

CHAPTER 2

UPDATED DEMOGRAPHIC AND WASTE MANAGEMENT DATA

Will County, Illinois is currently experiencing considerable growth in population and employment which has a direct impact on the generation and management of solid waste. Primary waste management data collected by the Will County Land Use Department, Waste Services Division (Waste Services) for calendar year 2000, as well as secondary demographic data from the U.S. Census for 2000 and population and employment data from the Northeastern Illinois Planning Commission (NIPC), were used to determine the amount of solid waste generated in 2000, waste generation rates for Will County and projections of waste generation for Will County and the Prairie View Recycling and Disposal Facility service area until 2020.

The Prairie View Recycling and Disposal Facility (Prairie View RDF) at the former Joliet Army Ammunition Plant will serve as the long-term waste disposal option for Will County and those communities at least partially in Will County. These communities include Aurora, Bolingbrook, Channahon, Coal City, Diamond, Godley, Joliet, Lemont, Minooka, Naperville, Orland Park, Park Forest, Sauk Village, Steger, Tinley Park and Woodridge. Population and employment data from the U.S. Census and NIPC for Will County and the non-Will County portions of these communities (hereafter referred to as the Service Area) were used to determine the amount of solid waste generated in the entire Service Area in 2000.

DEMOGRAPHICS

Population. Will County's population is rapidly increasing. According to U.S. Census data, Will County had a population of 502,266 in 2000, up from 357,313 in 1990 (an increase of over 40 percent). Depending on whether a third Chicago metropolitan airport is constructed near Peotone, NIPC estimates Will County's population will increase to between 739,046 and 822,743 by 2020. Table 2-1 depicts the projected population growth for the Service Area through the year 2020.

Prairie View RDF Service Area Population. According to 2000 U.S. Census data, the population in the remainder of the Service Area amounted to an additional 430,937 people. Thus, the entire Service Area included 933,203 people in 2000 (502,266 Will County residents plus 430,937 non-Will County residents). The Service Area population is projected to increase to between 1,254,767 and 1,345,711 by 2020 (an increase of between 34 and 44 percent) based on projections of population from NIPC.

TABLE 2-1 PRAIRIE VIEW RDF SERVICE AREA POPULATION PROJECTIONS, 2000 - 2020			
Area Population	2000 ¹	2020 with Peotone Airport ²	2020 without Peotone Airport ²
Will County	502,266	822,743	739,046
Remainder of Service Area	430,937	522,968	515,721
Prairie View Service Area	933,203	1,345,711	1,254,767
Source:			
1. U.S. Census, 2001			
2. NIPC (excluding Grundy and Kendall County portions), 2000			

Employment. According to NIPC, 145,625 persons were employed in Will County in 2000 (not including self-employed or family workers). NIPC projections of employment suggest an increase between 66 and 145 percent to between 227,840 and 336,897 persons by 2020 (again, depending on whether the third airport is constructed). Table 2-2 presents NIPC estimates for Will County employment growth.

Prairie View RDF Service Area Employment. According to NIPC, employment in the remainder of the Service Area amounted to 183,721 persons in 2000. Thus the entire Service Area employment was 329,347 in 2000. NIPC projections of employment in the Service Area (depending on whether the third airport is constructed) suggest an increase between 52 and 89 percent to between 498,855 and 622,123 persons by 2020.

**TABLE 2-2
PRAIRIE VIEW RDF SERVICE AREA
EMPLOYMENT PROJECTIONS, 2000 - 2020**

Employment Sector	2000	2020 with Peotone Airport	2020 without Peotone Airport
WILL COUNTY EMPLOYMENT			
Industrial	20,240	40,036	29,332
Commercial/Institutional	125,385	296,861	198,508
TOTAL	145,625	336,897	227,840
REMAINDER OF SERVICE AREA EMPLOYMENT			
Industrial	19,676	31,393	31,426
Commercial/Institutional	164,046	253,833	239,589
TOTAL	183,722	285,226	271,015
PRAIRIE VIEW SERVICE AREA EMPLOYMENT			
Industrial	39,916	71,429	60,758
Commercial/Institutional	289,431	550,694	438,097
TOTAL	329,347	622,123	498,855
Source: NIPC (excluding Grundy and Kendall County portions), 2000			

SOLID WASTE GENERATION AND MANAGEMENT

Methodology. Since 1999, Will County waste and recycling collection service providers have been required (by ordinance) to report to the County the amount of solid waste collected from Will County’s residential, commercial, institutional and industrial sectors. In addition, these haulers provide a breakdown of waste recycled and disposed. Seventy different haulers have reported waste collection in Will County during 2000. As a result, the Waste Services Division receives the most accurate, detailed data obtainable regarding the County’s waste management.

Waste generation rates used in this Plan Update differ significantly from those used in both the 1991 Solid Waste Management Plan and the 1996 Five-Year Update (see Table 2-3). Previously used residential waste generation rates were based on a sampling of four Will County communities (Bolingbrook, Joliet, Lockport and Romeoville) which resulted in a rate of 2.8 pounds of waste

generated per capita per day. Commercial waste generation rates were determined by obtaining two independent estimates from haulers (11 responses) and commercial/industrial waste generators (16 respondents). The rate of 6.5 pounds of waste disposed per commercial employee per day and 14.6 pounds of waste disposed per industrial employee per day were obtained (both rates are net of recycling). It was estimated that 18 percent of the commercial waste stream and 30 percent of the industrial waste stream was recycled in 1991. Therefore, commercial waste was generated at a rate of 7.9 pounds per employee per day and industrial waste was generated at a rate of 20.9 pounds per employee per day. In 1991, it was estimated that construction/demolition debris was generated at a rate of 0.72 pounds per capita per day. This was a widely used industry standard in 1991.

<p style="text-align: center;">TABLE 2-3 COMPARISON OF WILL COUNTY WASTE GENERATION RATES, 1991 & 2000</p>		
Sector	1991 & 1996 Waste Generation Rates ¹	2000 Waste Generation Rates ¹
Residential	2.8 PCD	2.04 PCD
Commercial/Institutional	6.5 PED / 7.9 PED ²	12.07 PED
Industrial	14.6 PED / 20.9 PED ²	30.51 PED
Construction/Demolition Debris	0.72 PCD	N/A ³
Total	5.8 PCD	6.28 PCD
<p>Notes:</p> <ol style="list-style-type: none"> 1. PCD refers to pounds per capita per day, PED refers to pounds per employee per day 2. First figure represents disposal rate, second figure represents generation rate 3. Construction/demolition debris was not disaggregated from commercial/institutional waste in 2000 <p>Source: Will County Solid Waste Management Plan, Volume II, 1991 Will County Land Use Department, Waste Services Division, 2001</p>		

Given the vastly different response rates from waste haulers in 2000 as well as the familiarity of waste haulers with the reporting procedures in Will County compared to 1991, the 2000 waste generation rates are judged to be more accurate of current waste generation in the County. Therefore, these more recently calculated rates will be used to project the rate of waste generation for the residential, commercial, institutional and industrial sectors of Will County and the Prairie View RDF Service Area in this second five-year Will County Solid Waste Management Plan Update.

Municipal Waste Generation. As defined by the Illinois Environmental Protection Act (415 ILCS 5/3.21), municipal waste refers to “garbage, general household and commercial waste, industrial lunchroom or office waste, landscape waste, and construction or demolition debris.” For the purposes of this Solid Waste Plan update, municipal waste will refer to residential, commercial and institutional waste (i.e., excluding industrial waste). Residential waste was generated at a rate of 2.04 pounds per capita per day (generating 186,619 tons) and commercial/institutional waste was generated at a rate of 12.07 pounds per employee per day (generating 276,201 tons). As indicated in Table 2-4 on the following page, 462,820 tons of municipal waste was generated in Will County in 2000 and 521,481 tons of municipal waste in the remainder of the Service Area, meaning 984,301 tons of municipal waste were generated in the Service Area in 2000.

Total Solid Waste Generation. Total waste is defined as all waste generated in the Service Area by the residential, commercial, institutional and industrial sectors. Residential waste was generated at a rate of 2.04 pounds per capita per day (generating 186,619 tons), commercial and institutional waste was generated at a rate of 12.07 pounds per employee per day (generating 276,201 tons) and industrial waste was generated at a rate of 30.51 pounds per employee per day (generating 112,715 tons). As indicated in Table 2-4, 575,535 tons of total solid waste was generated in Will County in 2000 and 631,052 tons of total solid waste in the remainder of the Service Area in 2000, meaning 1,206,587 tons of total solid waste were generated in the Service Area in 2000.

**TABLE 2-4
PRAIRIE VIEW RDF SERVICE AREA
SOLID WASTE GENERATION, 2000 (TONS)**

Sector	Tons Generated	Percent of Total	Generation Rate ¹
WILL COUNTY WASTE GENERATION			
Residential Waste	186,619	32.4%	2.04 PCD
Comm/Inst Waste	276,201	48.0%	12.07 PED
Municipal Waste Generation ²	462,820	80.4%	
Industrial Waste	112,715	19.6%	30.51 PED
Total Waste Generation ³	575,535	100.0%	
REMAINDER OF SERVICE AREA WASTE GENERATION			
Residential Waste	160,117	25.3%	2.04 PCD
Comm/Inst Waste	361,364	57.3%	12.07 PED
Municipal Waste Generation ²	521,481	82.6%	
Industrial Waste	109,571	17.4%	30.51 PED
Total Waste Generation ³	631,052	100.0%	
PRAIRIE VIEW SERVICE AREA WASTE GENERATION			
Residential Waste	346,736	28.7%	2.04 PCD
Comm/Inst Waste	637,565	52.8%	12.07 PED
Municipal Waste Generation ²	984,301	81.6%	
Industrial Waste	222,286	18.4%	30.51 PED
Total Waste Generation ³	1,206,587	100.0%	

Notes:

1. PCD refers to pounds per capita per day, PED refers to pounds per employee per day. Will County's residential, commercial/institutional and industrial waste generation rates were applied to the remainder of the Service Area to determine waste generation.
2. Municipal waste generation refers to the sum of residential and commercial/institutional waste.
3. Total waste generation refers to the sum of residential, commercial/institutional and industrial waste.

Source: Will County Land Use Department, Waste Services Division, 2001

Waste Disposition. In 2000, the vast majority of waste generated in Will County was disposed in sanitary landfills (355,507 tons or 61.8 percent), as depicted in Table 2-5. The remainder was taken to recycling centers or compost/land application facilities (220,029 tons or 38.2 percent). The municipal waste recycling rate (i.e., residential, commercial and institutional waste) for Will County in 2000 was 34.1 percent or 157,911 tons.

**TABLE 2-5
WILL COUNTY SOLID WASTE DISPOSITION, 2000 (TONS)**

Sector	Recyclables				Solid Waste Disposed	Tons Generated	% of Total
	Fiber ¹	Containers ²	LSW ³	Other ⁴			
Residential	13,974	28,706	18,649	8,597	116,647	186,619	32.4
Commercial	9,367	4,688	18,455	53,483	188,200	274,193	47.6
Institutional	746	50	0	1,150	62	2,008	0.4
Industrial	596	8,095	1,202	52,225	50,597	112,715	19.6
Total	24,683	41,538	38,306	115,501	355,507	575,535	100.0

Notes:

1. Fiber refers to all grades of paper.
2. Containers refer to aluminum, plastic, steel and glass containers.
3. LSW refers to landscape waste.
4. Other refers to scrap metal, construction/demolition debris, dimensional lumber and other recyclables.

Source: Will County Land Use Department, Waste Services Division, 2001

Waste Collection. All solid waste collection in Will County is performed by the private sector (with the exception of small quantities of landscape waste that is collected by public works crews). A total of 70 different companies reported waste collection activity in Will County during 2000. Six companies have contracts or franchise agreements with municipalities for waste and/or recycling collection (Waste Management-Southwest, BFI-Elgin, Citiwaste, Crown Recycling & Disposal, Groen Waste Services and Homewood/Nu-Way Disposal). Other service providers collect waste and recyclables from the commercial sector, the unincorporated areas of the County, and those municipalities without contracts/franchised collection. Curbside recycling is available in all but four municipalities (Crest Hill, Monee, Peotone and Beecher which are served exclusively by drop-off recycling facilities), as well as a small number of customers located in unincorporated areas of the County. Table 2-6 indicates the various service providers collecting waste in Will County.

TABLE 2-6
SERVICE PROVIDERS COLLECTING SOLID WASTE IN WILL COUNTY, 2000 ¹

A&R Recycling Inc.	Joliet Disposal
Abitibi Consolidated – Recycling Division	K&R Service
Accurate Document Destruction	Kaluzny Brothers
Ace Iron & Metals	Kendrick Paper Stock Company
American Disposal Services	Land & Lakes Company
American Mobile Shredding	Lemont Scrap Processing
Apex Waste Services	Loop Recycling
Apollo Disposal Service, Inc.	Mahoney Environmental
Atlas Roll-off Service	Metal Management-Midwest, Joliet Division
Bechstein Construction Co.	Midwest Transfer Services, Inc.
Belson Scrap & Steel, Inc.	Mobile Document Destruction
Berlinsky Scrap Corp	Panozzo Disposal
Best Environmental	Portable Services
BFI of Elgin	Prairie Disposal
Bill's Recycling	R&M Disposal Inc.
Call Today Haul Today	Recyclable Inc.
Citiwaste, Inc.	Recycled Fibers Division-Midwestern Region
Clark Excavating & Demolition	Recycling Systems, Inc.
Cornerstone Material Recovery	Region Metals
Crown Recycling & Waste Services	Resource Management Companies
D&P Roll-Off Recycling	Roy Strom Co.
Document Services Inc.	Shred It Inc.
Docu-Shred Inc.	Shred-Co
Environmental Recycling & Disposal	Shred-X Corporation
Flood Brothers Disposal Services	Skyline Disposal
Gaby Iron & Metal	Smith Salvage Co
Griffin Industries	TORVAC, Inc.
Groen Transportation, Inc.	Trashmasters Recycling & Disposal, Co.
Groen Waste Services	Tri-State Disposal Inc.
H&H Garbage Removal	United Scrap Metal, Inc.
Heartland Disposal	VIM Recycers, Inc
Hillside Disposal Service, Inc.	Waste Box - South
Homewood/Nu-Way Disposal Service	Waste Management of the South Suburbs
Illiana Scrap Processing Inc.	Waste Management-Southwest
Iron Mountain	Wise Recycling

Note:

1. List includes all refuse haulers, scrap metal recyclers, document destruction companies, restaurant grease haulers, commingled container recyclers and paper recyclers.

Source: Will County Land Use Department, Waste Services Division, 2001

POLLUTION CONTROL FACILITIES

Transfer Stations - There are five transfer stations in Will County permitted by the Illinois Environmental Protection Agency (IEPA): Banner Western Transfer and Recycling facility located in Rockdale (which accepts only Waste Management refuse), Waste Management-Southwest Transfer Station/Material Recycling Facility located in Joliet, Citiwaste, Inc. also located in Joliet (which is restricted to handling only non-putrescible waste), TCD Transfer Station in Wilmington and the E.C. Rizzi & Associates transfer station (for landscape waste only) in Bolingbrook. Table 2-7 lists the transfer stations in Will County.

TABLE 2-7 WILL COUNTY TRANSFER STATIONS, 2000		
Facility Name	Location	IEPA Site Number
Banner-Western Transfer & Recycling Center	Rockdale	1970850012
WM-Southwest Transfer Station & MRF	Joliet	1970450096
Citiwaste Transfer Station	Joliet	1978093002
E.C. Rizzi & Associates ¹	Bolingbrook	1974155082
TCD Services Transfer Station ²	Wilmington	1971100003
Source: Illinois Environmental Protection Agency, 2000.		
Note:		
1. Accepts landscape waste for transfer only.		
2. Facility was closed in 2000.		

Compost/Land Application. Landscape waste collected in Will County is taken to three permitted landscape waste composting facilities (CDT in Joliet and two Land & Lakes sites in Romeoville). Five on-farm land application sites are also used to manage the remainder of landscape waste collected in the county. Table 2-8 lists the compost/on-farm land application facilities in Will County.

**TABLE 2-8
WILL COUNTY COMPOST/LAND APPLICATION SITES, 2000**

Facility Name	Location	IEPA Site Number
CDT Landfill Corp. Compost Facility	Joliet	1978170005
Land & Lakes Willow Ranch Compost Facility	Romeoville	1970100001
Land & Lakes Willow Ranch Compost Facility	Romeoville	1978030003
Baltz Farms On-Farm Compost Facility	Shorewood	1970455315
Christensen Farms On-Farm Compost Facility	Peotone	1970755021
Henke Farms On-Farm Compost Facility	Wilmington	1978225001
Smits Farms On-Farm Compost Facility	Crete	1978010004
Plum Valley Nursery On-Farm Compost Facility	Crete	1970300015

Source: Illinois Environmental Protection Agency, 2001
Will County Land Use Department, Waste Services Division, 2001

Sanitary Landfills. In 2000, Will County had five permitted, non-hazardous landfills, namely the CDT Landfill in Joliet, Wheatland Prairie Recycling and Disposal Facility near Plainfield, the Laraway Recycling and Disposal Facility south of Joliet, Lincoln Stone Quarry in Joliet and Mineral Solutions (formerly American Fly Ash) near Romeoville. Since neither Lincoln Stone Quarry nor Mineral Solutions accept municipal solid waste for disposal, it will not be addressed further in this Plan. According to data from the IEPA, the three remaining landfills had less than 2 years and 1,777,000 cubic yards of disposal capacity remaining, as indicated in Table 2-9. CDT stopped accepting waste for disposal in March 2000, Laraway accepts primarily special waste, although small quantities of municipal waste are accepted, and Wheatland Prairie will cease accepting waste for disposal by June 2001.

**TABLE 2-9
WILL COUNTY MUNICIPAL WASTE LANDFILLS, 2000**

Facility Name	Location	IEPA Site #	Remaining Capacity (cubic yards)	Expected Closure Date
CDT Landfill	Joliet	1978170006	43,000	2000
Laraway Recycling & Disposal Facility ¹	Elwood	1970450002	616,000	2003
Wheatland Prairie Rec. & Disposal Fac.	Plainfield	1978200004	1,118,000	2001

Source: Illinois Environmental Protection Agency, 13th Annual Report, 2000.

Note:

1. Accepts some municipal waste, although predominantly special waste.

WASTE GENERATION PROJECTIONS

Population and employment projections from NIPC to 2020 do not include portions of those communities (Aurora, Channahon, Coal City, Diamond, Godley, Joliet and Minooka) that extend into Kendall and Grundy Counties, nor were these communities able to provide projections to 2020 for this Plan Update. Consequently, waste generation projections for the Grundy and Kendall County portions of the Service Area were not determined for this Plan Update.

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. Population and employment projections from NIPC were used to project waste generation until 2020.

From 1970 to 1990, the population of the Chicago metropolitan area increased a mere four percent. Employment increased at a similar, relatively slow rate. According to NIPC, population and employment levels in the Chicago metropolitan area are currently increasing at an unprecedented rate. Will County is in a unique position among other counties in the Chicago metropolitan area, since a third regional airport is being considered near Peotone in eastern Will County.

With or without the third regional airport, Will County’s growth will increase dramatically. Most recent estimates from NIPC suggest Will County’s population will increase by 64 percent (to 822,743) with the new airport or 47 percent (to 739,046) by 2020 without a third airport over the 2000 population of 502,266. Employment is expected to increase 131 percent (to 336,897) with the new airport or 57 percent (to 227,840) without the new airport over the 2000 employment of 145,625.

Waste generation is affected primarily by changes in population and employment. Using projections of population and employment from Tables 2-1 and 2-2, respectively, and the waste generation rates reported in Table 2-3, Will County and the Service Area will generate between 31,257,214 and 34,892,518 tons by 2020 as depicted in Table 2-10. These projections are derived annually through 2020 using the following formulas:

$$\text{Residential Waste Generation} = \frac{((2.04 \text{ PCD} * \text{Service Area Population}) * 365 \text{ days})}{2000 \text{ pounds}}$$

$$\text{Comm./Inst. Waste Generation} = \frac{((12.07 \text{ PED} * \text{Service Area Comm/Inst Employment}) * 365 \text{ days})}{2000 \text{ pounds}}$$

$$\text{Industrial Waste Generation} = \frac{((30.51 \text{ PED} * \text{Service Area Industrial Employment}) * 365 \text{ days})}{2000 \text{ pounds}}$$

(Note: calculations using these waste generation rates will result in slightly different amounts than those reported here due to rounding).

**TABLE 2-10
PRAIRIE VIEW RDF SERVICE AREA
SOLID WASTE GENERATION PROJECTIONS, 2000 – 2020**

Waste Stream	Tons of Waste Generated		
	2000	2020 ¹	2020 ²
WILL COUNTY WASTE GENERATION			
Residential	186,619	305,694	274,596
Commercial/Institutional	276,201	653,932	437,278
Municipal Waste Generation ³	462,820	959,626	711,874
Industrial	112,715	222,956	163,347
Total Waste Generation ⁴	575,535	1,182,582	875,221
REMAINDER OF SERVICE AREA WASTE GENERATION ⁵			
Residential	160,117	194,311	191,618
Commercial/Institutional	361,364	559,149	527,772
Municipal Waste Generation ³	521,481	753,460	628,896
Industrial	109,571	174,824	175,008
Total Waste Generation ⁴	631,052	928,284	803,904
PRAIRIE VIEW SERVICE AREA WASTE GENERATION			
Residential	346,736	500,005	466,214
Commercial/Institutional	637,565	1,213,081	965,050
Municipal Waste Generation ³	984,301	1,713,085	1,431,264
Industrial	222,286	397,780	338,355
Total Waste Generation ⁴	1,206,587	2,110,865	1,769,618

Notes:

1. Assuming 3rd Chicago regional airport is constructed.
2. Assuming no 3rd Chicago regional airport is constructed.
3. Municipal waste generation refers to the sum of residential and commercial/institutional waste.
4. Total waste generation refers to the sum of residential, commercial/institutional and industrial waste.
5. Will County's residential, commercial/institutional and industrial waste generation rates were applied to the remainder of the Service Area to determine waste generation in these areas.

Source: Will County Land Use Department, Waste Services Division, 2001