

Analysis of MSW Landfill Tipping Fees— April 2019

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The Environmental Research & Education Foundation (EREF) maintains a database of Municipal Solid Waste (MSW) landfills across the United States (EREF, 2017). This database was used to draw a sample of active facilities for analysis of MSW landfill (MSWLF) tipping fees. Landfill owners were contacted and asked to provide gate rate information for MSW disposal, supplemented by current website information on fees. For the purpose of this report, the terms gate rate, tip fee, and tipping fee are used interchangeably to refer to the per-ton fee for hauled MSW loads.

In the 2019 study, MSW tip fee information was obtained from 392 landfills categorized as large, medium, or small based on accepted tonnage. Of the landfills providing gate rate information, approximately:

- 15% were large (i.e. accepting more than 390,000 tons/year),
- 44% were medium (i.e. accepting between 390,000 and 65,000 tons/year), and
- 41% were small (i.e. accepting less than 65,000 tons/year).

The small landfills reported an average of 26,150 tons/year, while medium landfills and large landfills accepted 163,010 tons/year and 831,480 tons/year, respectively.

Summary of 2019 MSW Landfill Tip Fees. MSWLF tip fee data were compiled by geographic region and basic statistical data were computed. For 2019, the national MSW landfill tip fee average was \$55.36/ton. Regional MSW tip fees ranged from \$40.92/ton in the South Central region to \$73.03/ton in the Pacific (Table 1). Ninety-one percent of landfills that provided 2018 gate rates also provided data in 2019.

Table 1. Average MSW Landfill Tip Fees, by region

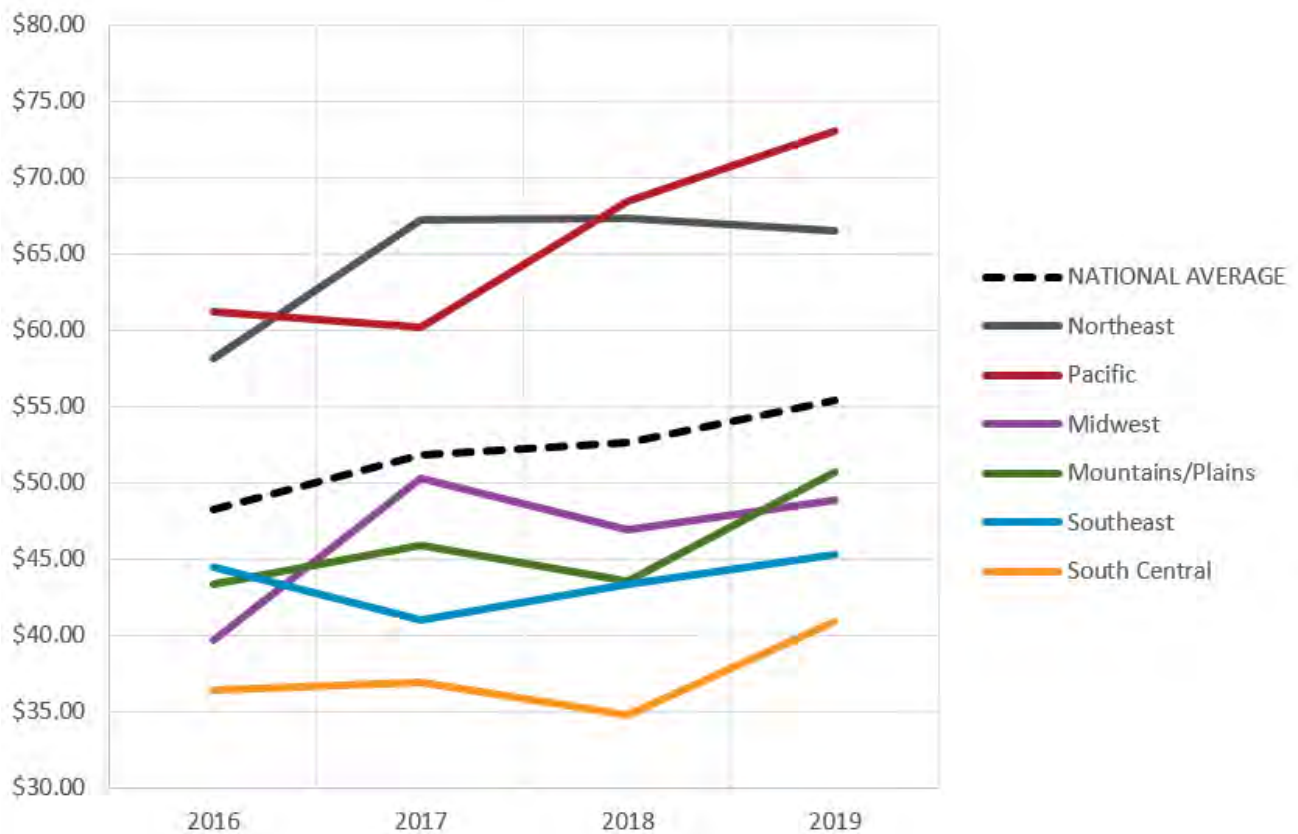
Region	Average Tipping Fee		
	April 2018 ^a	April 2019	Difference
Pacific (AK, AZ, CA, HI, ID, OR, WA)	\$68.46	\$73.03	+\$4.57
Northeast (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV)	\$67.39	\$66.53	-\$0.86
Mountains/Plains (CO, MT, ND, SD, UT, WY)	\$43.57	\$50.71	+\$7.14
Midwest (IL, IN, IA, KS, MI, MN, MO, NE, OH, WI)	\$46.89	\$48.87	+\$1.98
Southeast (AL, FL, GA, KY, MS, NC, SC, TN)	\$43.32	\$45.25	+\$1.93
South Central (AR, LA, NM, OK, TX)	\$34.80	\$40.92	+\$6.12
National Average	\$52.62	\$55.36	+\$2.74

^aFrom EREF, 2018 rev. ed.

Based on previous EREF analysis (2018), the national average tip fee increased 5.2% from 2018 to 2019, increasing from \$52.62 per ton to \$55.36 (Table 1). Compared to 2018, average regional tip fees increased in all regions except for the Northeast, where tip fees decreased (-1.3%, -\$0.86) in part due to the closure of landfills that previously had high tip fees due to limited remaining capacity. The largest increases occurred in the Mountains/Plains (+16.4%, +\$7.14), South Central (+17.6%, +\$6.12) and Pacific (+6.7%, +\$4.57) regions. For 2019, average tip fee increased by \$2.74 or +5.2%.

Four-year trends in average tip fee (Figure 1) show a continued increase in the national average MSW tip fee with an average year-over-year increase of 3.5% from 2016 through 2018 (Table 2). Tip fees in the Northeast and Pacific remain notably higher than the rest of the U.S., with the Pacific region having the highest tip fees for the second year in a row. The Mountains/Plains region surpassed the Midwest for the third highest regional tip fees in 2019. The Southeast and South Central continued to be the least expensive regions for MSW landfill disposal (Figure 1).

Figure 1. Regional MSWLF Tipping Fees, 2016 through 2019^{a,b,c}



^aRegions, and the states contained therein, are denoted in Table 1.

^bData Years: Jan 2016, April 2017, April 2018, April 2019

^cValues for all regions and years are provided in the Summary Table at the end of the report.

Table 2. MSW Landfill Tip Fees 2016–2019

Region	Average Tipping Fee		Average Year-over-Year Change ('16–'19)
	Jan 2016	April 2017 April 2018	
Pacific (AK, AZ, CA, HI, ID, OR, WA)	\$58.20	\$67.27 \$68.46	+4.7%
Northeast (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV)	\$61.20	\$60.20 \$67.39	+3.6%
Mountains/Plains (CO, MT, ND, SD, UT, WY)	\$39.64	\$50.27 \$43.57	+4.3%
Midwest (IL, IN, IA, KS, MI, MN, MO, NE, OH, WI)	\$43.38	\$45.84 \$46.89	+6.1%
Southeast (AL, FL, GA, KY, MS, NC, SC, TN)	\$44.46	\$41.01 \$43.32	+0.6%
South Central (AR, LA, NM, OK, TX)	\$36.34	\$36.94 \$34.80	+3.4%
National Average	\$48.27	\$51.82 \$52.62	+3.5%

Table 3. State and Regional Average Tip Fees, from April 2018 survey^{a,b}

Region/State	Average Tipping Fee^c
Pacific	\$ 73.03
<i>Alaska</i>	\$ 154.92
<i>Hawaii</i>	\$ 112.33
<i>Washington</i>	\$ 89.08
<i>Nevada</i>	\$ 74.20
<i>Oregon</i>	\$ 71.28
<i>Idaho</i>	\$ 68.71
<i>California</i>	\$ 55.56
<i>Arizona</i>	\$ 43.39
Northeast	\$ 66.53
<i>Rhode Island</i>	\$ 110.00
<i>Delaware</i>	\$ 85.00
<i>New Jersey</i>	\$ 81.91
<i>Maine</i>	\$ 78.50
<i>New Hampshire</i>	\$ 74.34
<i>Maryland</i>	\$ 68.57
<i>New York</i>	\$ 68.40
<i>Pennsylvania</i>	\$ 68.07
<i>Virginia</i>	\$ 52.22
<i>West Virginia</i>	\$ 51.50
<i>Connecticut</i>	N.A.
<i>Massachusetts</i>	N.R.
<i>Vermont</i>	N.R.
Mountains/Plains	\$ 50.71
<i>Wyoming</i>	\$ 74.45
<i>Colorado</i>	\$ 62.04
<i>Montana</i>	\$ 49.36
<i>South Dakota</i>	\$ 49.14
<i>North Dakota</i>	\$ 46.98
<i>Utah</i>	\$ 32.08
Midwest	\$ 48.87
<i>Wisconsin</i>	\$ 65.00
<i>Minnesota</i>	\$ 63.52
<i>Missouri</i>	\$ 62.42
<i>Illinois</i>	\$ 51.78
<i>Iowa</i>	\$ 48.47
<i>Indiana</i>	\$ 47.91
<i>Ohio</i>	\$ 44.35
<i>Michigan</i>	\$ 41.97
<i>Kansas</i>	\$ 39.32
<i>Nebraska</i>	\$ 39.21
Southeast	\$ 45.25
<i>Florida</i>	\$ 55.08
<i>Tennessee</i>	\$ 50.24
<i>Georgia</i>	\$ 48.77
<i>South Carolina</i>	\$ 44.03
<i>North Carolina</i>	\$ 43.87
<i>Mississippi</i>	\$ 38.70
<i>Alabama</i>	\$ 33.41
<i>Kentucky</i>	\$ 29.82
South Central	\$ 40.92
<i>Oklahoma</i>	\$ 50.22
<i>Arkansas</i>	\$ 40.23
<i>Texas</i>	\$ 40.18
<i>New Mexico</i>	\$ 38.28
<i>Louisiana</i>	\$ 33.28
National Average	\$ 55.36

^aN.A– not applicable, no landfills actively accepting MSW were identified in the state.

^bN.R. – not reported, response rate did not meet threshold for publication.

^cRegional and national averages computed on a facility-basis, and therefore do not equal the average of the individual state averages reported herein.

States with active MSW waste-to-energy (WTE) facilities continue to have higher tipping fees than those without ($p < 0.05$). The average MSWLF tip fee was \$59.93/ton for states with WTE in 2019. In states without WTE, the average MSW tip fee was \$53.58/ton. For 2019, the difference was less pronounced for 2019 than in years past due to large tip fee increases in many states without active WTE facilities. Nationally, landfilling was 12% more expensive in WTE states, equivalent to \$6.34/ton higher. Comparatively, in 2018 tip fees in states with WTE were 28% higher (+\$13.89/ton) than states without WTE. The relationship between WTE use and landfill tip fee suggests that MSW landfill fees continue to indicate, in part, if market conditions are suitable for the use of WTE for MSW management (EREF, 2018).

Exploring Methodology Impacts when Estimating National Average Tip Fee

EREF's national average tip fees are calculated as an average of all observations ($n = 392$ for 2019). We know, however, that the amount of MSW landfilled in each state varies due to factors such as total waste generation, fraction recovered for recycling and/or composting, and interstate transport (i.e. import and export of MSW). To account for these differences, a weighted-average national tip fee was also calculated for 2019 based on the relative amount of MSW disposed of via landfilling in each state and the average tip fee for each state (EREF, 2017). Results indicate a tonnage-weighted average tip fee of \$52.08 for 2019, which is \$3.27 less than the unweighted national average of \$55.36/ton MSW. This difference suggests that MSW may be disproportionately sent to landfills in states with lower tip fees; a practice which is recognized through interstate transport of landfilled MSW. This trend was also observed in the 2018 data, where the tonnage-weighted average national tip fee was \$50.08, or \$2.54 less than the unweighted national average of \$52.62 per ton. Year-to-year change for each of the calculated averages was roughly 4%, suggesting that while interstate transport may allow for lower tip fees to be paid, it does not insulate against the overall national trend of increasing MSW tip fees (Table 4).

Table 4. Summary of Average and Weighted-Average Tip Fee

	National Average^a	Ton-Weighted Average	Difference (%)
2018	\$52.62	\$50.08	4.8%
2019	\$55.36	\$52.08	5.9%
Difference (%)	4.1%	4.0%	

^aCalculated as an unweighted average of all observations ($n = 392$ for 2019; $n = 397$ for 2018)

Construction & Demolition Waste Pricing at MSW Landfills

In addition to collecting MSW tip fee data, information gathered for 2019 included tip fee for construction & demolition (C&D) wastes deposited in MSW landfills. Although MSW landfills primarily receive MSW, many are permitted and readily accept non-MSW special wastes such as construction, demolition, ash, or liquid wastes. Of the special wastes accepted at MSW landfills in the U.S., construction and demolition wastes are most common: C&D waste is accepted at MSW landfills in 41 states and comprises roughly 12% of the landfilled stream on average (EREF, 2019).

Of the 392 landfills providing MSW tip fee data, 241 also had a posted gate rate for C&D materials disposed of at the landfill. The national average tip fee for C&D waste in 2019 was not statistically different from the MSW tip fee at \$54.04/ton C&D compared to \$55.36 for MSW (Table 5). Although over half of landfills (57%) set the same tip fee for MSW and C&D materials, this pricing strategy was not uniform. C&D tip fees were priced lower than MSW at 27% of sites. At the remaining 16% of MSW landfills, the cost to dispose of a ton of C&D material was higher than for MSW (Table 5).

Table 5. Construction & Demolition (C&D) Pricing Summary

	2019	% of total
National Average C&D Tip Fee^a	\$ 54.04	
National Average MSW Tip Fee	\$ 55.36	
# Sites where C&D and MSW priced the same	138	57%
# Sites where C&D priced lower than MSW	65	27%
# Sites where C&D priced higher than MSW	38	16%

^aFor C&D disposed of at MSW landfills

References

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