

Estimating Per Capita Residential/Commercial Waste Generation

Ohio EPA Recommendations
September 4, 2002

*** DRAFT ***

Per Capita Residential/Commercial Waste Generation Projections Based on US EPA Figures

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Per Capita Generation, lbs./person/day (a)	4.64	4.51	4.56	4.60	4.65	4.70	4.74	4.77	4.79	4.82	4.84	4.86

(a) See calculations below for the derivation of these figures

Recommended Annual Increases in Generation

Ohio EPA recommends projecting changes in residential/commercial waste generation using the per capita annual rate of increase indicated below. Although not as accurate as the first approach, an alternative approach would be to increase the lbs./person/day by the amounts indicated below.

Example: If the SWMD calculates a 3.0 lbs./person/day generation rate in 2000, in order to project waste generation in 2001 Ohio EPA recommends increasing the 3.0 lbs./person/day rate by 1%, resulting in 3.03 lbs./person/day in 2001. This number would then be multiplied by the projected population in 2001. Alternatively, the 3.0 figure could be increased by .04 lbs./person/day, resulting in 3.04 lbs./person/day in 2001.

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Recommended Per Capita Annual Rate of Increase	1.00%	1.00%	1.00%	1.00%	1.00%	0.50%	0.50%	0.50%	0.50%	0.50%
Recommended Annual Change, lbs./person/day	0.04	0.05	0.05	0.05	0.05	0.02	0.02	0.02	0.02	0.02

Calculations

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Waste Generation (1)	231,000,000	231,850,000	235,095,900	238,387,243	241,724,664	245,108,809	248,540,333					
Projected Rate of Increase (2)			1.4%	1.4%	1.4%	1.4%	1.4%					
Population (3)	272,691,000	281,422,000	282,547,688	283,677,879	284,812,590	285,951,841	287,095,648					
Projected Rate of Increase (4)			0.4%	0.4%	0.4%	0.4%	0.4%					
Per Capita Generation, lbs./person/day (5)	4.64	4.51	4.56	4.60	4.65	4.70	4.74	4.77	4.79	4.82	4.84	4.86
Calculated or Projected Rate of Increase (6)		-2.75%	1.00%	1.00%	1.00%	1.00%	1.00%	0.50%	0.50%	0.50%	0.50%	0.50%
Annual Change, lbs./person/day (7)		-0.13	0.04	0.05	0.05	0.05	0.05	0.02	0.02	0.02	0.02	0.02

(1) Total Waste Generation for 1999 is from the US EPA report "Municipal Solid Waste in The United States: 1999 Facts and Figures". Year 2000 is from the US EPA report "Municipal Solid Waste in The United States: 2000 Facts and Figures". Later amounts are calculated based on the projected rate of increase identified in (2)

(2) Projected rate of increase in total waste generation is from the US EPA report "Characterization Of Municipal Solid Waste In The United States: 1998 Update".

(3) Population in 1999 is from the US EPA report "Municipal Solid Waste in The United States: 1999 Facts and Figures". Year 2000 is from the US EPA report "Municipal Solid Waste in The United States: 2000 Facts and Figures". Later population numbers are calculated based on the projected increases identified in (4)

(4) Projected rate of population increase is based on the US EPA report "Characterization Of Municipal Solid Waste In The United States: 1998 Update".

(5) Per capita generation for 1999 is from the US EPA report "Municipal Solid Waste in The United States: 1999 Facts and Figures". Year 2000 is from the US EPA report "Municipal Solid Waste in The United States: 2000 Facts and Figures". 2001 through 2005 figures are calculated based on the projected total waste generation (1) and population (3) amounts. 2006 through 2010 figures are calculated by increasing per capita generation by .5% each year.

(6) Annual Rate of Change in Per Capita Generation rate is calculated for years 2000 through 2005 based on the change in the lbs./person/day (5) from the previous year. The rate is projected to increase at .5% for the years 2006 through 2010

(7) Annual Change in lbs./person/day is calculated based on the change in the lbs./person/day (5) from the previous year. Figures may not add to lbs./person/day in (5) due to rounding

Historic Comparison

	1990	1994	1995	1996*	1997	1998	1999	2000
Per Capita Generation	4.5	4.51	4.4	4.45	4.49	4.52	4.64	4.51
Annual Amount of Change			-0.11	0.05	0.04	0.03	0.12	-0.13
Annual Percent of Change			-2.4%	1.1%	0.9%	0.7%	2.7%	-2.8%

*estimated

<u>Time Period</u>	<u>% Increase</u>	<u>Average Annual % Increase</u>
Percent Increase, 1990 - 1999	3.1%□	0.3%
Percent Increase, 1994 - 1999	2.9%□	0.5%
Percent Increase, 1995 - 1999	5.5%□	1.2%
Projected Increase, 2000 - 2005	5.1%□	1.0%
Projected Increase, 2000 - 2010	7.7%□	0.8%