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Waste Projections after Implementation of SWMP Actions

This chapter presents the projections of waste quantities for Fairfax County's solid waste management (SWM) system over the next 20 years. These projections reflect the implementation of the SWMP actions and, therefore, are different from the SWM system projections in Chapter 2.

Since projecting source reduction and reuse quantities is problematic, waste projections in Chapter 2 are the county's most accurate estimates of solid waste generation.

The impacts of source reduction and reuse actions in the SWMP are reflected in solid waste generation projections. However, Fairfax County does not project source reduction and reuse quantities; calculating quantities of solid waste that are reduced prior to entering the waste stream is problematic. Therefore, the projections in Chapter 2 are the county's most accurate estimates of solid waste generation in Fairfax County over the next 20 years.

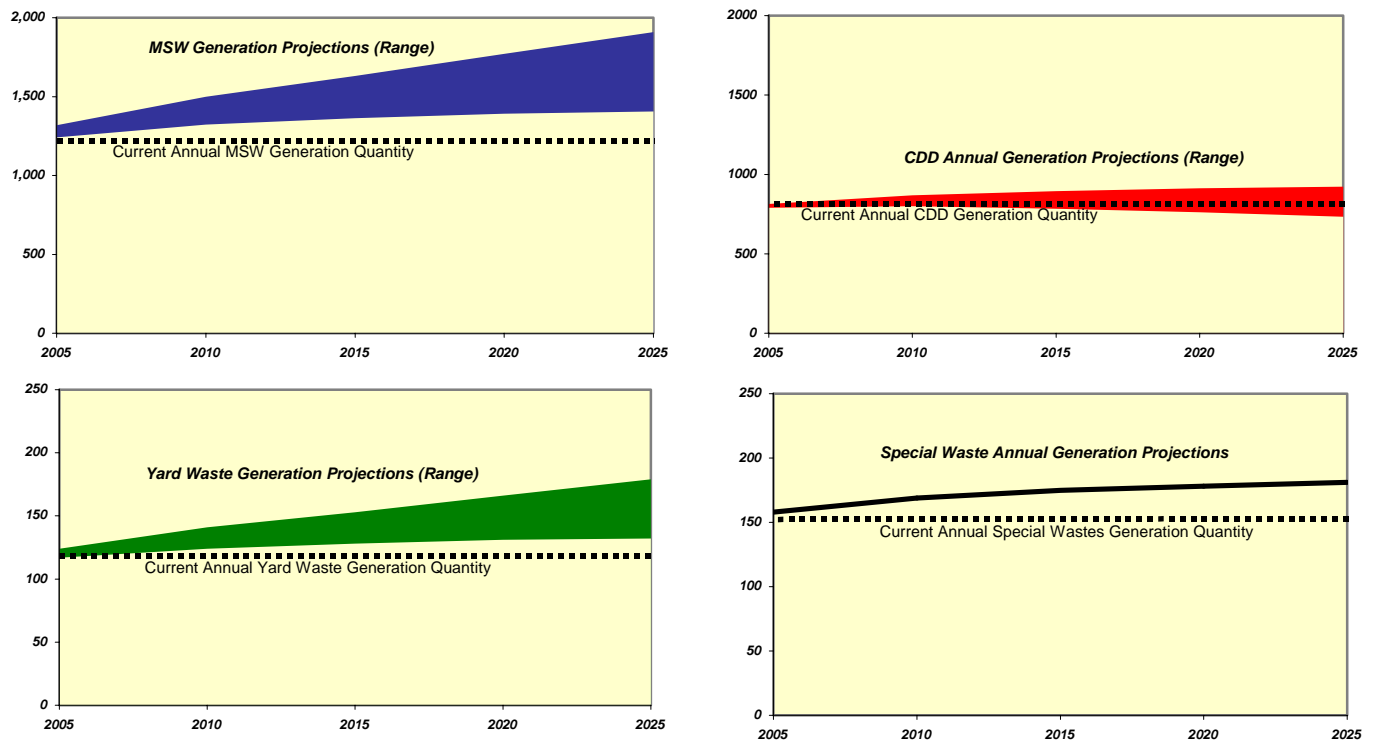


Table 2-10 of Chapter 2 shows the four alternative projections of MSW generated in Fairfax County over the next 20 years. Tables 2-12 and 2-13 present the county's two alternative projections of county-generated CDD. Yard waste and special wastes projections are presented in Tables 2-11 and 2-14. Table 13-1 and Figure 13-1 show the generation projections for MSW, CDD, yard waste and special wastes. Note that yard waste and some special wastes (i.e., used oil, used antifreeze, tires, and batteries) are also components of MSW.

Table 13-1. County 20-Year Generation Projections for MSW, CDD, Yard Waste and Special Wastes (in thousands of tons)

Year	MSW Generation (Range)	CDD Generation (Range)	Yard Waste Generation (Range)	Special Waste Generation	MSW, Excluding Yard Waste and MSW Special Wastes (Range)
2004	1,223 - 1,289	787 - 803	115 - 121	156	1,080 - 1,113
2005	1,241 - 1,319	791 - 815	117 - 124	158	1,096 - 1,161
2010	1,322 - 1,499	801 - 868	124 - 141	169	1,168 - 1,320
2015	1,363 - 1,630	785 - 895	128 - 153	175	1,208 - 1,442
2020	1,392 - 1,770	763 - 914	131 - 166	178	1,235 - 1,567
2025	1,406 - 1,909	733 - 924	132 - 179	181	1,249 - 1,694

Figure 13-1. County 20-Year Generation Projections for MSW, CDD, Yard Waste and Special Wastes (thousands of tons)



Recycling Projections

The county projects that implementing the SWMP actions will increase the annual quantities of MSW and CDD recycled.

Implementing the recycling SWMP actions (discussed in Chapter 11) will increase the annual quantities of MSW recycled in Fairfax County. These increases are in addition to the recycling projections in Chapter 2, which assume the continuation of current recycling activities. The county expects CDD recycling quantities to increase from SWMP actions, but only as a result of CDD disposal capacity concerns and recycling market conditions. Therefore, the county is unable to accurately calculate the impacts of SWMP actions on CDD recycling quantities. Fairfax County

does not project SWMP recycling actions to significantly impact yard waste and special waste recycling quantities.

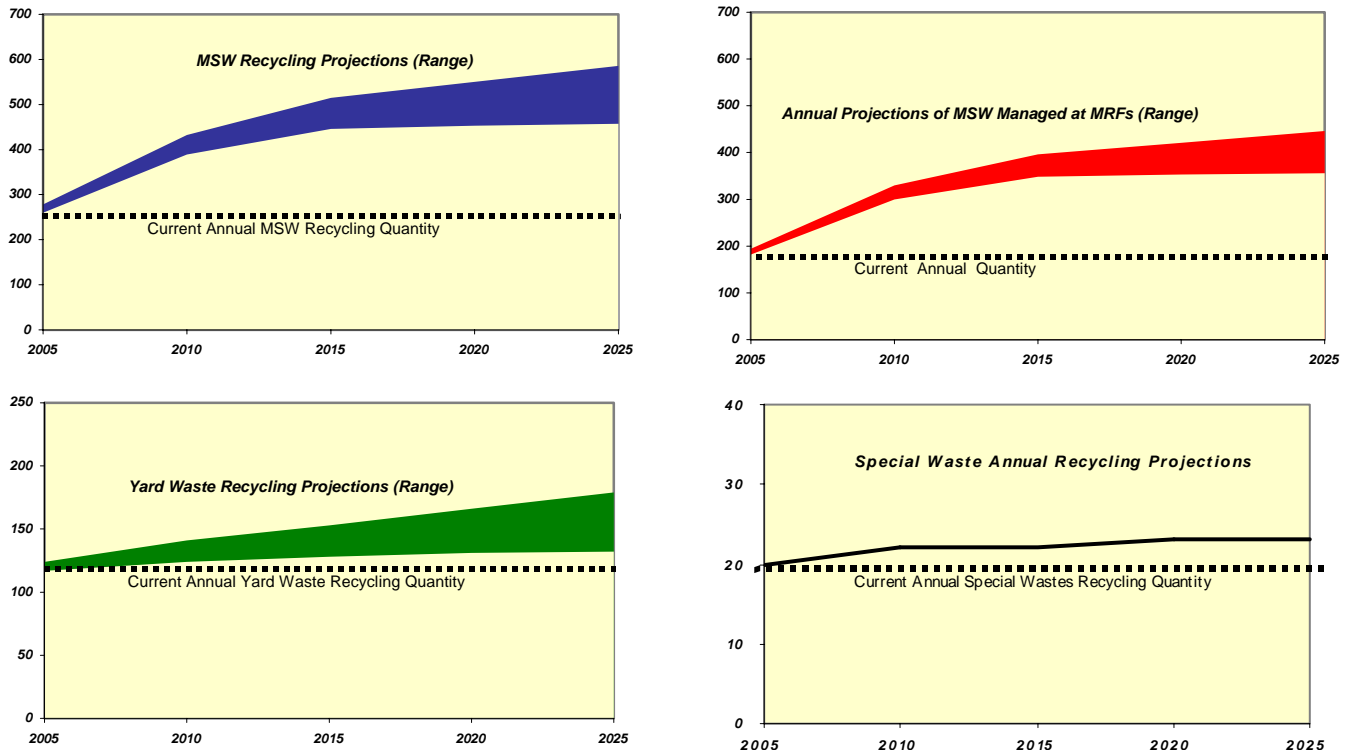
Table 13-2 and Figure 13-2 show the recycling projections for MSW, CDD, yard waste and special wastes. The calculation of the SWMP recycling projections is described below for each waste type.

Table 13-2. County 20-Year Recycling Projections for MSW, CDD, Yard Waste and Special Wastes (thousands of tons)

Year	MSW Recycling, Excluding Yard Waste and MSW Special Wastes (Range)	MSW Recyclables Managed by MRFs ¹ (Range)	CDD Recycling ²	Yard Waste Recycling (Range)	Special Waste Recyclables ³
2004	256 - 271	179 - 190	N/A	115 - 121	20
2005	260 - 278	182 - 194	N/A	117 - 124	20
2010	389 - 432	300 - 330	N/A	124 - 141	22
2015	446 - 515	348 - 396	N/A	128 - 153	22
2020	453 - 550	353 - 421	N/A	131 - 166	23
2025	457 - 586	356 - 446	N/A	132 - 179	23

- 1 - MSW recyclables managed at MRFs include paper, plastic, glass, and commingled bottles and cans
- 2 - The county is unable to accurately calculate the impacts of SWMP actions on CDD recycling quantities
- 3 - Special waste recyclables include used oil, used antifreeze, tires, and batteries

Figure 13-2. County 20-Year Recycling Projections for MSW, Yard Waste and Special Wastes (in thousands of tons)



Full implementation of the SWMP recycling actions is projected to increase annual MSW recycling quantities by 120,000 tons.

MSW



The county projects that the full implementation of the SWMP recycling actions will increase the annual MSW recycling quantities by 120,000 tons. These increases are in addition to the MSW recycling projections in Table 6-6 of Chapter 6, which assume the continuation of current recycling activities.

Annual recycling quantities are projected to increase gradually over the next eight years; the increase in recycling quantities will be in concert with the implementation of the SWMP recycling actions. The county expects to achieve the full annual recycling increase of 120,000 tons by 2012.

The county projects that improvements to curbside and business recycling will drive the future MSW recycling increases. MSW recycling increases from the SWMP actions will impact MSW recyclables managed by MRFs (i.e., paper, plastic, glass, and commingled bottles and cans) only.

Much of the recycling increases are expected to be achieved through expanding curbside recyclables to include mixed paper, plastic bottles, and cardboard. Recently, the county expanded recyclables for county collection service (provided to approximately 41,000 homes) to include mixed paper. This action increased recycling quantities by roughly 20 percent.

CDD

The county is unable to accurately calculate the impacts of SWMP actions on CDD recycling quantities.

If CDD disposal capacity concerns increase and CDD recycling is economically viable, Fairfax County will likely encourage increased CDD recycling by promoting the construction of a CDD recycling center in the county. Additionally, the county may revise County Code to require CDD recycling or recycling plans.



Since the county cannot accurately predict when CDD disposal capacity concerns will trigger increased CDD recycling, the county is unable to calculate the impacts of SWMP actions on CDD recycling quantities.

Yard Waste



Fairfax County does not project SWMP recycling actions to impact yard waste recycling quantities. Yard waste recycling projections are the same as the yard waste generation projections presented in Table 13-1.

Special Wastes

Special wastes recyclables include used oil, used antifreeze, tires, and batteries. Fairfax County does not project SWMP recycling actions to impact special wastes recycling quantities. Special wastes recycling projections are the same as the special wastes generation projections presented in Table 13-1.

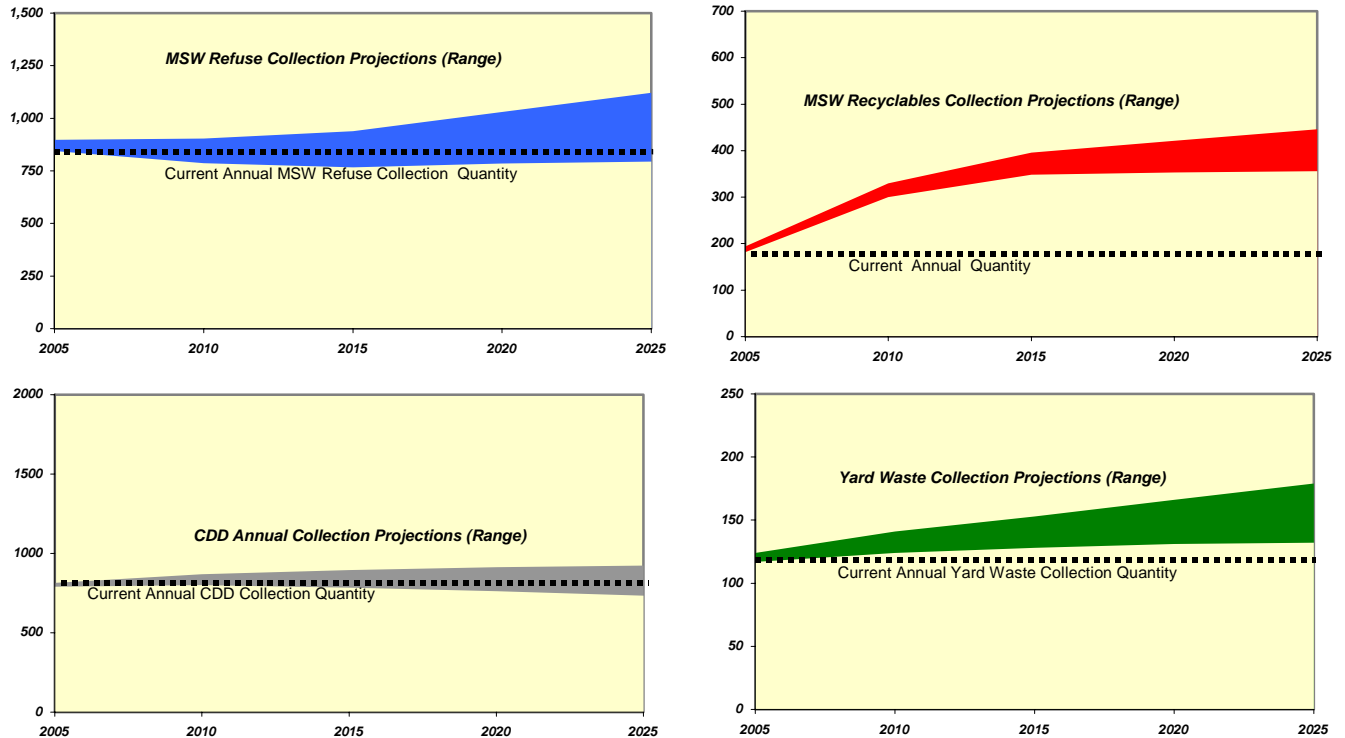


All waste generated, recycled and disposed in Fairfax County (except special wastes) will require collection. Table 13-3 and Figure 13-3 show the projected quantities of solid waste collection over the next 20 years.

Table 13-3. County 20-Year Collection Projections for MSW, CDD, and Yard Waste (in thousands of tons)

Year	MSW Refuse ¹ (Range)	MSW Recyclables Managed by MRFs ¹ (Range)	CDD (Range)	Yard Waste (Range)
2004	832 - 877	179 - 190	787 - 803	115 - 121
2005	844 - 897	182 - 194	791 - 815	117 - 124
2010	786 - 904	300 - 330	801 - 868	124 - 141
2015	766 - 939	348 - 396	785 - 895	128 - 153
2020	785 - 1,030	353 - 421	763 - 914	131 - 166
2025	794 - 1,121	356 - 446	733 - 924	132 - 179

Figure 13-3. County 20-Year Collection Projections for MSW, CDD, and Yard Waste (in thousands of tons)



Transfer Projections

Fairfax County SWMP actions include the continued transfer of all county-generated MSW and yard waste through county-operated transfer facilities (the I-66 Transfer Station and potentially other facilities). The county also plans to continue accepting some county-generated CDD at these transfer facilities. Table 13-4 and Figure 13-4 show the projected quantities of solid waste transfer over the next 20 years.



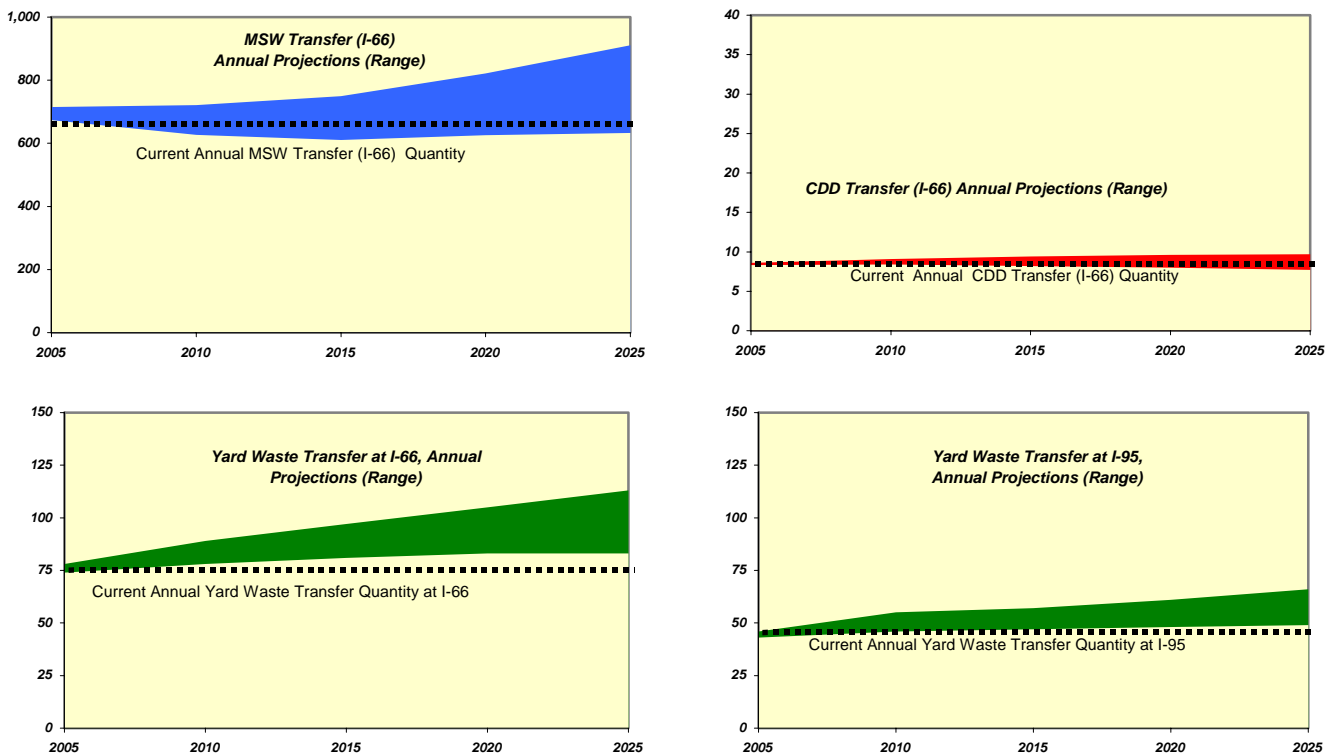
Fairfax County's current transfer facilities will have sufficient capacity to manage the projected quantities of solid waste requiring transfer over the SWMP planning period.

Table 13-4. County 20-Year Transfer Projections for MSW, CDD, and Yard Waste (in thousands of tons)

Year	MSW ¹ Handled at I-66 Transfer Station (Range)	MSW Sent Directly to E/RRF (Range)	CDD (Range)	Yard Waste Handled at I-66 Transfer Station (Range)	Yard Waste Handled at I-95 Landfill Complex (Range)
2004	663 - 699	168 - 177	8.2 - 8.4	72 - 76	42 - 45
2005	673 - 715	171 - 182	8.3 - 8.6	74 - 78	43 - 46
2010	627 - 721	159 - 183	8.4 - 9.1	78 - 89	46 - 52
2015	611 - 749	155 - 190	8.2 - 9.4	81 - 97	47 - 57
2020	626 - 822	159 - 208	8.0 - 9.6	83 - 105	48 - 61
2025	633 - 911	161 - 210	7.7 - 9.7	83 - 113	49 - 66

1 - MSW excluding yard waste and MSW special wastes

Figure 13-4. County 20-Year Transfer Projections for MSW, CDD, and Yard Waste (in thousands of tons)



Disposal Projections

Fairfax County SWMP actions include the continued use of the current disposal system. The county will dispose of all county-generated MSW using the E/RRF, with out-of-county landfills for overflow. County-generated CDD will be disposed of using in-county and out-of-county landfills. All county-generated yard waste will be recycled. Table 13-5 and Figure 13-5 show the projected quantities of solid waste disposal over the next 20 years.



Fairfax County's current disposal system will have sufficient capacity to handle the projected quantities of MSW requiring disposal over the SWMP planning period.

Table 13-5. County 20-Year Disposal Projections for MSW and CDD (in thousands of tons)

Year	MSW Disposed at the E/RRF (Range)	MSW Sent to Out-of-County Landfills (Range)	CDD Sent to Landfills (Range)
2004	778 - 823	54	787 - 803
2005	790 - 843	54	791 - 815
2010	732 - 850	54	801 - 868
2015	712 - 885	54	785 - 895
2020	731 - 976	54	762 - 914
2025	740 - 1,067	54	733 - 924

Figure 13-5. County 20-Year Disposal Projections for MSW and CDD (in thousands of tons)

