

Jave LaRose
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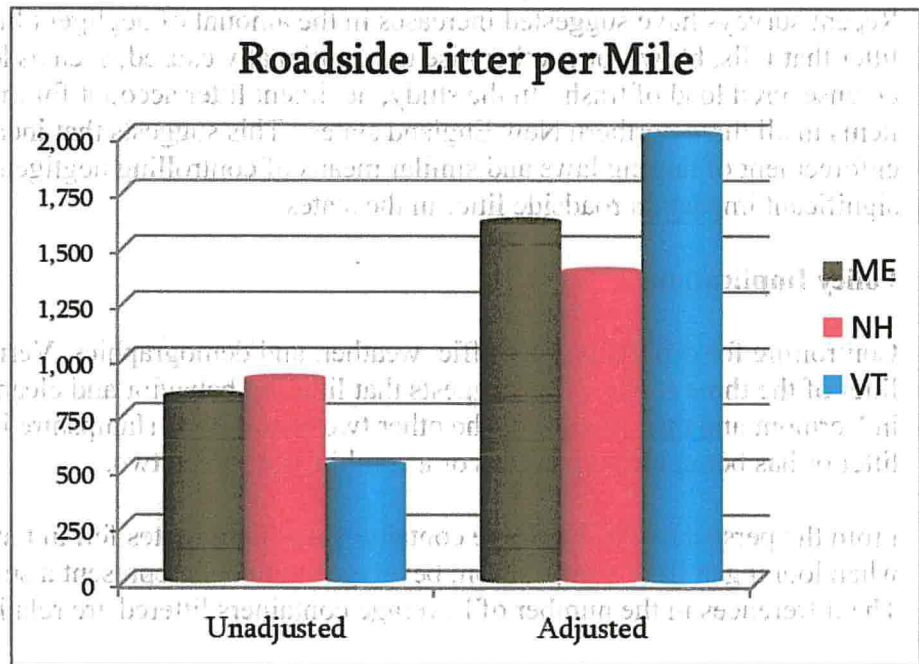
2010 Litter Survey of Northern New England

In the summer of 2010, Environmental Resources Planning LLC (ER Planning) conducted three separate litter surveys in the states of Maine, New Hampshire, and Vermont in order to compare the types and quantities of litter in each of the three states. ER Planning employed the Visible Litter Survey (VLS) methodology, used previously for characterizing and analyzing litter in more than 70 statewide litter surveys. This approach allows comparison of the results of this survey with those from other state surveys utilizing the same methodology. These include the most recent surveys conducted in New Jersey (2004), Georgia (2006), and Tennessee (2006). Sites for the survey were chosen using stratified random sampling across eight categories of roadways. A total of 288 sites were studied (96 per state) along more than 27 miles of roadway covering approximately 2.2 square feet of roadside area.

Results – Overall Litter

On the basis of unadjusted data from the three states, Vermont had the least litter per mile on average at 521 items per mile followed by Maine at 830 items and New Hampshire at 907 items (see figure – “Unadjusted Results”). These differences reflect littering behavior and cleanup efforts in the states, but they also reflect differences in demographics such as population and urbanization as well as differences in weather and traffic.

In order to correct for these differences and focus solely on litter rates and cleanup, ER Planning adjusted the results of the survey to correct to the same US average conditions of traffic, weather, income, population size, etc.; this adjustment eliminates the biasing effect of these factors and enables a fair comparison between states.



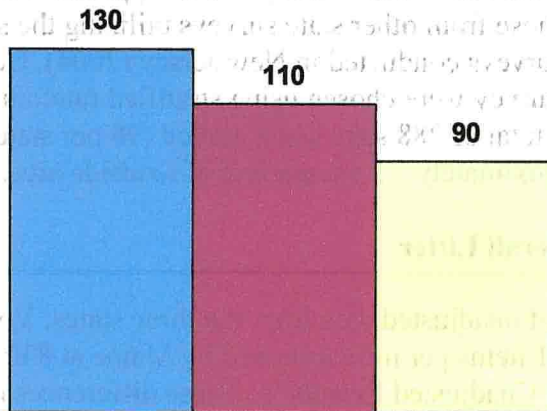
On an adjusted basis, the order of the states is reversed. New Hampshire had the least litter on a standardized basis at 1,387 items per mile followed by Maine at 1,609, and Vermont at 2,035. New Hampshire therefore has 32 percent less litter per mile than Vermont and 14 percent less litter per mile than Maine. For reference, a 2004 New Jersey study using the same methodology computed an adjusted litter rate of 1,746 items per mile – less litter than Vermont but more than Maine and New Hampshire.

Results – Beverage Containers in Litter

Beverage containers represented between 5.6 percent (Maine) and 7.9 percent (New Hampshire) of litter across the three states. Vermont fell in the middle of the range at 6.4 percent. These findings are consistent with other recent studies that show beverage containers representing 4.4 percent (Georgia – 2006) to 10.5 percent (Mississippi – 2000) of litter.

Beverage container litter per mile did not vary much across the states – from a low of 90 per mile in Maine (adjusted basis) to 130 in Vermont; the amount of beverage container litter in New Hampshire (110) fell exactly between the other two states.

Beverage Container Litter per Mile



Adjusted Items per Mile
■ Vermont ■ New Hampshire □ Maine

Results – Negligent Litter

Recent surveys have suggested increases in the amount of negligent litter. Negligent litter is litter that falls, blows, or is otherwise unintentionally caused, such as loose debris blowing from an unsecured load of trash. In the study, negligent litter account for more than half of littered items in all three northern New England states. This suggests that increased monitoring and enforcement of tarping laws and similar means of controlling negligent litter could have a significant impact on roadside litter in the states.

Policy Implications

Controlling for differences in traffic, weather, and demographics, Vermont has the most roadside litter of the three states. This suggests that littering behavior and cleanup efforts are problematic in Vermont and that, relative to the other two states, New Hampshire is either producing less litter or has better cleanup efforts or a combination of the two.

From the perspective of beverage containers, the three states fell in the same range as other states when looking at litter composition; beverage containers represent a small share of overall litter. The differences in the number of beverage containers littered are relatively small.

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TABLE 46. COSTS OF THE CURRENT BOTTLE BILL AND ESTIMATED COSTS OF EXPANDED BOTTLE BILL

Parties and Cost/Revenue Components	Cost Per Container (\$)	BOTTLE BILL		EXPANDED BOTTLE BILL	
		# Containers	Total Cost (\$)	# Containers	Total Cost (\$)
State Administrative Costs			(\$21,500)		(\$150,000)
Distributors					
Deposits collected	0.05	270,382,907	\$13,519,145	383,230,704	\$19,161,535
Deposits redeemed	0.05	241,948,783	(\$12,097,439)	324,966,302	(\$16,248,315)
Deposits collected, wine	0.15			9,846,154	\$1,476,923
Deposits redeemed, wine	0.15			7,384,616	(\$1,107,692)
Handling fees paid out					
Commingled	0.035	183,881,075	(\$6,435,838)	217,628,096	(\$7,616,983)
Sorted	0.04	58,067,708	(\$2,322,708)	117,184,360	(\$4,687,374)
Collection costs (third party & own)	0.015	241,948,783	(\$3,629,232)	334,812,456	(\$6,026,624)
Materials revenue received					
Aluminum		146,174,028	\$3,750,899	153,765,729	\$5,564,228
Plastics		35,946,008	\$789,228	107,765,988	\$1,872,642
Glass		59,809,251	\$332,129	70,540,336	\$293,790
Liquor Glass				7,384,616	\$110,831
Sub-Total, Distributors			(\$6,093,816)		(\$7,317,871)
Vermont Liquor Control					
Deposits collected	0.150	3,745,035	\$561,755	3,745,035	\$561,755
Deposits paid out	0.150	2,860,458	(\$429,069)	2,860,458	(\$429,069)
Collection Cost	0.078	2,860,458	(\$223,116)	2,860,458	(\$223,116)
Handling fees paid out	0.035	2,860,458	(\$100,116)	2,860,458	(\$100,116)
Materials revenue received	0.000				
Sub-Total, VLC			(\$190,545)		(\$190,545)
Retailers/Redemption Centers					
RVM costs	0.034	24,194,878	(\$822,626)	48,744,945	(\$1,657,328)
Manual costs	0.038	217,753,905	(\$8,239,953)	283,605,972	(\$10,647,030)
Handling fees received	0.036	241,948,783	\$8,758,546	332,350,917	\$12,304,358
Sub-Total, Retailers			(\$304,033)		\$0
Consumers					
Deposit paid	0.05	270,382,907	(\$13,519,145)	383,230,704	(\$19,161,535)
Deposits received	0.05	241,948,783	\$12,097,439	324,966,302	\$16,248,315
Liquor deposits paid	0.15	3,745,035	(\$561,755)	13,591,189	(\$2,038,678)
Liquor deposits received	0.15	2,860,458	\$429,069	10,245,074	\$1,536,761
Sub-Total, Consumers			(\$1,554,393)		(\$3,415,137)
Total :			(\$8,164,287)		(\$11,073,553)
Additional Cost to Consumers					
Separate trips to redeem	0.014	244,809,241	(\$3,448,633)	335,211,375	(\$4,722,130)
Total :			(\$11,612,920)		(\$15,795,683)

(1) Under "Consumers", Special trips to redeem were counted for bottle redeemers that answered "yes" to the question "Is this a special trip to redeem bottles and cans, or are you combining it with another errand?" or no to the question "If you weren't returning containers today, would you have taken this trip?"

quality is very good. As such the bale price differential has been dropped to 5 cents per pound from 10 cents per pound to reflect the relatively high quality of the material produced at the Rutland and Chittenden MRF's.

¹⁰⁸ In both cases the value of the glass represents glass FOB the glass beneficiation plant.

