



American Beverage Association

Northeast Visible Litter Survey 2010

Presentation of Results

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Recent Projects

- **American Beverage Association** – Northeast Litter Survey
- **American Chemistry Council** – Material Lifecycle in Environment
- **California Food Packaging** – Beach Litter Survey
- **Georgia DCA** – Statewide Litter Survey
- **Keep America Beautiful** – 2008 National Litter Study
- **Keep America Beautiful** – Community Appearance Index
- **Keep America Beautiful** – Litter Research Forum
- **Keep America Beautiful** – Litter: Literature Review and Analysis
- **Keep Tennessee Beautiful** - Statewide Litter Survey
- **New Jersey Clean Communities Council** - Statewide Litter Survey
- **North Carolina DOT** - Statewide Litter Survey
- **Ocean Conservancy** - National Marine Debris Monitoring Program
- **Potomac Watershed Initiative** – Trash Monitoring Protocol Committee
- **President's National Infrastructure Advisory Council** – Report Contributor



2010 Litter Survey – Methodology

1. Visible Litter Survey Methodology
 - a) Utilized for More than 70 Litter Surveys
 - b) Provides Comparability
2. Surveyed Three Northeast States
 - a) Maine
 - b) New Hampshire
 - c) Vermont
3. Determine
 - a) Quantity
 - b) Types
 - c) Adjust to Per Capita Basis
 - d) Compare Data for Each State



2010 Litter Survey - Methodology

Factors

1. Road Mileage by Locale
2. Population Levels
3. Proximity to Populated Areas
4. Daily Rainfall and Temperature (4 Months)
5. Litter Programs in Place
6. Median Income Levels
7. Traffic Volumes
8. Passenger Volumes
9. Open-Bed Vehicles



2010 Litter Survey - Methodology

Field Survey

1. Ambient Conditions
 - a) Construction Activity
 - b) Evidence of Recent Mowing
 - c) Impediments to Traffic
 - d) Weather (Rainfall, Wind)
2. Edge Count
3. Meander Count
4. Time and Day
5. Adopted Designation

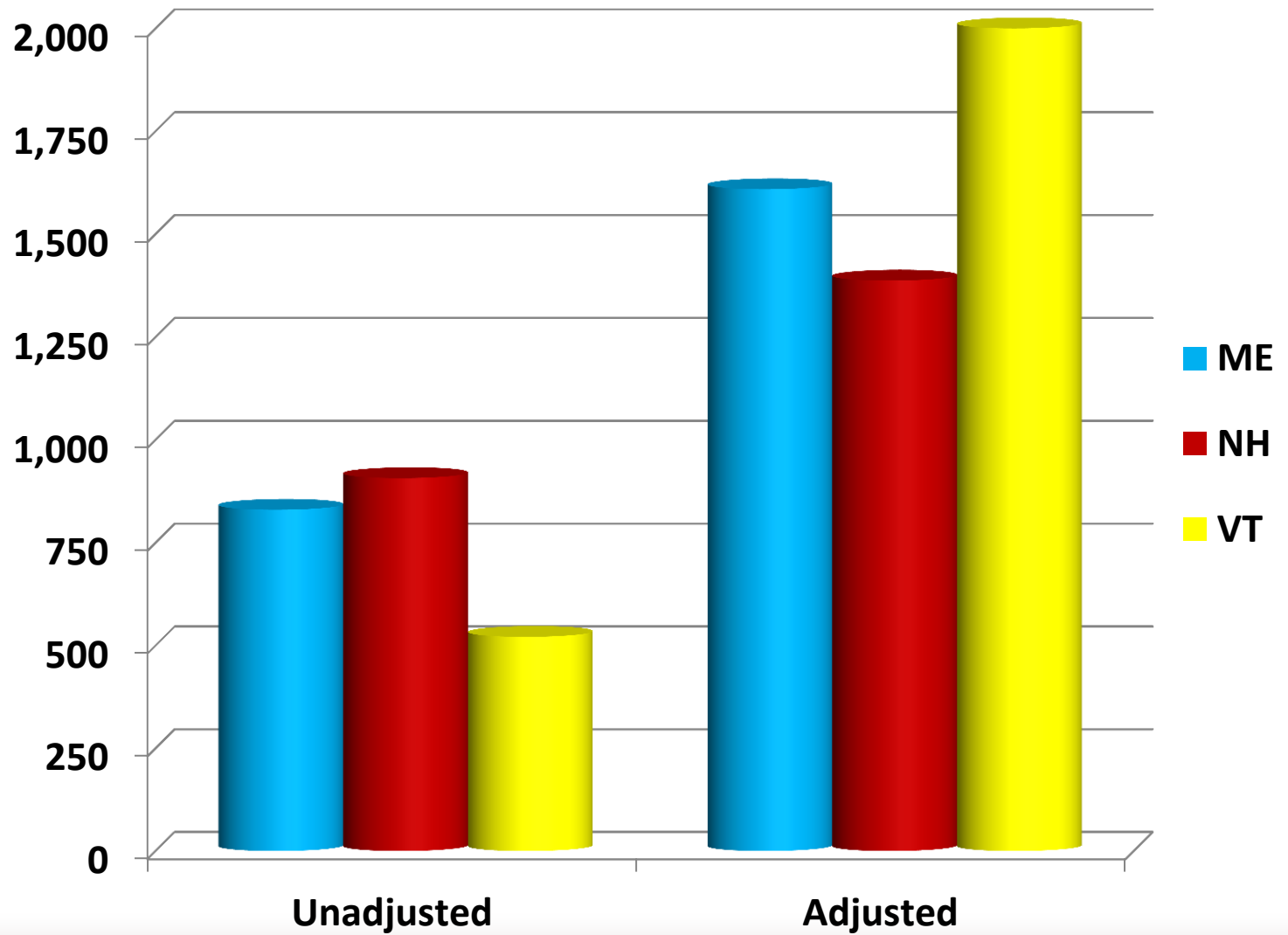
Roadway Types - Locales



Roadway Type	Acronym	Description
Rural Freeways and Toll Roads	RFT	Interstate highways, toll roads and limited access highways outside of urban areas.
Other State Rural Highways	OSR	U.S. and State highways outside of urban areas without limited access.
Rural Local Roads	RLR	Public roads outside of an urban area that are locally maintained (e.g. city, county).
Urban Freeways and Toll Roads	UFT	Interstate Highways, toll roads and limited access highways within an urban area.
Vacant, Industrial, Un-maintained Frontages	VIU	Urban streets in front of vacant lots, industrial sites or unmaintained buildings.
Commercial Frontages	COM	Urban streets in front of businesses such as convenience stores, restaurants and stores.
Public Facility Frontages	PUB	Urban streets in front of a public use building such as a courthouse, park, school or library.
Residential Frontages	RES	Urban streets in front of neighborhood homes.



Roadside Litter per Mile



Litter Composition by State

Category	VT	ME	NH
Miscellaneous Paper	19.0%	25.1%	20.5%
Miscellaneous Plastic	18.5%	20.5%	18.4%
Candy and Snack Wrappers	16.3%	13.5%	14.6%
Fast Food Packaging	13.4%	16.4%	14.7%
Beverage Containers	6.4%	5.6%	7.9%
Miscellaneous Metal	4.1%	3.7%	2.5%
Tobacco Products	3.9%	2.6%	2.3%
Vehicle Debris	3.8%	4.6%	5.0%
Toiletries and Personal Items	3.4%	2.9%	4.4%
Newspapers and Magazines	2.7%	0.5%	1.9%
Bottle Caps, Pull Tabs and Carriers	2.4%	1.9%	2.7%
Construction and Demolition Debris	2.2%	0.7%	1.4%
Advertising Materials	1.8%	0.8%	2.2%
Home Food Packaging	1.4%	0.2%	0.2%
Miscellaneous Glass	0.7%	0.9%	0.5%
Other Items	0.0%	0.2%	0.7%
TOTAL	100%	100%	100%



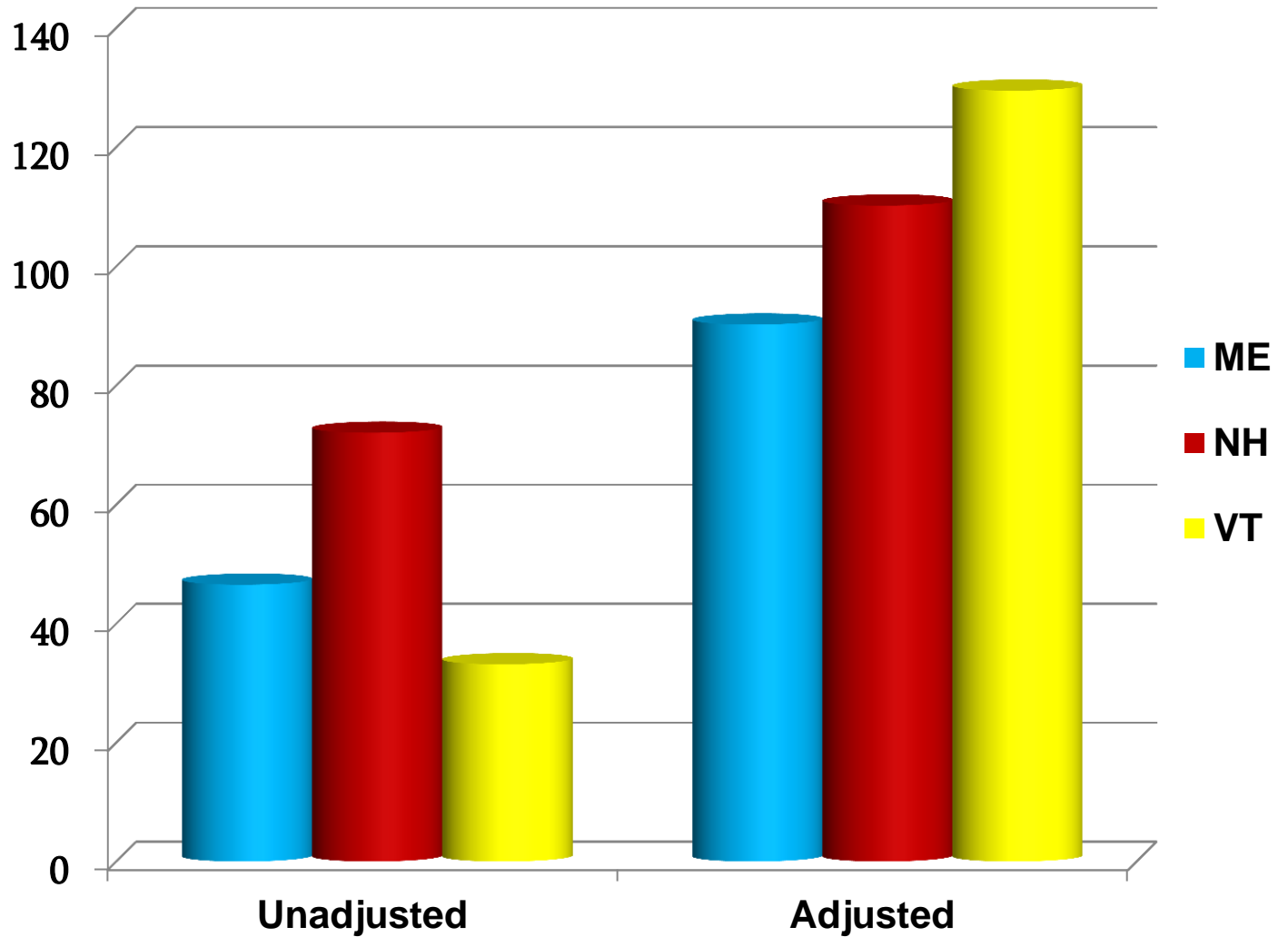


Plastic Bags & Polystyrene Foam Data

Category	ME	NH	VT	All 3 States
Plastic Bags	2.4%	3.0%	2.1%	2.5%
Polystyrene Foam	1.3%	1.4%	1.5%	1.4%



Beverage Containers per Mile

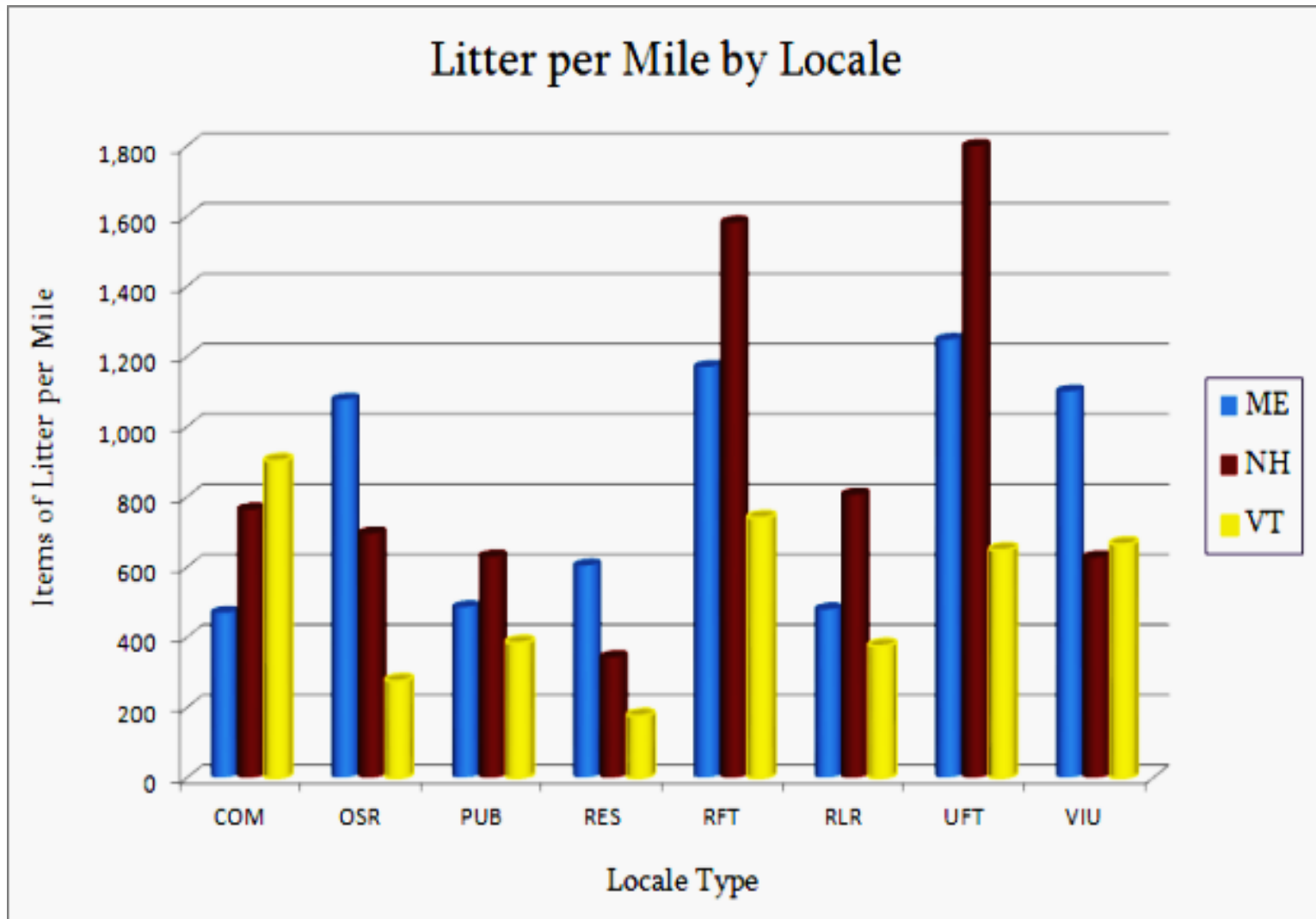


Beverage Containers – Comparisons

State	Survey Year	Percent
Mississippi	2000	10.5%
North Carolina	2001	9.0%
New Jersey	2004	8.9%
<i>New Hampshire</i>	<i>2010</i>	<i>7.9%</i>
Kentucky	1998	6.8%
Columbia, MO	1996	6.4%
<i>Vermont</i>	<i>2010</i>	<i>6.4%</i>
<i>Maine</i>	<i>2010</i>	<i>5.6%</i>
Tennessee	2006	5.4%
Lawrence, KS	1996	5.0%
Pennsylvania	1999	4.7%
Georgia	2006	4.4%



Roadside Litter - Locales





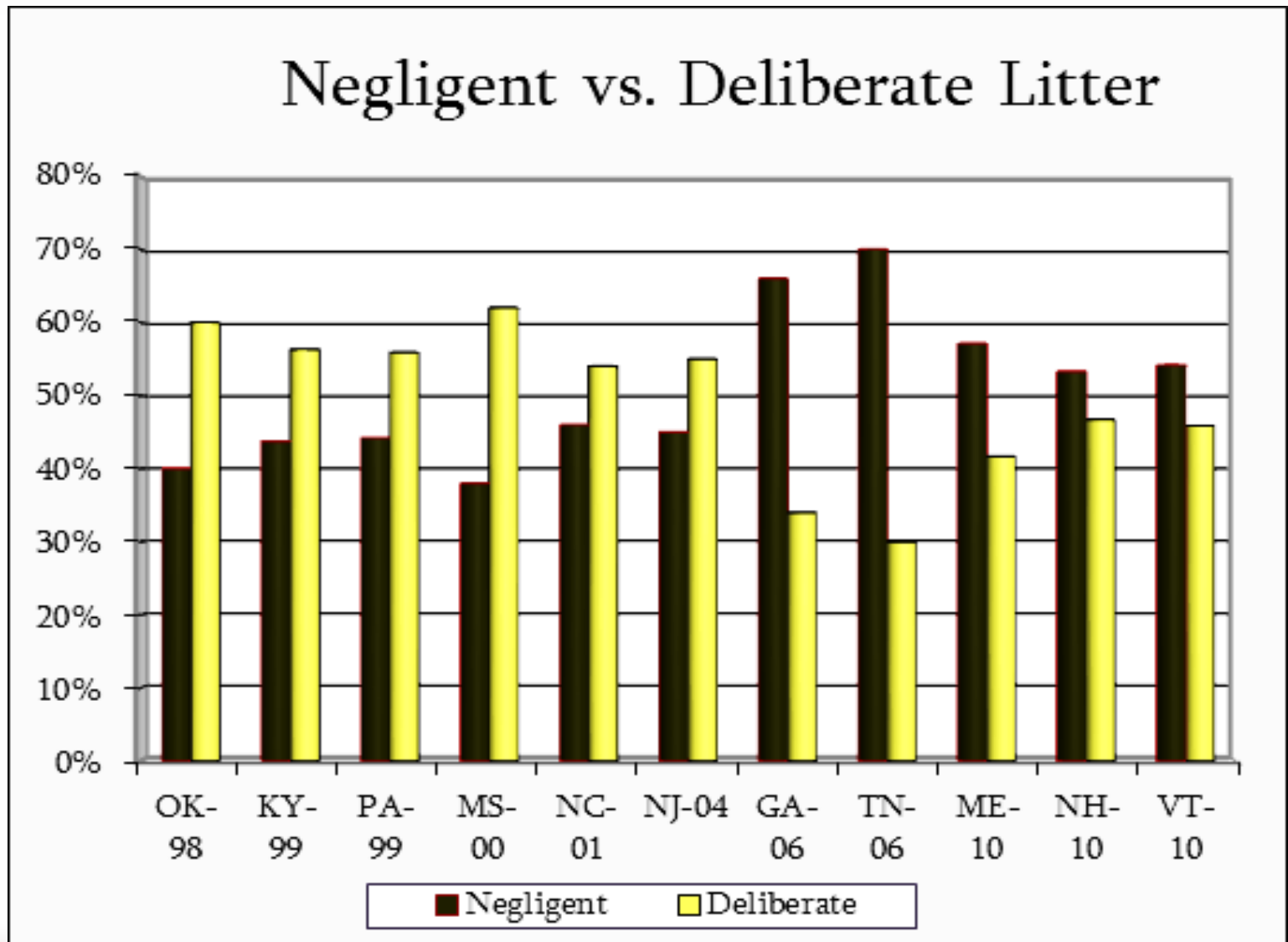
Tobacco Packaging Litter *

State	Survey Year	Percent
Kentucky	1998	7.9%
Pennsylvania	1999	7.2%
Lawrence, KS	1996	5.4%
Columbia, MO	1996	4.9%
North Carolina	2001	4.8%
New Jersey	2004	4.0%
<i>Vermont</i>	<i>2010</i>	<i>3.9%</i>
Mississippi	2000	3.6%
Georgia	2006	2.9%
<i>Maine</i>	<i>2010</i>	<i>2.5%</i>
<i>New Hampshire</i>	<i>2010</i>	<i>2.3%</i>
Tennessee	2006	1.3%

* Excludes cigarette butts, which normally constitute >36% of all litter.

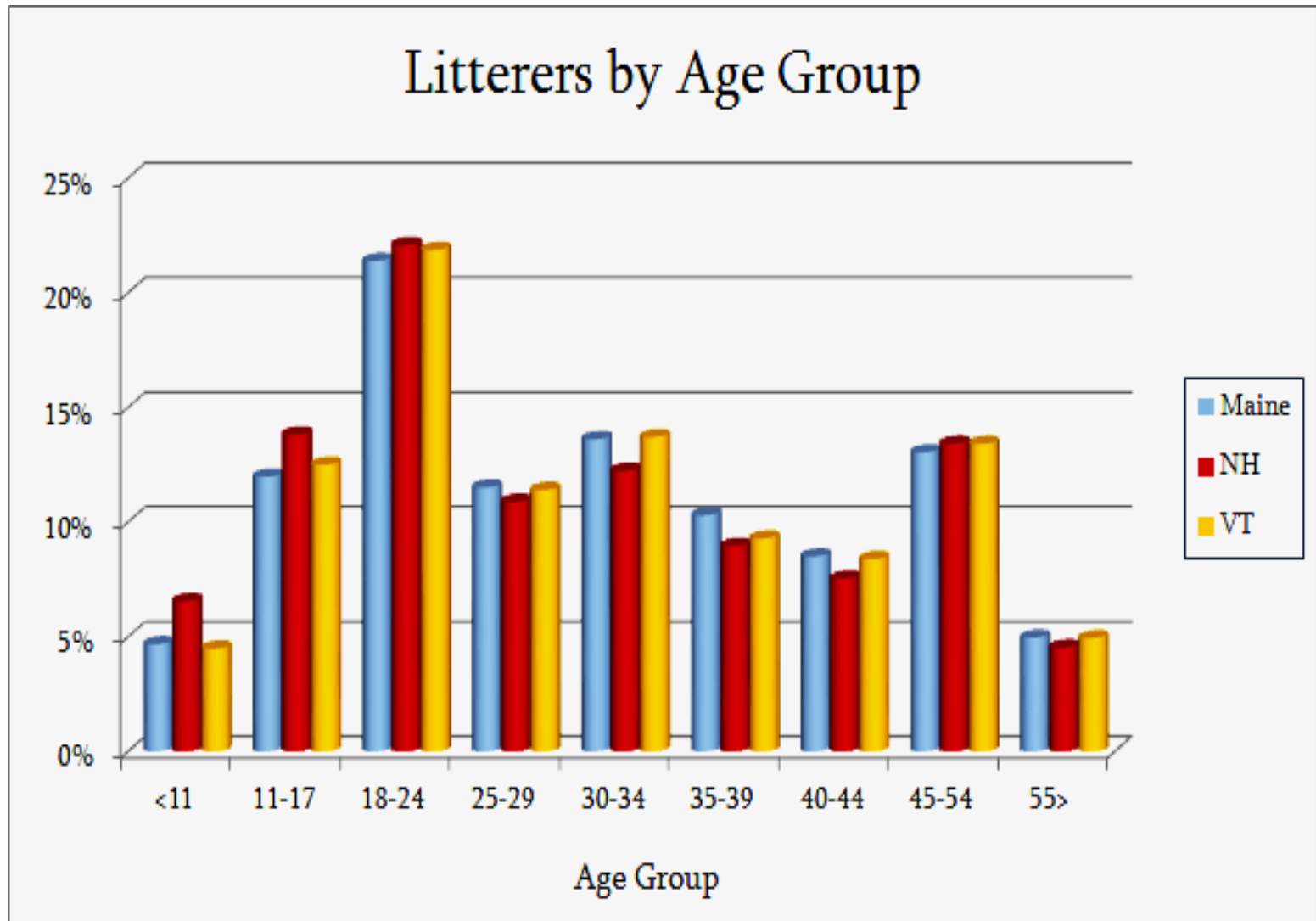


Deliberate Litter: 1998-2010



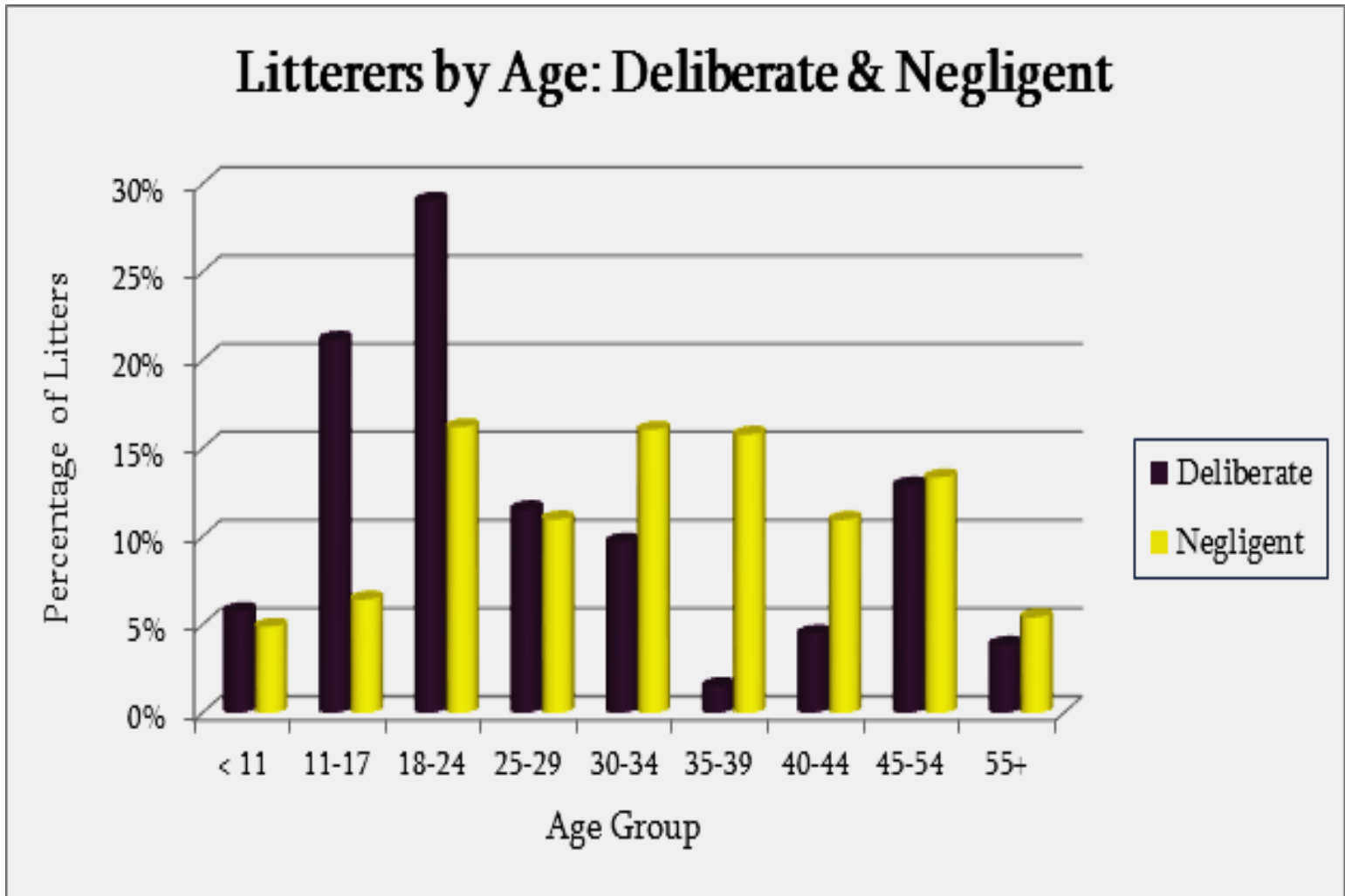


Litter Sources by Age





Littering Profile – All Three States





Conclusions

- All three states had significantly lower litter rates than other state surveys in which our staff was involved: Georgia, Tennessee, New Jersey, North Carolina.
- The composition of litter was generally similar in all three states. The top four categories of litter collectively accounted for 67%-76% of total litter.
- Miscellaneous small scraps of paper and plastic constituted 37.5%-45.6% of litter in all three states. This is similar to results from surveys that our staff managed in Georgia and Tennessee.
- Vermont yielded a lower litter rate than Maine or New Hampshire, due in part to Vermont's lower population and traffic level.
- Once litter rates were adjusted to reflect differences in variables such as population and traffic levels, Vermont yielded a higher litter rate than either Maine or New Hampshire.
- Negligent litter continues to grow as a greater percentage of litter compared with intentional litter.



Recommendations

- Our conversations with organizations involved in litter abatement within each of these three states suggest that each state would benefit from improved coordination of litter awareness and abatement programs. This will produce more synergistic effects in reducing litter.
- The high percentage of paper and plastic scraps found along roadways in all three states suggests that a significant portion of litter is related to insufficiently secured trash and recycling collection vehicles as well as improperly-tarped open-bed vehicles.
- Enforcement of effective regulations can help reduce litter, particularly along roadways to strategic locations such as solid waste and recycling facilities.
- Since negligent and deliberate littering are attributed to different sources, targeting educational efforts to reduce deliberate littering should focus on those aged 11-24, while efforts to reduce negligent littering should have a broader message of social awareness for the general population.
- Studies correlating the relationship between enforcement of litter laws and litter rates will help to establish the benefit of enforcement for each state as enforcement of laws in general tends to improve compliance.



Questions ?

Litter Projects since 1986
Recycling Projects since 1972

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