletters include information on upcoming events being offered by RR&E. While the School newsletter has set periodic information, such as the Earth Flag application and list of Schools that achieved it, the Monthly Electronic newsletter has set details on a variety of collection programs and topics. Both newsletters include information to engage audiences on topics of environmental interest.

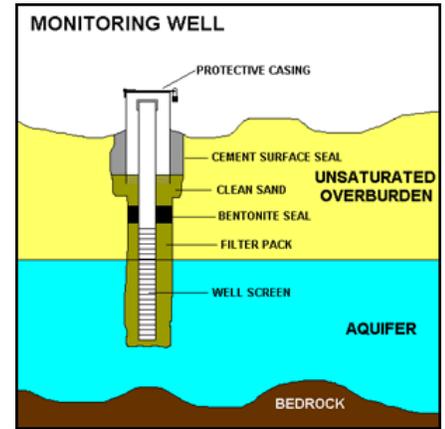
Digital Film Media: In the past, VHS, CD and DVDs were occasionally disseminated by staff to community groups and schools on various waste and recycling topics. For the launch of the WillCountyGreen.com website, with federal grant funds, a few 30-second digital commercials were made to promote the site to residents and to businesses. After airing on several cable network channels, these were placed on the Will County Green YouTube channel along with a digital video of a school educational seminar offered by the Environmental Educator in 2015. As opportunities present themselves, staff expects to make more of these digital videos. While funds may not be available to place them on network television, the videos may be aired on local cable channels and will certainly be placed on the YouTube channel where they may be accessed during presentations or linked through newsletters and the website.

Office Phone: The RR&E secretary is tasked with answering a variety of phone inquiries. This includes everything from taking complaints to explaining the options for recycling or disposing of latex paint. Due to the increase in calls in 2012, the phone system was updated to begin with a recording offering callers the option of pressing a number to learn about electronic recycling. This still remains a popular question even after listening to the recording. If the secretary is unavailable, other RR&E staff make an effort to pick up the calls and if that fails, a voice mail system ensures that all callers are heard and answered.

The screenshot shows the WillCountyGreen.com website with the tagline "The will power to rethink, renew, reduce and recycle." The main content area features several articles:

- Happy Veterans Day:** Accompanied by an American flag image.
- America Recycles Day:** Announces that November 15 is officially America Recycles Day and lists events throughout the Fall Season. It mentions a special collection event on Saturday, Nov. 12 in Romeoville and a Safety and Recycling event in Channahon on the 15th. It also lists Senator A. J. Welheim, Representative Jack McGuire, and County Executive Larry Walsh.
- Featured Recyclable:** Includes an image of a person recycling and text about composting leaves, stating they are a great source of nutrients and should never be burned.
- Crest Hill Police Department offers Medication Take-Back:** Announces a program to reduce drug use by offering a medication drop-off location.
- Green Business Star: Hendrickson's:** Celebrates Hendrickson's achievement of ISO 14001 certification and their commitment to comprehensive recycling and energy efficiency.
- Featured ReUse Option:** Promotes the use of reusable containers, showing images of reusable water bottles.

Groundwater Monitoring – Should Groundwater monitoring be required at CCDD and Uncontaminated Soil Only sites, Will County will conduct “split sampling” of selected groundwater samples at Will County’s facilities in accordance with IEPA sampling protocol. There are currently nine permitted CCDD and three Uncontaminated Soil Only sites in Will County. The samples would be sent to an IEPA-certified laboratory for analysis. The County then would verify the results obtained by the CCDD and Uncontaminated Soil Only sites utilizing a consultant or a staff Hydrogeologist. This process maintains the integrity of the sampling program. Typically, quarterly and annual groundwater monitoring results are reviewed to identify any exceedances of Applicable Groundwater Quality Standards, determine if statistically significant trends are present and report statistically significant changes in groundwater quality to the IEPA. Each facility’s permit documents the constituents to be sampled. The RR&E Division has commented on groundwater and other components in a facility’s IEPA permit application and will continue on a case-by-case basis.



Legislative Involvement and Tracking – Over the years, several members of the RR&E staff have taken active roles in working on legislation, such as the Electronics Recycling law and Clean Construction & Demolition Debris (CCDD) laws and Pollution Control Board rules. Staff has always monitored a variety of legislation concerning solid waste related issues. When necessary, RR&E will continue to prepare summaries of legislation and recommendations for action to the Will County Executive’s Office and the County Board Legislative Committee. Staff will continue to work with the County Executive’s Office and the Legislative Committee to propose state legislation as deemed necessary by the Committee. This includes interaction with County lobbyists and State legislators.

RR&E have also become an active member of the Product Stewardship Institute. This national organization opened a local statewide chapter to assist members with legislation on items such as electronics, hazardous waste, packaging, batteries, paint and more. The organization offers monthly calls on these topics and how different states are working with manufacturers to fund collection programs through state laws and voluntary actions. Membership in this organization has helped Will County collaborate with counties throughout the state in common solid waste related services and legislation.

Procurement – While Will County has a central purchasing division under the County Executive Office, the division does not usually become involved in purchases for other elected offices unless specifically requested. This makes streamlining printing and ink needs difficult. It also makes changes to policies challenging. RR&E encourages all County departments to purchase recycled-content supplies (such as copy paper, business cards, calendars, note pads, toilet and tissue paper, etc.) whenever possible. Staff will also work to amend the County’s Procurement Ordinance to favor the purchase and use of items manufactured with post-consumer recycled-content materials when performance standards, product availability and price are comparable to similar items made with virgin materials. Staff will keep up-to-date with Federal and State recycled-content procurement standards, while considering the addition of links to websites featuring various items made with post-consumer recycled content. Any formally adopted County procurement standards/ordinances may be shared with other units of local government within the County for their consideration.

Goals for Purchasing:

- Purchase recycled content paper, letterhead, envelopes, construction materials, office furnishings, etc.
- Purchase Recycling Services with Garbage Service
Targeting: Paper, Cardboard primarily, Cans and Plastic secondarily
- Double side copy policy
- Discourage the printing of emails
- Encourage electronic billing and processing of bills
- Encourage electronic responses to RFPs, RFQs, and formal bids
- Landscape using drought resistant plants
- Avoid purchasing sod



Will County has made significant efforts to reduce energy usage and costs with the support of federal funds, Energy Efficiency and Conservation Block Grant (EECBG), and state funds, Illinois Energy Now (IEN) Public Sector Energy Efficiency Program, that created opportunities for lighting, HVAC, and boiler replacements, upgrades, and tune-ups. As a result of persistent energy efficient initiatives, Will County will introduce a more energy efficient Sheriff's Department & Public Safety Complex in 2017 and a LEED certified courthouse in 2020 with a minimum Silver level of achievement, currently on track to receive Gold. The new Will County Courthouse will be the first building of its kind in Will County's building portfolio.

POLLUTION CONTROL FACILITY RECOMMENDATIONS

Incineration as Long Term Disposal Option – The County is not recommending incineration for volume reduction and/or energy recovery facilities of any kind (i.e. Anaerobic Digestion, others) at this time. This is due to the relatively high capital costs of constructing and operating such facilities. Additionally, as of the date of this Plan Update, energy prices are low, making the payback period on facility costs too long. Currently, Will County and surrounding areas are enjoying relatively low landfill tipping fees compared to the East and West Coasts, where other solid waste disposal options may make more economic sense.

Will County has historically found incineration and other solid waste disposal technologies to be more onerous than landfiling since the original Plan in 1991. This resulted in the County pursuing the development of a County-owned, privately operated landfill. After an extensive site selection process that evaluated potential sites throughout the County, a preferred site was identified on the property of the former Joliet Army Ammunition Plant.

Pursuant to the Illinois Land Conservation Act of 1995 (P.L. 104-106), the federal government conveyed a portion of the Arsenal property to the County for use as a long-term disposal facility. In 1997, Waste Management was named the operator of the Prairie View RDF after a lengthy screening and bid process. On March 4, 1999, the parcel was granted site location approval by the Will County Board (Ordinance #99-72) pursuant to section 39.2 of the Illinois Environmental Protection Act (415 ILCS 5/39.2). Also in 1999, limitations were placed on the site's deed from the federal government. The site could only accept waste from Will County and those towns lying partially in Will County, and for a maximum of

23 years. In late 2014, the federal government extended the closure date another 15 years. Therefore, the new closure date of the County's Landfill is January 19, 2042. If deemed necessary, the County may consider requesting the federal government remove the service area restriction at Prairie View. If the service area restriction were lifted, the landfill may be restricted to a certain annual volume. Furthermore, the County may consider expanding the Prairie View Landfill's capacity in the future, once deemed necessary.

The siting of the County landfill, named the Prairie View Recycling and Disposal Facility (RDF) was open for waste disposal on January 19, 2004. The Prairie View RDF will continue to meet the waste disposal needs of the Will County Service Area (Will County and municipalities located at least partly in the County). Will County is expected to continue growing in the residential and business sectors, and the landfill is a crucial component of the public infrastructure that will be needed to address such growth.

As stated in previous Solid Waste Plan Updates, the County, having sited a long-term disposal facility in accordance with the policies contained in the Will County Solid Waste Management Plan, has determined that there is no need for any new or expanded landfill facilities within Will County except as contemplated within the Host Agreements for the Prairie View RDF and the Laraway Recycling and Disposal Facility, which will result in the remediation of an environmental project approved by Will County. This policy determination applies to both new and expanded landfills, and shall remain effective until such time as the Prairie View RDF has depleted its capacity or the County amends the Solid Waste Management Plan to indicate otherwise. Accordingly, except as specified above, the County has determined that no other landfills (new and/or expanded) are needed or desired within Will County. The landfills used for coal ash are the only exceptions to this policy. The unlined onsite coal ash (Lincoln Stone Quarry) landfill, should be restricted to only onsite generated material.

It was determined in 2010 with the County signing of a "Gas Purchase Agreement" with Waste Management Renewable Energy & Waste Management ("Waste Management") through an Amendment of the Will County Landfill's Host & Operating Agreement that enough gas was being generated at the Prairie View RDF to build a landfill gas to electric plant to make it economically and environmentally practical. Since there is currently more gas than is being converted into electricity, Waste Management and the County expect to add additional engines or find additional ways to beneficially utilize the gas. This is partly due to the County Board allowing Waste Management in 2010 to recirculate leachate at the landfill. Recirculation of leachate, if properly managed and controlled, can provide additional gas generation, conserve airspace, and speed up the waste decomposition process.



New and/or Expansions of Existing Pollution Control Facilities–The goal of the County’s Solid Waste Management Plan is to develop a comprehensive integrated solid waste management system to accommodate the needs of the County for at least 20 years. Among the objectives of the plan is to comply with the statutes governing the siting of pollution control facilities, specifically Section 39.2of the Illinois Environmental Protection Act (415 ILCS 5/39.2), which states that siting approval may only be granted if “sufficient details” demonstrating compliance with the nine criteria set forth in Section 39.2 are included in siting applications. Therefore, in order to comply with this statute, and in order to ensure that sufficient information is presented on proposed pollution control facilities, applications for local siting approval to be located geographically within Will County shall contain, at a minimum, the information detailed in Section 39.2 of the Act. It is the opinion of the County Board (based on a recommendation by Staff) that unless an application contains all the required information, the application is incomplete, and does not contain the information necessary for the siting authority to adequately review and objectively rule on the proposed facility. Accordingly, any such siting application that does not contain all of the required information is deemed inconsistent with the County’s Solid Waste Management Plan, and therefore in turn deemed inconsistent with Criteria 8 of Section 39.2 of the Act.



Moreover, in order to be consistent with Criteria 8 of Section 39.2 of the Act, any new or expanded pollution control facility seeking local siting approval anywhere in Will County must negotiate a host agreement with the County prior to any determination of Plan consistency being made by the County. Host agreements with the County shall be for the purpose of:

- Outlining the type of pollution control facility and scope of operations at the proposed site;
- Indemnifying the County from possible future environmental liabilities;
- Compensating the County and other units of local government in the form of a host fee applied to each ton of waste received for processing and/or disposal consistent with relevant provisions of the Illinois Solid Waste Planning and Recycling Act;
- Compensating the Will County Land Use Department, Resource Recovery & Energy Division in the form of a host fee applied to each ton of waste received for processing and/or disposal to cover the cost of inspections, enforcement actions and other waste related activities performed by the Division;
- Compensate the County for costs related to road improvements and maintenance deemed necessary by the County, State of Local authority.
- Creating an Environmental Contingency Fund in addition to any such similar funds required by State law;
- Requiring approval of operation transfer by the Will County Board (based on a recommendation by Staff);
- Remaining capacity determinations (where applicable);
- Prohibitions on the acceptance of hazardous waste;
- Long-term disposal capacity requirements for non-hazardous waste generated in Will County;
- A Property Value Protection Program for adjoining properties;
- A Domestic Water Well Protection Program for adjoining properties;

- Maintaining and/or improving local roadways affected by new/expanded facilities;
- Access to financial records;
- Development of procedures to enforce all host agreement provisions.

The County may, at its option, waive any of the above requirements or suggest further requirements if it is determined to be in the best interest of the County.

Open Door Policy – Any new and/or expanded pollution control facility located in Will County shall not exclude any participant in the local solid waste management marketplace from using the facility, other than for good cause.

Transfer Stations – The County will not pursue the development of a County-owned transfer station. Rather, the County will allow the private-sector to develop a transfer station network as is appropriate.

GOALS FOR 2017-2022

The County’s solid waste planning efforts are dedicated to continual improvement. In each of the tasks previously listed, a sense of the division’s past efforts and future intentions is described. The County Board and County Executive have supported and encouraged continual improvement in the areas of inspections, disposal service, recycling, reuse and efficiency. In Appendix C, a list of efforts to reach Zero Waste is offered to demonstrate the desire of industry to move diversion goals ever higher. While Zero Waste is actually defined as 90% diversion, Will County recognizes that we are still far from such a goal. It is with this in mind that we are raising the past goal of 40% (which was achieved five of the years shown in this update) to a **Goal for 2022 of 55% waste diversion through recycling and composting.**

Will County residents and businesses have access to affordable waste disposal through a variety of private companies. However, recycling and composting services are not as readily available. While Will County has consistently reached the diversion goals set in our Solid Waste Plans, it is clear that more can be done.

Many Will County communities have upgraded from recycling bins to recycling carts but reduced recycling collection to every other week. As the list of recyclable items has grown, this approach results in a loss of residential recycling because as carts fill, residents place recyclables in the garbage cart. If residents forget to set the cart out or are away from home on the recycling collection week, they may have 4 weeks of recyclables and no room in the recycling cart, resulting in recyclables being sent to the landfill.

Many communities do not include the apartment residents in their collection program. Some may even leave out condominiums or townhouse residents if the development relies on dumpsters instead of curbside set-out. This results in recyclables being placed in the garbage as these residents often lack recycling dumpsters as part of their service.

- RR&E has a goal to work with each municipality to encourage additional recycling, food waste collection, and other solid waste services.



- RR&E has a goal to work with municipal leaders to explore the possibility of adding all condominiums, townhomes and apartment buildings to municipal contracts.

Unincorporated residents often report difficulty receiving landscape collection service or white good recycling service. Many complain that traditional curbside recycling service is either not available or too costly. RR&E has several options to explore to improve this situation:

- RR&E shall reach out to municipalities and learn if they are open to allowing unincorporated homes adjacent to them to join the municipal garbage and recycling contract.
- RR&E shall meet with townships to learn if they are interested in pursuing collection contracts for all unincorporated township residents as permitted by State law.
- RR&E will also work with the County State’s Attorney’s Office, Purchasing and elected officials to bid collection services for sections of the unincorporated areas that cannot be covered in either of the two previous manners.
- RR&E may also ask elected officials to consider County ordinances that require residential waste haulers to offer curbside recycling, white good recycling and landscape collection services.

Businesses and Non-Profits are either busy with their core focus or hampered by space constraints, making recycling difficult to add. Many restaurants could do cardboard, glass, plastics and metal containers but with high personnel turnover and limited space in kitchens, as well as discouraging pricing for heavy glass producers, recycling isn’t being done. Considering that restaurants pay the highest cost for disposal because of the weight of food waste and the growing availability of scrap food collection service and inside Anaerobic Digestion systems, this is a prime area for growth in diversion.

- RR&E will survey restaurants and determine the best course of action to take to encourage them to become more “green.”
- RR&E may recommend franchise agreements for commercial waste and recycling services in municipalities.
- RR&E may work to improve reporting through a licensing ordinance that would also require haulers to offer recycling services.
- RR&E may recommend municipalities include commercial businesses in their collection contracts to reduce the amount of heavy trucks on city streets and reduce costs for service. (Crete is the only community with a single hauler at this time.) This would exclude roll-off services as those contracting for these short-term arrangements tend to benefit from competition in services and pricing in communities without franchises.
- RR&E will work to find interested commercial sites to demonstrate higher recycling rates, with a goal of 70% diversion for office buildings.



Some businesses and other organizations (such as the County Adult Detention Facility) use balers for their cardboard. This is a more efficient way to have it recycled.

Over the past decade, Will County had the opportunity to bid an electronics front-door collection program. Residents that wished to use the service contacted the company and paid them a set fee for electronics to be taken at their home with an appointment. RR&E has seen a need to offer such a program for white goods (appliances such as refrigerators, stoves, window air conditioners). When these items are placed along the curb in unincorporated areas, they may be damaged, releasing Freon into the air or taken by a scrap entrepreneurs who will cut the Freon line and turn the item into a Scrap Metal Recycler.

- RR&E will survey townships and residents to determine the need for white good collection services.
- RR&E will then prepare a bid for white good collection services to meet the needs of residents in unincorporated areas of the County. This program, if approved, would work in a similar manner to the former front-door electronics program.

Schools will continue to be a focus for RR&E. Staff will work with them to create a District Solid Waste Plan, measure their waste and recycling and assist them with improving through Waste Audits, Waste Free Lunch programs and the addition of composting programs.

- RR&E has a goal of schools improving their recycling and composting rates at least 15% over the next five years.

No single goal will boost the recycling rate from the 43% achieved in recent years to the goal of 55% diversion by 2022. All of these goals together, with the support of the County, Municipal, School and Business leaders, should result in greater diversion.



White Goods include refrigerators, ovens, air conditioners, dehumidifiers, washing machines and dryers.

APPENDIX SECTION

APPENDIX A SUMMARY OF SOLID WASTE-RELATED LEGISLATION SINCE 2007

Disclaimer: The following information is presented in summary form. It is not intended to replace a thorough reading of the legislation. It not intended to be a comprehensive list of every legislative act, but is offered for facilitating an understanding of the foundation and context for the Solid Waste Management Plan.

Federal Legislation	Description of Legislation
H.R. 66	Approved in 2011, the Waste-to-Energy Technology Act states a 30% cash grant is provided from landfill gas or waste to energy facilities using municipal solid waste or sewage sludge.
S. 710 PL 112-195	Approved October 5, 2012, the Hazardous Waste Electronic Manifest Establishment Act amends the Solid Waste Disposal Act. This required the US EPA to establish a hazardous waste electronic manifest system within three years to be used by a hazardous waste generator or transporter.
H.R. 5771	Passed December 2014, became law, allowed through 2014 for renewable energy facilities to be eligible for tax credit for producing electricity from renewable resources, including wind, biomass, landfill gas, trash, hydropower, and marines and hydrokinetic renewable energy facilities.
National Defense Authorization Act	Will County Prairie View Landfill closure date was extended to 2042 with the passage of the National Defense Authorization Act in late 2014. It had been determined the landfill would not be filled to capacity by the 2027, the federally mandated closure date. This law allows Will County and the federal government to utilize the landfill for MSW disposal purposes until it reaches capacity.
DEA Rules	Effective October 9, 2014, new Drug Enforcement Administration (DEA) regulations allow authorized manufacturers, distributors, reverse distributors, narcotic treatment programs, hospitals/clinics with an on-site pharmacy, and retail pharmacies to collect controlled and non-controlled pharmaceutical drugs from ultimate users by voluntarily administering mail-back programs and maintaining collection receptacles. In addition, the regulations allow authorized hospitals/clinics with an on-site pharmacy and retail pharmacies to voluntarily maintain collection receptacles at long-term care facilities.
US EPA Rule	Effective October 24, 2016, the US EPA finalized national regulations to provide a comprehensive set of requirements for the safe disposal of Coal Combustion Ash (CCA) from coal fired power plants. This may include a requirement for CCA to be regulated under Subtitle D of RCRA.
Illinois Legislation	
P.A. 095-0066	Approved 2008, provides that within 24 hours after an unpermitted release of a contaminant from a nuclear power plant, the owner or operator must report the release to the EPA.
P.A. 095-0087	Approved 2008, Mercury-added Product Prohibition Act. Defines “mercury-added product.” States that no person shall sell, offer to sell, or distribute certain mercury added products in the state of Illinois.
P.A. 095-0177	Defines that a site that stores non-decaying solid waste in its original containers for 10 days or less for temporary storage and consolidation provided such waste is further transferred to a recycling, disposal, treatment, or storage facility on a non-contiguous site is not a “pollution control facility.”
P.A. 095-0268	Approved 2007, creates the Plastic Carryout Bag Recycling Program. Specifies requirements for the retailer collection and recycling program.
P.A. 095-0408	Approved 2007, Excludes transfer stations used for 24 hour landscape waste from the definition of “pollution control facility.”
P.A. 095-0452	Prohibits the installation of thermostats containing mercury in new construction beginning July 1, 2008. States that a thermostat containing mercury must not be disposed of in a landfill or incinerated.
P.A. 095-0741	Approved in 2008, provides that school districts in the State shall review their procurement procedures and specifications. They must:

	<p>(A) seek out products and supplies that contain recycled materials</p> <p>(B) ensure that purchased products or supplies are reusable, durable, or made from recycled materials.</p> <p>(C) develop a waste reduction plan by July 1, 2010.</p>
P.A. 096-0077	Approved 2009, all State agencies are required to use, to the maximum extent feasible, compost material in all land maintenance activities that are to be paid for with public funds.
P.A. 096-0121	Approved 2009, amends the Environmental Protection Act. Requires the Agency to develop and implement a public information program regarding available drug disposal sites and the proper storage and disposal of drugs.
P.A. 096-0235	Approved 2009, this law allows construction and demolition recycling facilities to operate statewide without siting but with zoning approval or meet state set-back requirements and obtain a permit from the IEPA. It also requires time limits on material storage and C&D items considered recyclable.
P.A. 096-0418	Redefines the term “compost.” This act also eliminates food scrap from the definition of garbage. Defines “compostable material” and “food scrap.”
P.A. 096-0489	This law allows the IEPA to determine a material that otherwise is required to be managed as waste may be managed as non-waste if that material was used beneficially and in a manner that is protective of human health and the environment.
P.A. 096-1295	Establishes mercury thermostat collection program.
P.A. 096-1416	As of July 1, 2008 all CCDD facilities must have obtained a permit from the IEPA. Passage of this law in July 30, 2010, created a new set of regulations for CCDD sites, including record keeping, certifications, fees to be assessed by Counties and the State, and County ability to inspect sites under IEPA authority. Defines clean construction/demolition debris. Defines uncontaminated soil. Separates waste from recycled materials. Clarifies the definition of clean construction or demolition debris will not be considered “waste” if it is separated or processed and returned to the economic mainstream in the form of raw materials or products within 4 years of its generation.
P.A. 097-0230	Approved 2011, defines general construction or demolition debris that is processed for use at a landfill.
P.A. 097-0853	Established a Task Force to investigate and provide recommendations for expanding waste reduction, recycling, reuse, and composting in Illinois that protects the environment, as well as public health, and promotes economic development. Resulted in a list of recommendations to the Governor in January 2015, among them a call for increased recycling goals, expansion of food scrap composting, and an increase in purchasing of recycled content and finished compost materials.
P.A. 097-0923	Amends the Recyclable Metal Purchase Registration Law. Provides that all purchases of recyclable metal must be recorded and obtained for three years.
P.A. 097-1081	Amends the Illinois Administrative Procedure Act. Beginning January 1, 2013, the EPA shall issue 3-year Special Waste Hauling Permits. The fee will increase for each waste hauling vehicle identified in the permit application and for each vehicle that is added to the permit during the 3-year period.
P.A. 097-1163	Approved 2013, Authorizes the owners and operators of general construction facilities to receive double credit for asphalt shingles that they divert to a shingle recycling facility. Authorizes the Illinois Highway Department of Transportation to set a goal of maximizing the use of recycled materials in asphalt paving projects.
P.A. 098-0239	Approved in 2013, EPA Urban Composting: exempts small, non-commercial, compost sites from some regulations.
P.A. 098-0296	Approved in 2013 to give the IEPA the ability to deny Beneficial Use permits to asphalt shingle recyclers that have a history of violations.
P.A. 098-0484	Approved in 2013, Farm Composting: Authorizes a person who is operating an on-farm landscape composting facility to accept food scrap, crop residue, livestock waste, agricultural landscape waste, uncontaminated wood waste, yard waste, and landscape waste for composting when meeting EPA requirements.
P.A. 098-0656	Approved in 2013, with parts effective immediately, parts in 2015 and part in 2016; Tire Storage, recycling: Addresses large storage issues and calls for financial assistance through existing fees to be given to units of local government and private industry for the purposes of:

	(A) assisting in the establishment of facilities and programs to collect, process, and utilize used and waste tires and tire-derived materials; (B) demonstrating the feasibility of innovative technologies as a means of collecting, storing, processing, and utilizing used and waste tires and tire-derived materials; and © applying demonstrated technologies as a means of collecting, storing, processing, and utilizing used and waste tires and tire-derived materials.
P.A. 098-0714	The EPA will post on its website information regarding electronic collection sites. Collectors must also provide a report to the EPA regarding items collected.
P.A. 098-0857	Allows law enforcement to bring all types of pharmaceuticals to an IEPA permitted Household Hazardous Waste collection facility for storage and eventual disposal service.
P.A. 098-1079	Any person who engages in the business of collecting or hauling garbage, municipal waste, recyclable material, landscape waste, brush, or other refuse operating in specific counties or municipalities must offer the collection of recyclable materials.
P.A. 099-0011	Establishes one day compostable waste collection events requirements. Encourages pumpkin collections and may also be applicable to leaf and brush collections.
P.A. 099-0013	Enacted in 2015. Revises the Electronic Products Recycling and Reuse Act. Increases the amount of items electronic manufacturers have to pay to recycle.
P.A. 099-0034	Requires all state agencies to report on their compost use and examine whether they could use additional end product compost in land maintenance activities. Such land maintenance activities include reduction of stormwater run-off and increased infiltration of moisture in land maintenance activities. This information must be reported to the General Assembly by December 15, 2015.
P.A. 099-0067	Defines Biosolids. "Exceptional Quality biosolids" means solids that: -are generated from the advanced processing of publicly-owned sewage treatment plant sludge; -not exceed ceiling concentration limit -meet requirements for Class A with respect to pathogens -meet 1 vector attraction reduction requirements
S.B. 0116	Pending, corporate authorities of a county or a municipality may establish a green special service area with Property Assessed Clean Energy (PACE) Financing.
P.A. 099-0082	Effective on July 1, 2015, no person may knowingly mix sharps with any other material intended for collection as a recyclable material by a residential or commercial hauler. The EPA will provide educational materials to the public about the safe management and proper disposal of household generated sharps.
H.B. 0001	Effective on August 25, 2015, the IEPA will be required to set up a state approach to pharmaceutical collections. The Director of the Division of Alcoholism and Substance Abuse will also educate the public about drug disposal practices as well as take-back programs.
P.A. 099-0552	Amends the Procurement Code. Effective July 15, 2016, a public entity shall not enter into a contract to purchase food with a bidder or offeror if the bidder's or offeror's contract terms prohibit the public entity from donating food to food banks, including, but not limited to, homeless shelters, food pantries, and soup kitchens. Amends the School Code to make a similar change.
S.B. 1807	Prohibits a unit of local government from entering a franchise agreement for Construction and Demolition Recycling services.
County Legislation	
Alameda County	In 2012 Alameda County, California, passed an ordinance requiring any drug manufacturer whose products were sold in the County to implement and fully fund a take-back program for residents.
Cook County	In 2016 Cook County adopted an ordinance anticipated to provide over five million residents with convenient access to safe drug disposal. The ordinance makes Cook County the largest county in the U.S. to require drug companies to safely dispose of unwanted medications, and adds to the two states, nine counties, and three cities in the U.S. with similar drug take-back laws.
Cook County	In Cook County, an ordinance requiring fees be paid by transfer stations based on volume throughput resulted in a court ruling siting the Solid Waste Plan Authority as the means that allowed the fees to be implemented. (Sec. 30-826. – Municipal solid waste transfer station fees and exemptions.)

	Due to the courts upholding this ordinance, Senate Bill 1561 was introduced in 2017 to limit the authority within the Solid Waste Planning Act.
McHenry County	In 2015 McHenry County utilized IL Statute P.A. 091-111 (which allows Counties to enter into agreements with municipalities, private entities and citizens for refuse service and recycling services) to create an ordinance and bid a contract for comprehensive collection services for specific unincorporated areas of the County.
Will County	In 2007 and 2015 the Will County Board approved expansions of the Laraway RDF, which primarily accepts contaminated soils and construction and demolition waste. The owner and operator, Waste Management, agreed through a Host Agreement to cap a former Phosphogypsum Stack next to the facility.
Will County	In February, 2010, the Will County Board approved a Gas Purchase Agreement with Waste Management Renewable Energy and Waste Management to purchase landfill gas from the County's Prairie View RDF to be used in a renewable Gas-To-Energy Plant.
Will County	In February, 2010, the Will County Board approved allowing Waste Management to recirculate leachate at the County owned, Prairie View RDF. The recirculation of leachate is expected to produce additional gas to be used at the Gas-To-Energy Plant and decompose the waste faster, resulting in better utilization of the landfill air space.

APPENDIX B
SUMMARY OF COURT DECISIONS SINCE 2007 AFFECTING
WILL COUNTY SOLID WASTE PLAN IMPLEMENTATION

Disclaimer: The following information is presented in summary form. It is not intended to replace a thorough reading of the judicial rulings. It not intended to be a comprehensive list of every judicial decision, but is offered for facilitating an understanding of the foundation and context for the Solid Waste Management Plan. (IPCB - <http://www.ipcb.state.il.us/COOL/external/casemenu.aspx>)

Court Cases	Background and Final Decision
Massachusetts v. Environmental Protection Agency (Supreme Court of the United States 2007)	Twelve states and several cities of the United States sued the Environmental Protection Agency for not regulating carbon dioxide and other greenhouse gases as pollutants. On remand, EPA found that six greenhouse gases “in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare.”
United Haulers Assn. v. Oneida-Herkimer Solid Waste Mgmt. Auth. (Supreme Court of the United States Decided 2007)	A non-profit corporation, United Haulers, sued the New York counties of Oneida & Herkimer, claiming that county ordinances required all solid waste and recyclables to be delivered to one of several waste processing facilities owned by the Authority. The Court concluded that the Counties’ flow control ordinances, which treat in-state private business interests exactly the same as out-of-state ones, do not discriminate against interstate commerce.
Save the Plastic Bag Coalition v. The City of Manhattan Beach (Supreme Court of California 2011)	On July 14, 2008, the City of Manhattan Beach adopted Ordinance # 2115 to ban the use of single use plastic bags. This was overturned by the Supreme Court of California in 2011 concluding “the ordinance’s ban on plastic bags would have a severe and immediate effect on their business in the City.”
Justice Department’s Environmental and Natural Resources Division vs Wal-Mart (2013)	Wal-Mart agreed to pay \$81 million due to criminal charges. Wal-Mart pleaded guilty to six counts of violating the Clean Water Act by illegally handling and disposing of hazardous materials.
Stop the Mega-Dump v. County Board of Dekalb County, Illinois, and Waste Management of Illinois, Inc., and Illinois Pollution Control Board (Illinois Supreme Court 2013)	Though fought by a citizens group, Stop the Mega-Dump (STMD), Waste Management was granted approval for a vertical and horizontal expansion of the Dekalb County Landfill.
Martin Maggio v. County of Winnebago, Winnebago County Board, and Winnebago Landfill Company, LLC (Illinois Pollution Control Board 2013)	County of Winnebago filed for an expansion. A landowner adjacent to the landfill appealed the expansion stating “the County Board did not have proper jurisdiction” and “the County Board’s proceedings were not fundamentally fair.” The Board found that WLC complied with proper requirements and allowed for the application for expansion.
People of the State of Illinois v. Forbo Adhesives, LLC, a Delaware limited liability company (Illinois Pollution Control Board 2012)	Illinois EPA inspector documented that Forbo Adhesives were not meeting codes and regulations for their hazardous waste storage area. Forbo Adhesives was found to be in violation and paid a civil penalty of \$44,403.
Rockland County, NY (Spring, 2014)	Upheld Flow Control law which required haulers to bring waste and recyclables to a government owned, but privately operated facility.
CCDD Ruling by Illinois Pollution Control Board (IPCB)	Proposed Amendments to Clean Construction or Demolition Debris (CCDD) Fill Operations: Proposed amendments to 35 Ill. Adm. Code 1100.R12-9 dated June 7, 2012. IPCB ruled that groundwater monitoring at CCDD and Uncontaminated Soil Fill operation sites was not required due to sufficient regulations being promulgated to protect ground water.
Will County Appeal Illinois Pollution Control Board	After a lengthy process whereby Will County and the Illinois Attorney General pleaded to the IPCB to require groundwater monitoring at CCDD and Uncontaminated Soil Fill Operations, an appeal was filed on September 14, 2015 to the Illinois 3 rd District Appellate Court to impose monitoring.

APPENDIX C

SUMMARY OF LOCAL GOVERNMENT CALLING FOR ZERO WASTE

Cities & Counties	Background and Final Decision
U.S. Conference of Mayors 2015 Adopted Resolution	The United States Conference of Mayors adopted a definition of Zero Waste, and set of Zero Waste principles, that recognizes a Hierarchy of Material Management as follows: Extended Producer Responsibility and Product Redesign; Reduce Waste, Toxicity, Consumption, and Packaging; Repair, Reuse and Donate; Recycle; Compost; Down Cycle and Beneficial Reuse; Waste-Based Energy as disposal; Landfill Waste as disposal; and encourages cities that have not already done so to work toward the adoption a similar set of zero waste principles in their own communities.
Central Vermont Solid Waste Management District	The Central Vermont Solid Waste Management District adopted a zero waste plan in 2003. The district has a <u>section on its site</u> devoted to zero waste.
San Francisco, CA	San Francisco set a zero waste goal for 2020 in 2005 or earlier, with a long list of resolutions in place to achieve the goal. As of 2014, the city claimed to have achieved an 80 percent diversion rate. Most recently, the city was sued to stop it from steering a \$130 million waste disposal contract pact to Recology.
Austin, TX	Discussions about zero waste began about 2005 and in 2008, the city hired a consultant to write a plan to achieve zero waste and divert all of its landfill waste toward reuse and recycling by 2040. The strategic plan was unveiled later that year and adopted in 2009. The city has a litany of programs in place to help achieve that goal. In 2015 it hopes to reach the 50 percent diversion rate milestone. In 2017, all commercial properties (including apartments) will be required to provide recycling. In 2018 all food service businesses will be required to divert organic material.
Oakland, CA	The city adopted a <u>zero waste strategic plan in 2006</u> with a goal of implementing a zero waste system by 2020 and updated periodically. Recently, Oakland restaurants have decried big increases in composting costs in the city's new trash program.
Seattle, WA	The City adopted a Zero Waste Resolution in July 2007 and have made a series of steps to reach the goal. Recently, the city implemented an aggressive organics program. It has banned food waste citywide and had planned on implementing \$1 fines on residents for noncompliance. In April it suspended the fine. And more recently the city was sued by some residents in an effort to <u>prevent haulers from inspecting waste bins</u> .
Dallas, TX	Dallas' zero waste aspirations were laid out in its Local Solid Waste Management Plan 2011-2060, released in 2013. The goals are less aggressive than in some other zero waste, cities, but for its part Dallas is aiming for a 40 percent diversion rate by 2020, a 60 percent rate by 2030 and zero waste by 2040. The plan was criticized, which has led to some revisions.
Salt Lake City, UT	In Salt Lake City's Zero Waste Resolution, passed in 2011, the city aims for 50 percent diversion by 2015; 70 percent diversion by 2025 and zero waste by 2040. Currently, the city says it has achieved a diversion rate of 38 percent for the residential sector. But a study completed in the spring of 2012 estimated that the recycling rate for the non-residential and multi-family sector in Salt Lake City was just 10 percent. It is now considering legislation to put mandatory recycling requirements on such structures to help boost its diversion rates.
Washington, DC	In 2014 Washington D.C. City Council unanimously passed two key pieces of legislation: <u>a Styrofoam ban</u> by food service businesses and <u>a waste modernization bill</u> . The bill establishes a clear priority for reuse and recycling over landfilling and incineration, requires separation of waste into recyclables, compostables, and trash, imposes strict reporting requirements for private haulers, and bans the disposal of a wide-range of electronic waste (e-waste). The bill also requires the government to

	develop a zero waste plan designed to move DC toward its goal of 80% waste diversion and leaves open the possibility of implementing a Pay as You Throw (PAYT) system.
City of Minneapolis, MN	During her 2015 State of the City address, Mayor Hodges launched a process to create a set of strategies to move Minneapolis toward zero-waste. In June, the Minneapolis City Council approved goals for the city to recycle and compost 50 percent of its waste by 2020 and 80 percent by 2030. Most recently, City Council Members introduced a resolution indicating a zero waste plan will be developed for City Council consideration in spring of 2016.
San Diego, CA	San Diego announced aggressive new goals for the city in June of 2015. They approved a plan that envisions the diversion rate climbing to 75 percent by 2020, 90 percent in 2035 and 100 percent in 25 years. The city is currently hosting a series of zero waste meetings to flesh out the details of how it will achieve those goals.
Los Angeles, CA	Los Angeles' zero waste ambitions go hand-in-hand with its franchise zone plans. Key to the franchise plan is increasing the diversion rate for commercial real estate and apartments. In 2014, the City Council voted to approve the Department of Sanitation's proposed Zero Waste LA Commercial and Multifamily Franchise Hauling system. More details on Los Angeles' zero waste plan can be found here .
New York, NY	Part of Mayor Bill de Blasio's OneNYC plan calls for sending zero waste to landfills and reducing waste disposal by 90 percent relative to 2005 levels, by 2030. The plan was announced in April, 2015. The sustainability plan includes the expansion of New York City's organics curbside collection and local drop-off site programs to serve all New Yorkers by the end of 2018. The city also hopes to implement single-stream recycling collection for metal, glass, plastic and paper products by 2020.

APPENDIX D

STATUS REPORT ON PAST UPDATES & CURRENT PLAN COMPONENTS

Over the years, the Solid Waste Management Plan components have evolved, adapting to changes in legislation, addressing a variety of waste streams and exploring methods of collection, waste reduction and recycling. This Appendix summarizes the status of Solid Waste Management Plan components contained in the original 1991 Plan, each of the past three updates, and provides information on the goals offered in this plan.

The summary “Table” format allows insight at-a-glance to past goals and the current 2008-2016 recommendations to implement, modify, or remove the previous Plan components from further consideration. Any additional components are added to the officially adopted Plan in Chapter 4.

Although conceived as a twenty-year plan, a County Solid Waste Plan is to be updated every five years in order to adapt to changes in the Solid Waste industry and comply with the intent of the Will County Board with regards to Plan implementation. Some of the original Plan's recommended system components are no longer relevant, applicable, necessary, or have proven to be inappropriate. Therefore, the five columns of information (shown on the following pages) summarize the Plan Components; depicting additions, eliminations and modifications to reflect current conditions.

NOTE: Definitions of Terms Used in the Status Report

Add – means to create a new goal

Delete – means to delete this goal in its entirety

Continue – means to continue to pursue previous actions described, already implemented

Implement – means to begin action described

Modify – means to change the action described slightly and includes description of action to be taken

APPENDIX D: TABLE 1. SUMMARY OF WILL COUNTY SOLID WASTE MANAGEMENT PLAN COMPONENT STATUS					
(1991 Solid Waste Plan, 1996 Plan Update, 2001 Plan Update, 2008 Plan Update)					
Plan Component	1991 Plan Recommendation	1996 Plan Update Recommendation	2001 Plan Update Recommendation	2001-2007 Status & Recommendation(s)	2007-2016 Status & Recommendation(s)
Source Reduction & ReUse	5% volume reduction goal at the source	5% volume reduction goal at the source	Deleted; No standardized method exists to track the effects of source reduction	Continue	Continue
	Build cost of disposal into bid considerations	Recommendation dropped from further consideration	Modify; Disposal cost should be given informal consideration during bidding	Modify; Encourage disposal cost identification in waste service bids/proposals	Continue
	Assign bid preferences for recycled feedstock and consideration of disposal cost	No bid preferences, rather County will promote recycled-content procurement	Implement; No bid preferences shall be given to products with recycled-content	Modify; Pursue purchasing to include recycled-content with non-recycled-content bid requests	Continue
	Develop promotional campaign regarding source reduction	Continue in grade schools, discontinue for businesses and institutions	Modify; Develop source reduction campaign for schools and businesses	Continue in schools and businesses	Continue
	Requirement of a two-sided copying policy for County govt.	Requirement removed, since all county offices have double-sided copying ability	Implement	Encourage double-sided copying in all County offices	Continue

Recycling & Landscape Material (LSM)
Food Scrap added to LSM

	Creation of information clearinghouse	Discontinue due to lack of personnel	Establish a clearinghouse within department/division	Develop clearinghouse on website	Continue
	Work with Three Rivers Mfg. Assn. and others to offer waste audit assistance	Discontinue due to lack of personnel	Offer waste audit assistance to all businesses in County	Implement	Continue
	Work with municipalities to develop volume/weight-based collection programs	Provide technical assistance as requested	Implement	Implement	Continue
	Continue volume reduction/recycling grant program	Continue with tip fee surcharge revenues	Implement	Implement when it is determined needed.	Continue
	30, 40 and 50 % reduction goals 5, 10 and 15 years after implementation of Plan	30, 40 and 50 % reduction goals 5, 10 and 15 years after implementation of Plan	Modify; 30, 35, 40 & 45% goals in 5, 10, 15 and 20 years respectively.	Modify; 40% goal for remaining 5 years	Modify; 55% diversion goal by 2022 (See Ch. 4, Goals Section)
	Develop public education campaign for recycling	Continue for residential sector, business leaders should implement education for commercial sector	Modify; Develop public education campaigns for residential, institutional and private sectors	Continue School Waste Reduction program, public education campaigns and restart commercial program.	Modify; Enhance by utilizing website and social media for public education on a continuous basis. Began in 2010. (See Ch. 4 Education and Outreach Section)
	Develop technical assistance program for recycling	Implement	Implement	Continue	Continue
			Add; Book Recycling Program with ReUse Component	Continue	Continue
			Add; Electronic Recycling Program	Modify; Establish permanent electronic collection sites	Modify; Continue Front-Door service and support more permanent electronic collection sites. (See Ch. 4 Electronics Recycling in Collection Programs Section)
	Implement/expand in-house recycling program	Implement	Implement	Continue	Modify; set goal for each County building and overall goal of 40%. (See Ch. 4 County Office Waste and Recycling Program Section)
	Continue grant/loan recycling program with record keeping requirements	Continue program but discontinue record keeping requirements	Modify; Reinstate record keeping requirements	Implement	Continue
	Develop support of recycling programs for elected officials	Implement	Implement	Implement	Continue
	Implement "Pay-By-The-Bag" programs in unincorporated areas	Implement	Modify; Seek cooperation with townships for variable rate pricing	Implement	Continue
	Identify/implement demonstration programs for recycling	Implement	Continue	Continue	Modify; Textiles, Wood, Carpet, Mattress, Latex Paint, and more as become available. (See Ch. 4

					Collection Programs Section)
	Prepare “general use” recycling materials	Continue	Continue	Continue	Continue
	Provide site approval support for recycling/LSM facilities	Continue	Continue	Continue within IEPA regulations	Continue
	Provide market development assistance for recycling industry	Removed from consideration, given level of private-sector recycling	Modify; Re-instate market development activities, primarily for C&D materials	Implement	Continue
	Not considered in original Solid Waste Plan				Add; Increase Food Scrap recycling, with a goal of 10% by 2022. (See Ch. 4 Composting and Garden Programs in Collection Programs Section)
	Not considered in original Solid Waste Plan				Add; Encourage In-Vessel Food Scrap Recycling/Composting. (See Ch. 4 Pumpkin Collection in Collection Programs Section)
	Not considered in original Solid Waste Plan				Add; Consider building a Collection Site on County owned property to offer collection of several recyclable items. (See Ch. 4 Collection Site in Collection Section)
Anaerobic digestion	Not considered in original Solid Waste Plan				Add; Consider large scale and small scale implementation for Food Scraps and Organics if economically feasible. (See Ch. 3 Anaerobic Digestion in Various Types of Solid Waste Facilities Section)
Gasification	Not considered in original Solid Waste Plan				Add; Consider gasification of portions of the waste stream for element recovery and energy if economically feasible. (See Ch. 3 Gasification in Various Types of Solid Waste Facilities Section)
Incineration	Waste Incineration	Volume reduction is totally excluded due to high cost	Continue	Continue	Continue
		Energy recovery not included in County’s plan for the near future	Exclude from future consideration given county landfill plans	Continue	Modify; Include economically feasible Biomass from elements of the waste stream for energy recovery in conjunction with recycling. (See Ch. 4 Wood Recycling in

					Collection Programs Section)
Landfill	County shall develop a landfill with the private sector	Site selected at Joliet Arsenal for county-owned landfill	Implement	Continue	Continue
	Landfill will be only for the disposal of waste generated within Will County	Landfill will be primarily for county waste, with a 20-year disposal capacity guarantee	Modify; 20 to 23 year disposal capacity guarantee for service area generated waste	Continue	Modify; County owned Landfill currently allowed to operate until 2042 per federal law. (See Ch. 2 Federal Legislative Changes in Legislative Changes Section)
	County-owned, privately operated facility	Continue	Implement	Continue	Continue
	County will pay costs of site purchase, siting, permitting & construction. Bonds to be issued for all costs	Not mentioned in Plan Update	Modify; Selected contractor will assume all costs of siting, permitting and construction	Modify; Any Pollution Control facility applicant will assume all costs of siting, permitting and construction	Continue
	County will prepare siting application	Not mentioned in Plan Update	Implemented; County reviewed siting application prepared by contractor selected to operate landfill	Continue	Continue
	Intergovernmental agreements for waste w/ municipalities for landfill	Implement	Delete; No such formal agreements will be sought	Continue	Continue
	County will investigate processing methods to reduce volume of waste landfilled	Not mentioned in Plan Update	Modify; Volume reduction processing methods are to be considered at landfill	Continue; Operator secured permit for C&D material recycling area	Continue
		Modify; County will charge market rate tip fees at landfill for non-residential waste; county municipalities will be charged a discounted tip fee	Modify; Non-residential tip fee not mentioned in landfill contract; contractor selected and operating agreement has been signed	Continue	Continue
			Add; Assist in remediation of brownfield sites as grant funding allows	Continue through completion of current project	Modify; Pursue additional grant funds when available. (See Ch. 4 Funding Mechanisms Section)
			Add; Aerial Photography and Altitude Comparison done at closing landfills	Discontinue unless needed	Continue
		Not considered in original Solid Waste Plan			Add; County currently in joint agreement with the landfill operator to turn landfill gas into electricity. Funds may be designated for energy efficiency projects. (See Ch. 2 County Ordinances and Actions Section)

Landfill	Not considered in original Solid Waste Plan				Add; County and landfill operator partner to explore the possibility of turning methane gas into fuel. (See Ch. 2 County Ordinances and Actions Section)
					Add; Explore the possibility of allowing out-of-county waste into Prairie View Landfill and increasing air and land capacity.
Household Hazardous Waste (HHW)	County will conduct at least 3 HHW collection programs annually	Modify; County will provide 1 collection event through contract, 2 additional collections annually will be sought from IEPA	Modify; Landfill contractor to provide at least 3 collections, additional collections sought through IEPA, municipalities and townships	Modify; Landfill contractor will provide funding for 2 mobile HHW collections and 1 Electronics collection annually; additional collections will be sought directly from IEPA; County will continue funding regional permanent HHW site in Naperville; County will pursue permanent HHW site within Will County. Landfill contractor may be asked to modify funding to support permanent electronic and HHW sites.	Modify; Continue and add County funded HHW collections when IEPA does not provide them. (See Ch. 4 Household Hazardous Waste Collection in Collection Programs Section)
	Cost of holding HHW collection events will eventually be built into disposal costs at LF	Not mentioned in Plan Update	Implement; Costs are borne by selected landfill contractor through operating agreement	Modify; Costs are borne by landfill contractor, IEPA and/or Solid Waste Fund	Continue
				Modify; Implement Medication Take-Back program with the IEPA	Modify; Utilize Solid Waste Funds and IEPA to provide Medication Take-Back through pharmacies and police departments. (See Ch. 4 Pharmaceutical Take-Back in Collection Programs Section)
Transfer Stations	Transfer stations will be needed depending on selected landfill location	One transfer station needed in both northern and eastern parts of County	Modify; Selected contractor may desire to site transfer stations in northern and eastern parts of the County	Continue; the eastern portion of Will County is partially serviced through the Matteson Transfer Station	Modify; still need a transfer station in northern portion of Will County. (See Ch. 3 Transfer Stations in Various Types of Solid Waste Facilities Section)
				Modify; Allow C&D recycling facilities pending State regulation changes	Modify; State now allows C&D recycling facilities without siting and some Transfer Stations have sought and are seeking siting changes to handle waste

					and C&D materials. (See Ch. 3 Construction and Demolition Recycling Facilities in Various Types of Solid Waste Facilities)
Collection in Unincorporated Areas	County will franchise collection in unincorporated areas	Implement	Implement	Modify; County will encourage townships to explore residential franchise opportunities alone or in partnership w/municipalities. If necessary, the County will pursue special service areas for waste, recycling and/or landscape collection services.	Continue
	Curbside and/or drop-off recycling will be required of all haulers operating in unincorporated areas	Drop-off recycling will be implemented in municipalities to serve unincorporated areas	Modify; County will implement waste collection franchises in the County under certain conditions	Modify; Implement recycling Drop-off programs for townships and municipalities and pursue curbside collection franchises or municipal contract expansions into unincorporated areas under appropriate conditions.	Continue
Municipal Services				Add; County will assist & encourage communities to explore or improve residential waste & recycling service contracts.	Continue
				Add; County will encourage municipalities with residential contracts to explore partnerships w/townships.	Continue
	Not considered in original Solid Waste Plan				Add; Encourage municipalities with residential collection contracts to add food scrap service to landscape service. (See Ch. 4 Assistance to Local Government in Tasks Section)
	Not considered in original Solid Waste Plan				Add; Encourage municipalities with residential collection contracts to add condominiums, townhouses and apartments to service. (See Ch. 4 Assistance to Local Government in Tasks Section)

Plan Updates	Updated at minimum of 5-year intervals	Continue	Modify; update Plan as needed (at a minimum of 5-year intervals)	Continue	Continue
	Assess volume reduction goals at first five-year update	Assess volume reduction goals at next five-year Plan Update	Delete; discontinue source reduction tracking; maintain recycling record keeping	Continue	Continue
	Review technologies intended to reduce volume of material permanently disposed at landfills	Not mentioned in Plan Update	Implement volume reduction strategies at landfill	Continue	Continue



The future includes economic growth through an increase of recycling and composting.

APPENDIX E

PUBLIC OUTREACH ACTIONS

The RR&E Staff performed a variety of outreach actions to notify the public and elected officials that the Solid Waste Plan Update was drafted and comments, suggestions, and concerns were welcome before approval and adoption would be requested from the County Board in December, 2017

- The Draft Solid Waste Plan Update Released on July 25, 2017 opening a 90 day comment period when it was published on the WillCountyGreen.com website. (Placed on the front page, with graphic and link to the .pdf file and added to the Solid Waste Plan page of the website.)
- An announcement of the Update was placed in the:
Herald News Farmer's Weekly Vedette
Naperville Sun Daily Southtown
- The County's "Green" electronic newsletter was sent out each month with a link to the Solid Waste Plan on the WillCountyGreen website along with instructions on where to send comments. The newsletters were sent on July 25, August 14, September 6, and October 2, 2017
- Social Media was used to promote the reading and solicitation of comments: Facebook and Twitter were used specifically to invite followers to read and comment on the Solid Waste Plan Update on July 25 and October 17, as well as including it with the links to the four newsletters listed above. A link and graphic of the Solid Waste Plan Update was also published on Instagram July 26, 2017.
- Email was sent to all Municipal and Township leaders, with a link to the Plan Update in July and October requesting comment.
- Email was sent to all waste haulers serving Will County and many recyclers, with a link to the Plan Update in July and October.
- Email was sent to local environmental groups and community organizations that partner with the County RR&E division of Land Use on programs with a link to the Plan Update in July and October.
- The County Recycling Program Specialist provided a presentation to the Will County Governmental League on September 14, 2017.
- The County Recycling Program Specialist offered a brief description of the Plan Update on October 12 at a meeting of Green Drinks – Joliet, encouraging attendees to read and comment on the Plan Update. This was also done at two Sharefest meetings and at the quarterly Ag-in-the-Classroom meeting at the Farm Bureau.
- Email was sent to the Illinois EPA notifying the Agency of the Draft Plan and approval timeline with a request for comment.
- The County Board provided public notice of a Public Hearing for the Draft Plan to be held at the October 19 County Board meeting.
- The Comment period ended October 22, 2017.
- The Solid Waste Plan Update was finalized and sent to the County Board for approval at the December 21, 2017 County Board Meeting.

APPENDIX F

COMMENTS RECEIVED BETWEEN JULY 25 AND OCTOBER 22, 2017

Sent: Monday, July 31, 2017 12:27 PM
To: Marta Keane <mkeane@willcountygreen.com>
Subject: RE: Green Summer Opportunities

Marta,

Please accept this anonymous comment on the Solid Waste Plan Update: I live in Romeoville in an Apartment Complex. They have NO RECYCLING dumpsters in the complex! I have called the management there as well as Waste Management and I believe since I am only a renter I can't make a difference. Is there any way that you can help me to make these apartments green?

The person submitting this comment wished to remain anonymous and was pleased that the Solid Waste Plan would encourage her local community to do more to increase access to recycling services. (Page 59 – Goals From 2017-2022)

From: Rita Travis [<mailto:Farstar2542@comcast.net>]
Sent: Friday, August 11, 2017 8:41 AM
To: RRE Intern1 <rreintern1@willcountygreen.com>; Samantha Bluemer <sbluemer@willcountygreen.com>
Subject: Re: Will County Solid Waste Management Plan Update (2007 - 2016) Now Requesting Comments

Hi Halynn and Sam,

It has taken me a while to get through the Solid Waste Plan. I am quite impressed with the scope of the document. I found the sections beginning with anaerobic digestion very interesting. It gives me hope that progress can be made.

Let me know if there is anything the Bluestem Earth Festival can do to assist in the effort. We are best at education.

I do have one question. I may have missed this in the document, but are there plans for commercial composting? Many of our institutions are now using compostable plates, cups, etc. rather than plastic. They are labeled as “commercially compostable.” Throwing them in with solid waste does not seem like the best option.

Thank you for sharing the document.

Rita Travis
Bluestem Earth Festival Co-chair



RR&E staff responded to this question, pointing out that the composting facility in Romeoville, highlighted in the Solid Waste Plan, was considered a “commercial composting site” intended for food scraps, compostable utensils, plates and cups. (Page 26 – Material Collection)

I have been reviewing the DRAFT plan and do not see any mention of agricultural livestock wastes, i.e., regarding production, collection, transfer, storage, treatment, utilization.

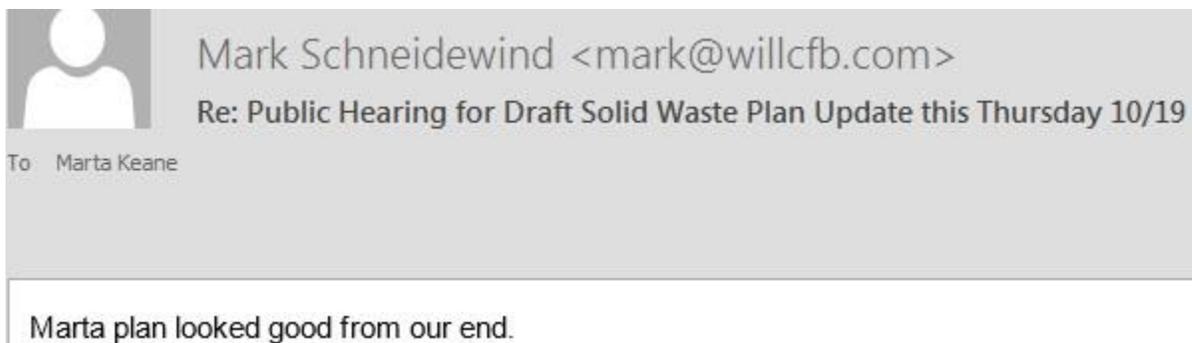
Is guidance concerning this waste shown somewhere else? Or just overlooked?

Thanks

Neil

Neil Pellmann, P.E., CPESC
Resource Conservationist
Will-South Cook Soil and Water Conservation District

Since livestock manure waste is not a significant issue in Will County, it was not specifically mentioned. In light of the comment, staff did address it. (Page 27 – Anaerobic Digestion and Page 31 Manure Management)



Will County staff made no changes to the Plan based on this comment.

From: Samuel Wyke [<mailto:wyke@rockdaleillinois.org>]

Sent: Friday, July 28, 2017 3:15 PM

To: Dean Olson

Subject: Will County Solid Waste Plan

Dean,

Thanks for forwarding the updated Solid Waste Plan. I read through the solid waste plan it generally looked good. I did notice there was nothing mentioned about the New Moen Transfer Station in The Village of Rockdale and that Environmental Recycling was not listed as one of the waste hauler offering municipal collection. Just curious why this was left out?

Please keep me updated on any other topics.

Thanks,

Mayor Sam Wyke

Sent: Friday, October 20, 2017 1:37 PM

To: Dean Olson

Cc: Donald R Ipema; Hock, John

Subject: public comment solid waste plan update

Good afternoon Dean,

As per our discussion yesterday I appreciate that your revised updated solid waste plan will include Environmental Recycling & Disposal under the list of waste haulers that service municipalities. Also, I did not see any mention of the Moen Transfer Station in the update, which filed for local siting in December of 2014 and was issued a development by the IEPA in March on 2017. I think it should be included since it will be part of the Will County waste infrastructure. Please let me know if you would like to discuss this further.

Thanks,

Jay A. Ipema

Environmental Recycling & Disposal

Will County was unable to include Environmental Recycling and Disposal in the original draft due to reporting inaccuracies. The company was added when reporting was completed. (Page 25 – Primary Waste Disposal) The proposed transfer station is in litigation and not currently operating. This station does not have a permit to operate from the Illinois EPA, however, due to the comments received, it has been listed. (Page 27 – Transfer Stations)

An Excerpt from a Tribune Article on the Public Hearing held October 19

In December 2014, the federal officials agreed to extend the life of the landfill from 2027 to 2042 because it was not filling up as quickly as anticipated. Federal action would be required to ease the restriction.

If it were lifted, the county could still limit the amount of waste accepted at Prairie View to ensure that it remain in use until 2042 or longer, officials said.

Dale Hoekstra, director of Waste Management, urged the board to work with federal officials to lift the restriction on Prairie View.

Board member Cory Singer, R-Frankfort, said it is necessary to understand why that regulation was imposed and the "importance of a deal remaining a deal."

"Will County suffered a loss when the arsenal was shut. This was done to benefit the people of Will County," he said. "I get that it has to be viable. I hope it extends beyond 2042 and that it could be expanded because it is very difficult to site landfills. Not many people seek a landfill next to them."

While a certain amount of tonnage is needed to make it economically viable, board Speaker Jim Moustis, R-Frankfort Township, said the county has "never put more in that landfill than was produced here."

He suggested the county board look into lifting the restriction of only county usage, saying, "it is important to make sure our landfill is economically viable."

In response to concerns expressed by Waste Management, the Solid Waste Plan Update was edited to include the exploration of expanding the service area with restrictions on the total amount of material accepted. (Page 56 – Pollution Control Facility Recommendations)

An Excerpt from the Public Hearing held October 19

Several Board Members, including Speaker Moustis, asked staff to look into the possibility of an expansion of Prairie View landfill since it takes a long time to either expand or to consider another site if expansion is not possible.

While the County Solid Waste Plan Update projects adequate disposal over the next 20 years through the use of Prairie View Landfill, in response to Board Members concerns with future landfill siting, the Plan Update now includes language allowing staff to explore the possibility of expanding both the height and footprint of the landfill for future needs. (Page 56 – Pollution Control Facility Recommendations)