

Five Year Analysis of Household Solid Waste and Recycling Fees

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**Recycling and Materials Management Section
Division of Environmental Assistance and Customer Service
N.C. Department of Environmental Quality**



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Introduction

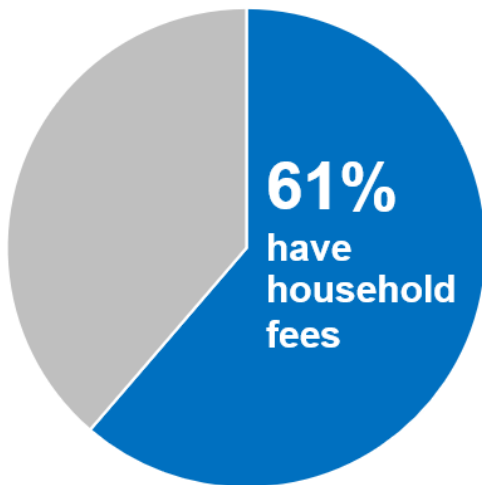
The Division of Environmental Assistance and Customer Services' (DEACS) Recycling and Materials Management Section (RAMMS) analyzed five years of local government solid waste and recycling fee data collected from Solid Waste and Materials Management Annual Reports from Fiscal Year (FY) 2014-15 through FY 2018-19. Annual reports are completed by every local government in the state.

Household Solid Waste and Recycling Fees

Of the 652 local governments in North Carolina, 442 operated or contracted for recycling programs in FY 2018-19. Of those governments with recycling programs, 271 local governments, or 61 percent, fund their recycling programs, in whole or in part, using per household charges. Those recycling programs without household charges are generally funded through property taxes.

Graph 1. Household Charges

Of North Carolina's 442 local government recycling programs, 271 have household solid waste and recycling fees.



This five-year analysis includes only those local governments that have per household charges for their recycling programs. Solid Waste and Materials Management Annual Report data is self-reported by local governments. Twenty-six governments with per household charges were removed from this analysis due to incomplete or inconsistent data within the five-year timeframe, leaving 245 recycling programs in this analysis.

This analysis includes the annual solid waste, recycling, yard waste, bulky waste, and/or availability fees charged by local governments per household. The sum of these fees is referred to as the "combined" solid waste and recycling fee. It includes only those fees which are charged monthly or annually; bulky item and yard waste pickup that is charged per collection is not included. Most governments with recycling programs provided one total sum for all their solid waste services.

Combined Solid Waste and Recycling Fees

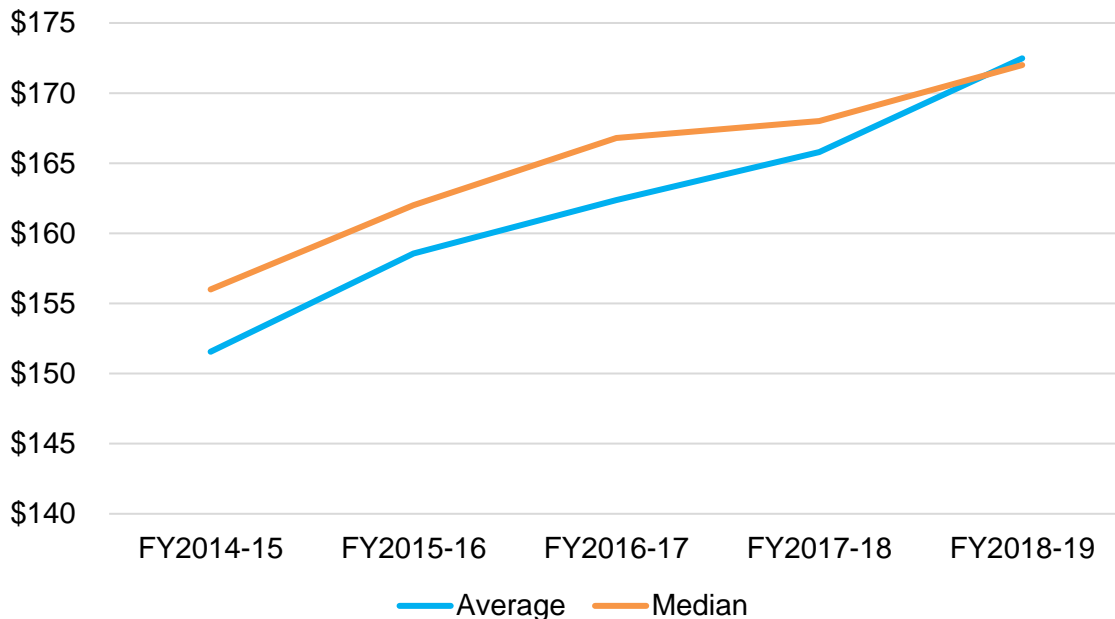
The average annual household fee for combined solid waste and recycling services increased by \$21 between FY 2014-15 and FY 2018-19 as shown in Table 1 and Graph 2 below. The median household fee increased by \$16. On average, local governments raised their combined solid waste and recycling fees by 14 percent between FY 2014-15 and FY 2018-19, including five governments that added household charges for the first time during these years. Twenty-nine percent of local governments included in this analysis, or 72 out of 245, did not increase their per household fees during this period.

Table 1. Combined annual solid waste and recycling fees, FY 2014-15 through 2018-19, N=245.*

	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total Increase
Average	\$152	\$159	\$162	\$166	\$172	\$21
Median	\$156	\$162	\$167	\$168	\$172	\$16

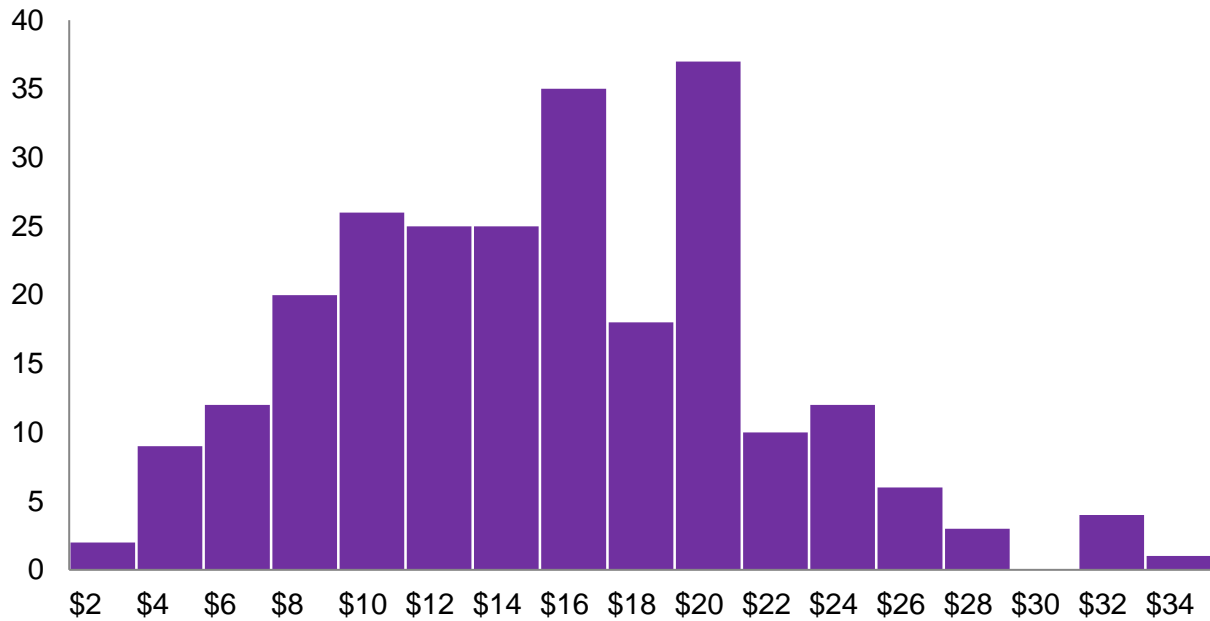
*All numbers are rounded to the nearest whole number.

Graph 2. Average and median combined annual household charges for solid waste, recycling, yard waste, bulky waste, and/or availability fees from FY 2014-15 to FY 2018-19, N=245.



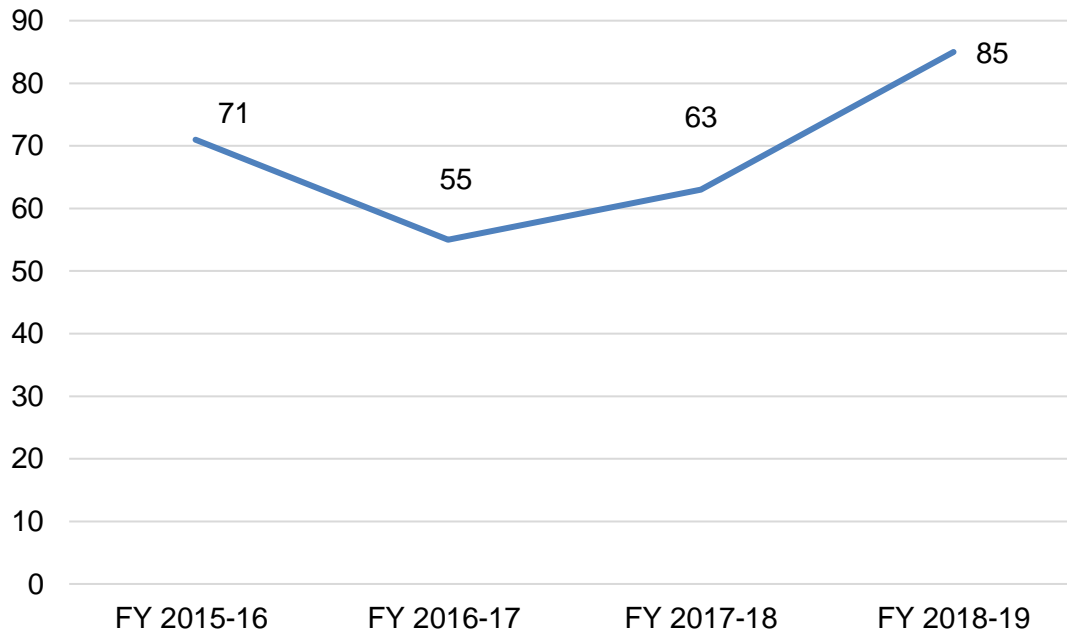
Graph 3 below shows the distribution of monthly combined solid waste and recycling fees in FY 2018-19. The average monthly fee in FY 2018-19 was \$14.37, and the median monthly fee was \$14.33.

Graph 3. Histogram of monthly combined solid waste and recycling fees in FY 2018-19, N=245.



Graph 4 below shows the number of local governments that increased their combined fees from FY 2015-16 to FY 2018-19. The largest fee increase occurred in FY 2018-19, when 85 local governments raised their combined solid waste fees.

Graph 4. Number of recycling programs (out of 245 programs) that increased combined solid waste and recycling fees each fiscal year.



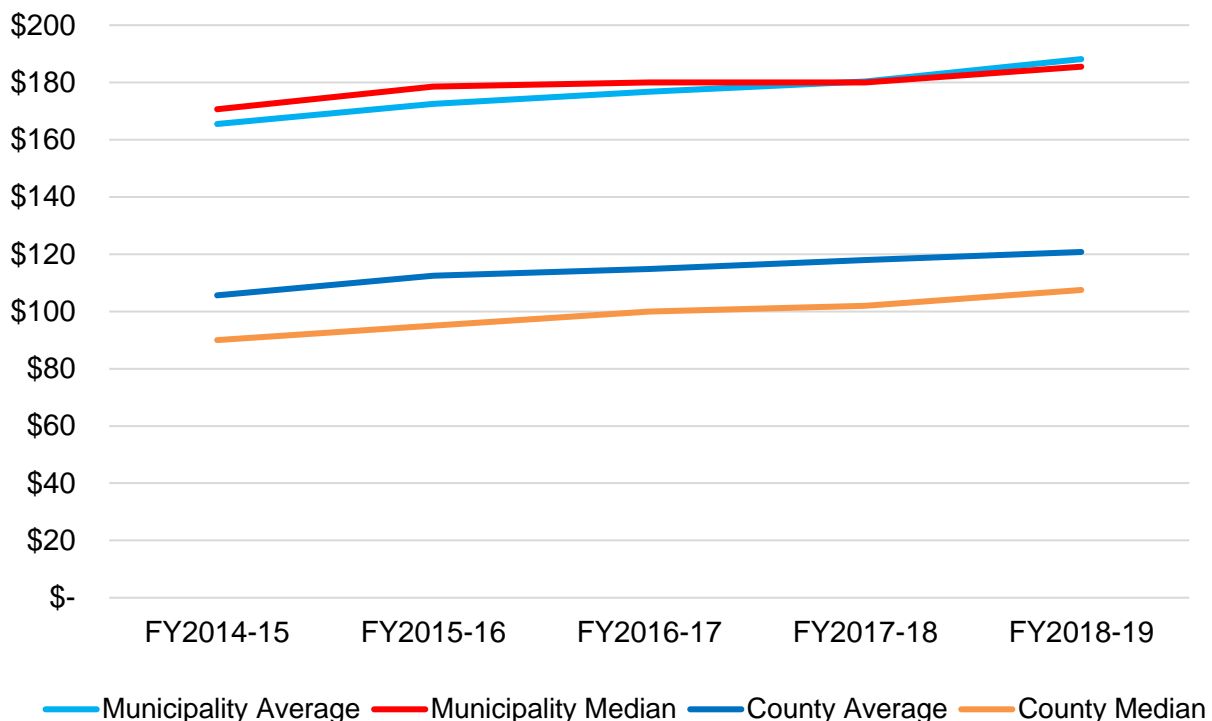
County versus Municipality Combined Solid Waste and Recycling Fees

Municipal solid waste and recycling fees are consistently higher than county fees as shown in Table 2 and Graph 5 below. In FY 2018-19, municipal fees were \$67 higher, on average, than county fees. In the same fiscal year, the median municipal fee was \$78 higher than the median county fee.

Table 2. Combined annual solid waste and recycling fees by county (N=57) and municipality (N=188), FY 2014-15 through 2018-19.

	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Municipality Average	\$165	\$173	\$177	\$180	\$188
Municipality Median	\$171	\$179	\$180	\$180	\$186
County Average	\$106	\$112	\$115	\$118	\$121
County Median	\$90	\$95	\$100	\$102	\$108

Graph 5. Average and median combined annual household charges for solid waste and recycling by county (N=57) and municipality (N=188), FY 2014-15 to FY 2018-19.



County Solid Waste and Recycling Fees

Most counties run drop-off convenience sites for their recycling programs instead of curbside programs. Of the 100 counties, 78 counties have drop-off recycling programs; 18 have both curbside and drop-off programs; and four have only curbside recycling programs.

Sixty counties have per household charges for their recycling and solid waste programs. Three of those counties were removed from this analysis due to inconsistent or missing data. As shown in Table 3, county annual household fees for solid waste and recycling are least expensive for dropoff-only programs, and most expensive for curbside-only programs.

Table 3. County annual solid waste and recycling fees (N=57) by collection type, FY 2018-19.

	Number of Counties	Average	Median
Dropoff Only	46	\$107	\$95
Dropoff and Curbside	8	\$154	\$145
Curbside Only	3	\$246	\$235

Standalone Annual Recycling Fees

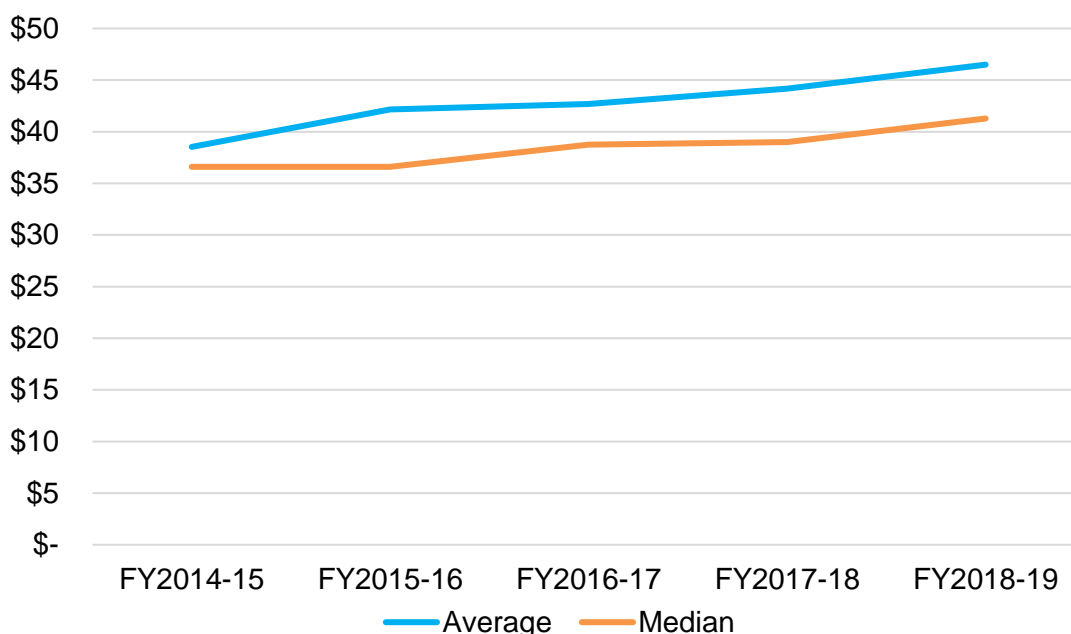
Of the 245 recycling programs included in this analysis, only 79 governments broke out their various solid waste fees to provide their standalone recycling fee. Shown in Table 4 and Graph 6 below, the average annual household recycling fee increased by \$8 between FY 2014-15 and FY 2018-19 and the median annual household recycling fee increased by \$5. However, these figures do not include the 166 recycling programs included in this analysis that did not parse their recycling fees out of their combined solid waste fees.

Table 4. Standalone annual recycling fees, FY 2014-15 through 2018-19, N=79.*

	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total Increase
Average	\$39	\$42	\$43	\$44	\$46	\$8
Median	\$37	\$37	\$39	\$39	\$41	\$5

*All numbers are rounded to the nearest whole number.

Graph 6. Average and median annual household recycling fee, FY 2014-15 to FY 2018-19, N=79.



Discussion

Of the 442 local governments in North Carolina that have recycling programs, 61 percent, or 271 local governments, have recycling and solid waste household fees. On average, combined solid waste and recycling fees increased by 14 percent over the past five fiscal years. The statewide average solid waste and recycling fee in FY 2018-19 was \$14.37 per month, up from \$12.63 per month in FY 2014-15. The median monthly combined solid waste and recycling fee in FY 2018-19 was \$14.33, up from \$13.00 in FY 2014-15.

Most local government recycling programs with household fees for solid waste and recycling increased their fees between FY 2014-15 and FY 2018-19. Seventy-one percent of North Carolina recycling programs increased their household fees during this timeframe. Only 29 percent of governments with recycling programs did not increase their fees during this time. The largest combined solid waste and recycling fee increase in the past five years occurred in FY 2018-19, when 85 local governments increased their household fee an average of \$6.69 per year, or \$0.56 per month.

For comparison to other utilities, the median residential water bill in North Carolina in 2019 was \$34.60 per 5,000 gallons, and the median wastewater bill per 5,000 gallons was \$42.75.¹ Households in North Carolina use an average of 4,000 to 5,000 gallons of water per month.² The average monthly residential electricity bill in North Carolina in 2019 was \$123.25.³

¹ https://efc.sog.unc.edu/sites/default/files/2019/NC%202019%20Rates%20Report_Final.pdf

² https://efc.sog.unc.edu/sites/default/files/2018/NCLM_EFC_Annual_Rates_Report_2018.pdf

³ https://www.eia.gov/electricity/sales_revenue_price/pdf/table5_a.pdf