

State of Vermont
House Committee on Ways and Means

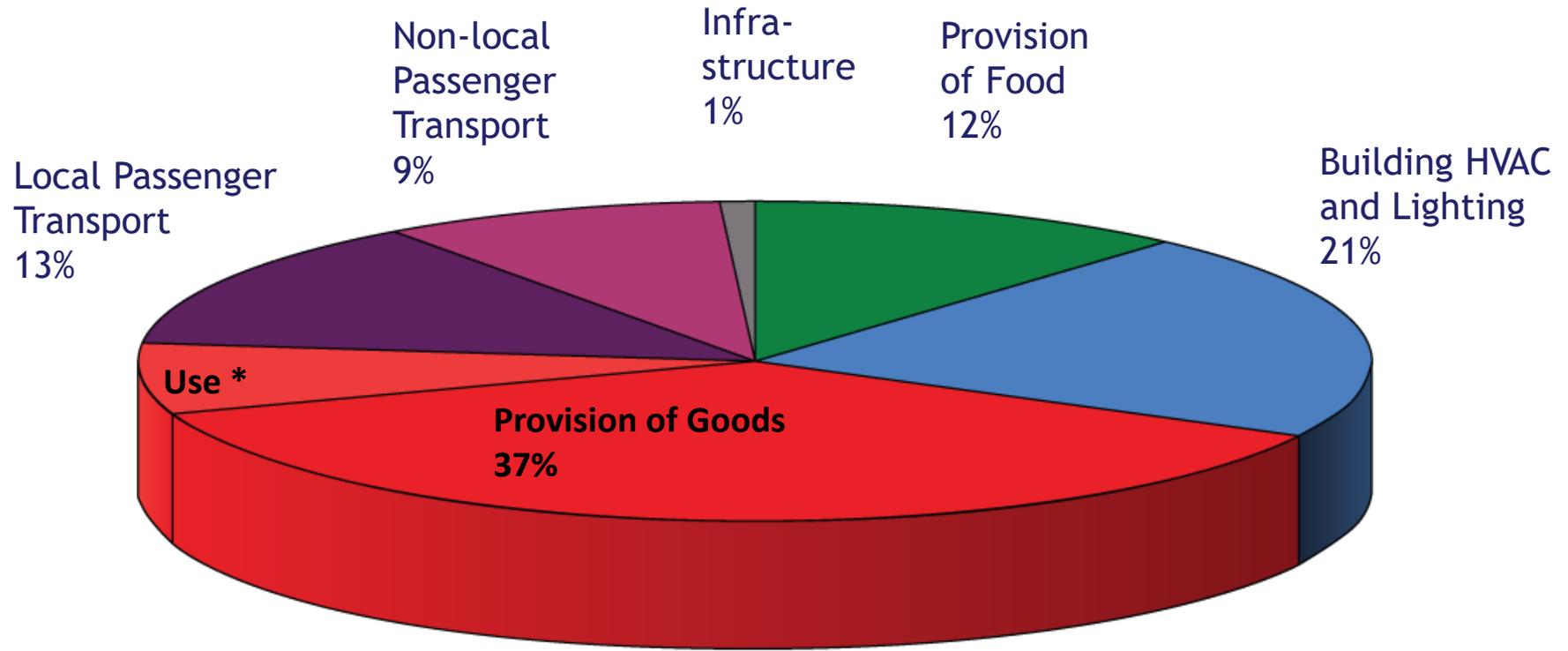
Container Recycling Institute
March 9, 2021





Container Recycling
Institute © 2018

US Greenhouse Gas Emissions Consumption View - Global



Products & Packaging
44%

* Use of Appliances
and Devices
7%

Source: PPI 2009 – Joshua Stolaroff

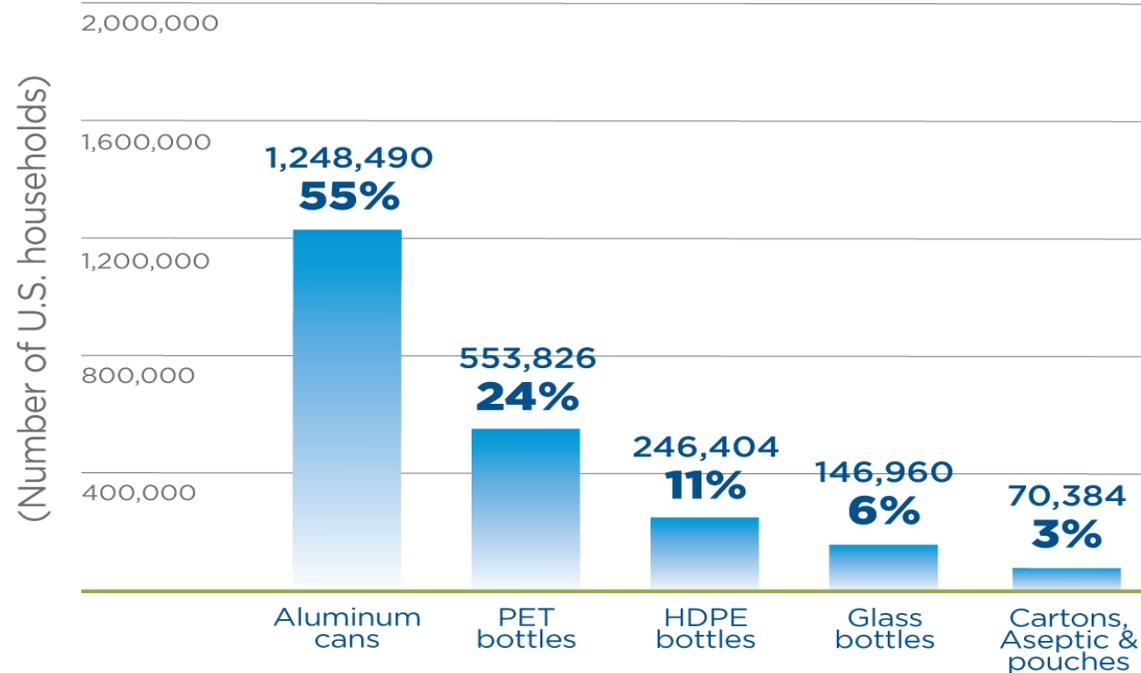


Energy Impacts of Wasting

- In total, about **2.3 million American homes** could have **all their energy needs met** (heating & cooling, cooking, utilities, etc.) with the amount of energy required to replace the beverage containers wasted in 2010.

Energy Required to Replace Wasted Beverage Containers, 2010

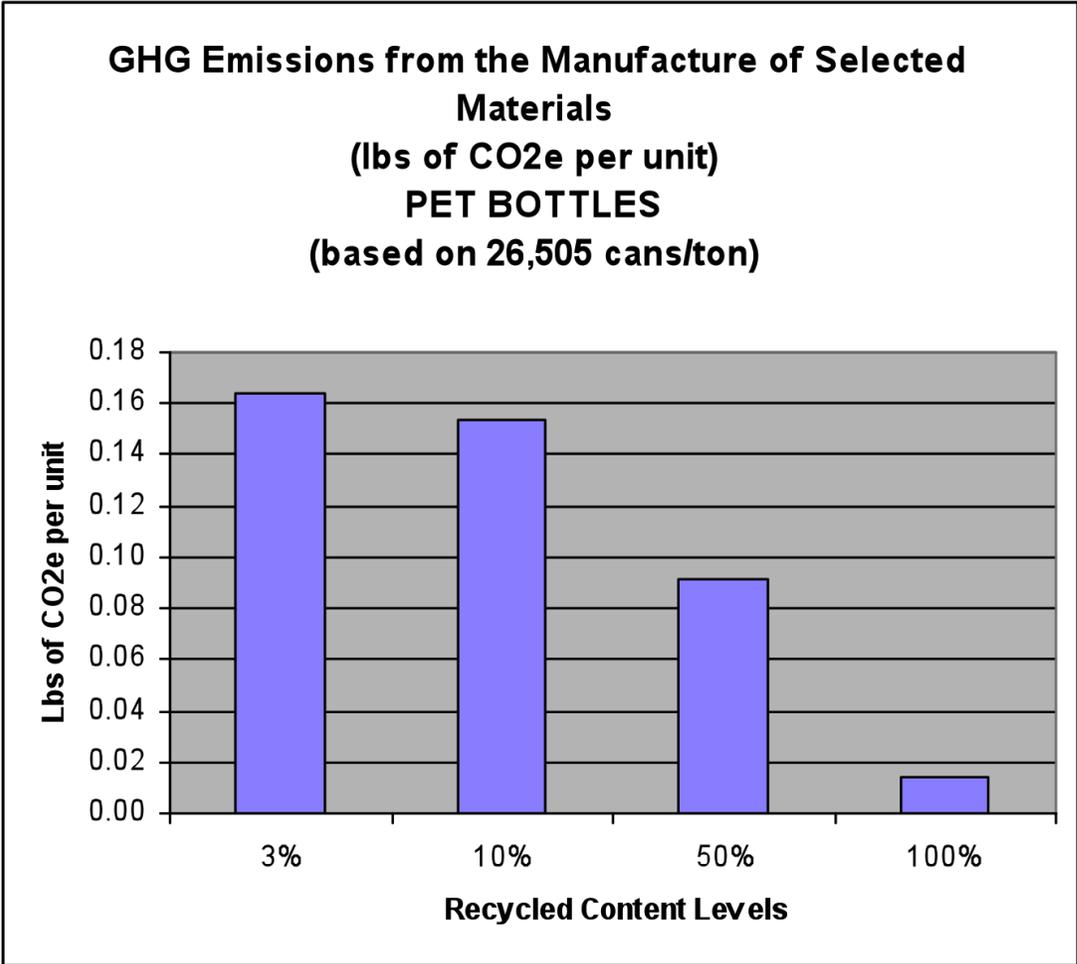
(in U.S. household equivalents)



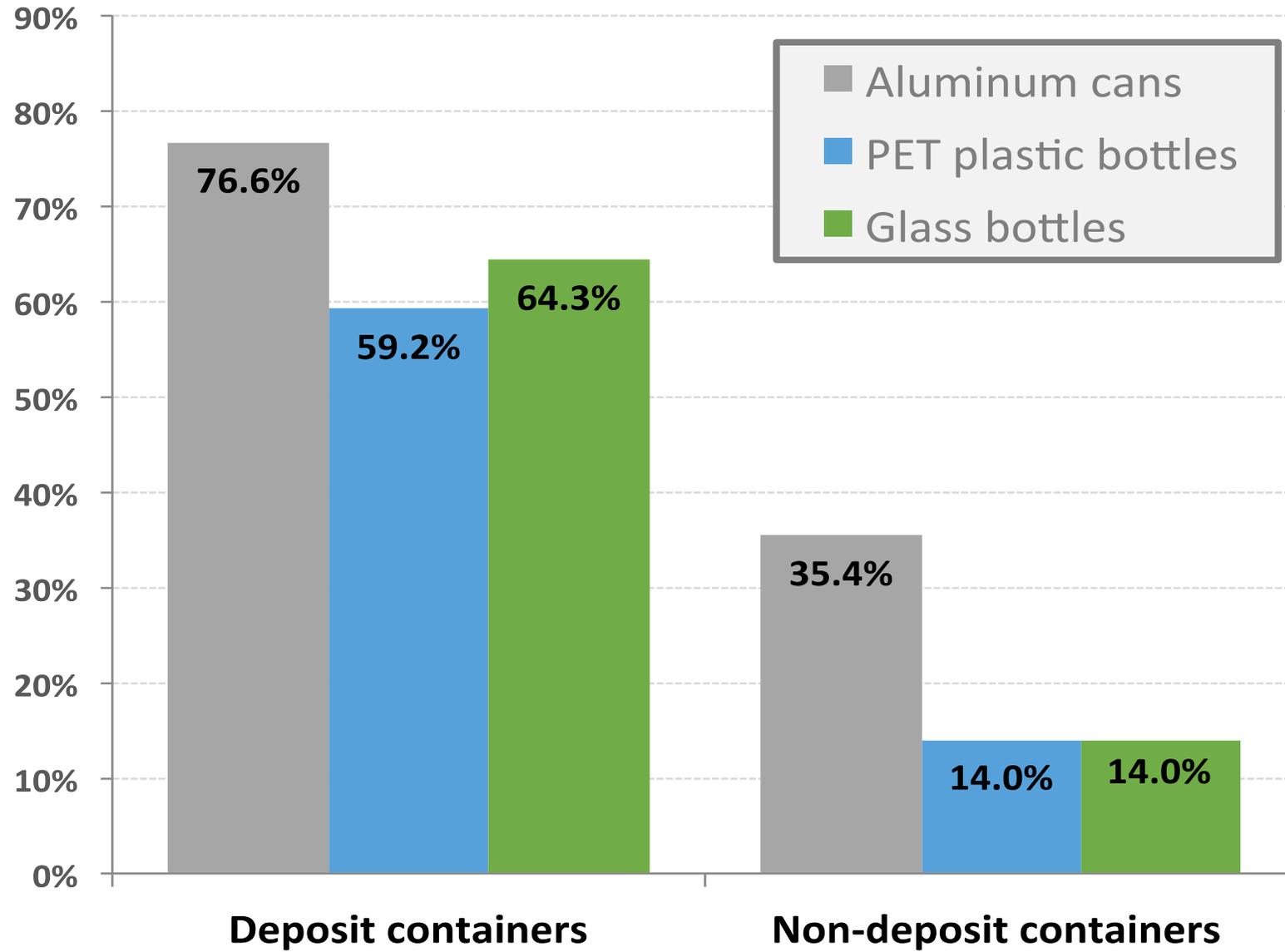
Assumes 89.6 MBtu per household per year. See further notes and sources in Appendix B.

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Recycled Content for PET Bottles: 3%, 10%, 50% and 100%



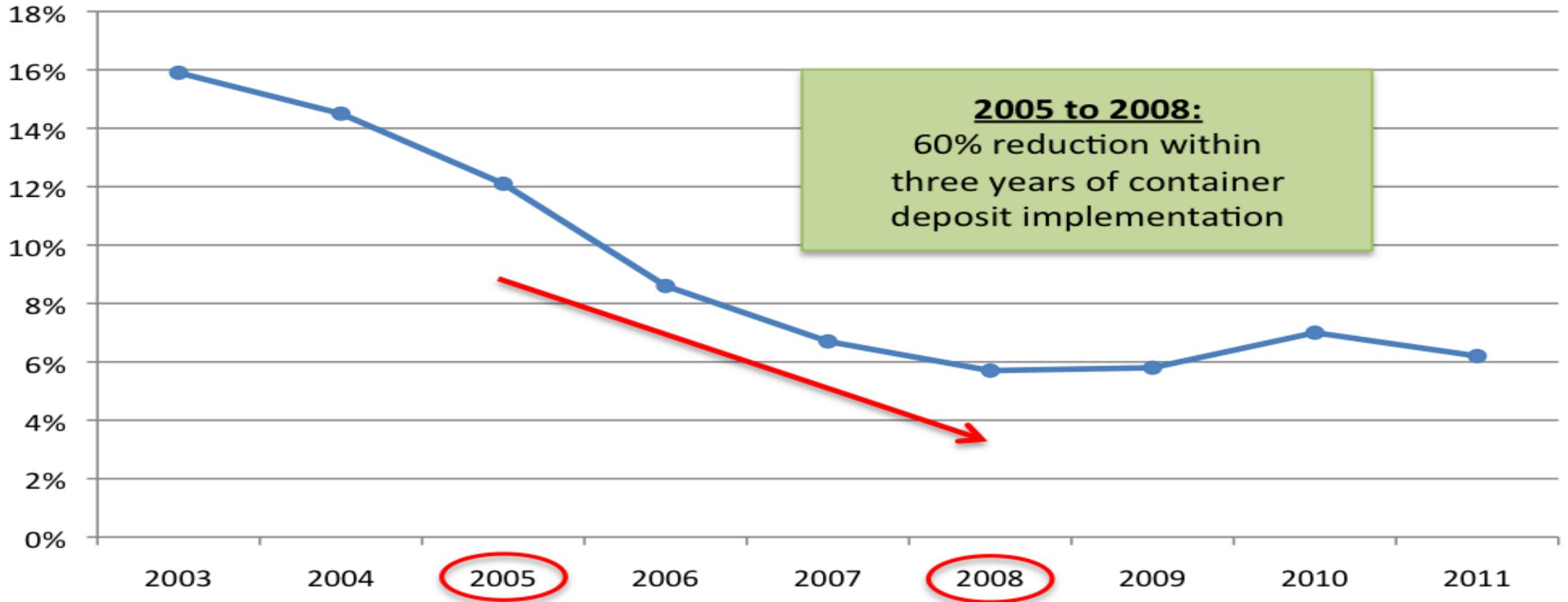
U.S. Recycling Rates by Deposit Status, 2017



Source: "2017 Beverage Market Data Analysis," Container Recycling Institute, 2019. *This graph is copyrighted, and is not to be shared, copied, or reproduced in any manner without written permission from CRI.*

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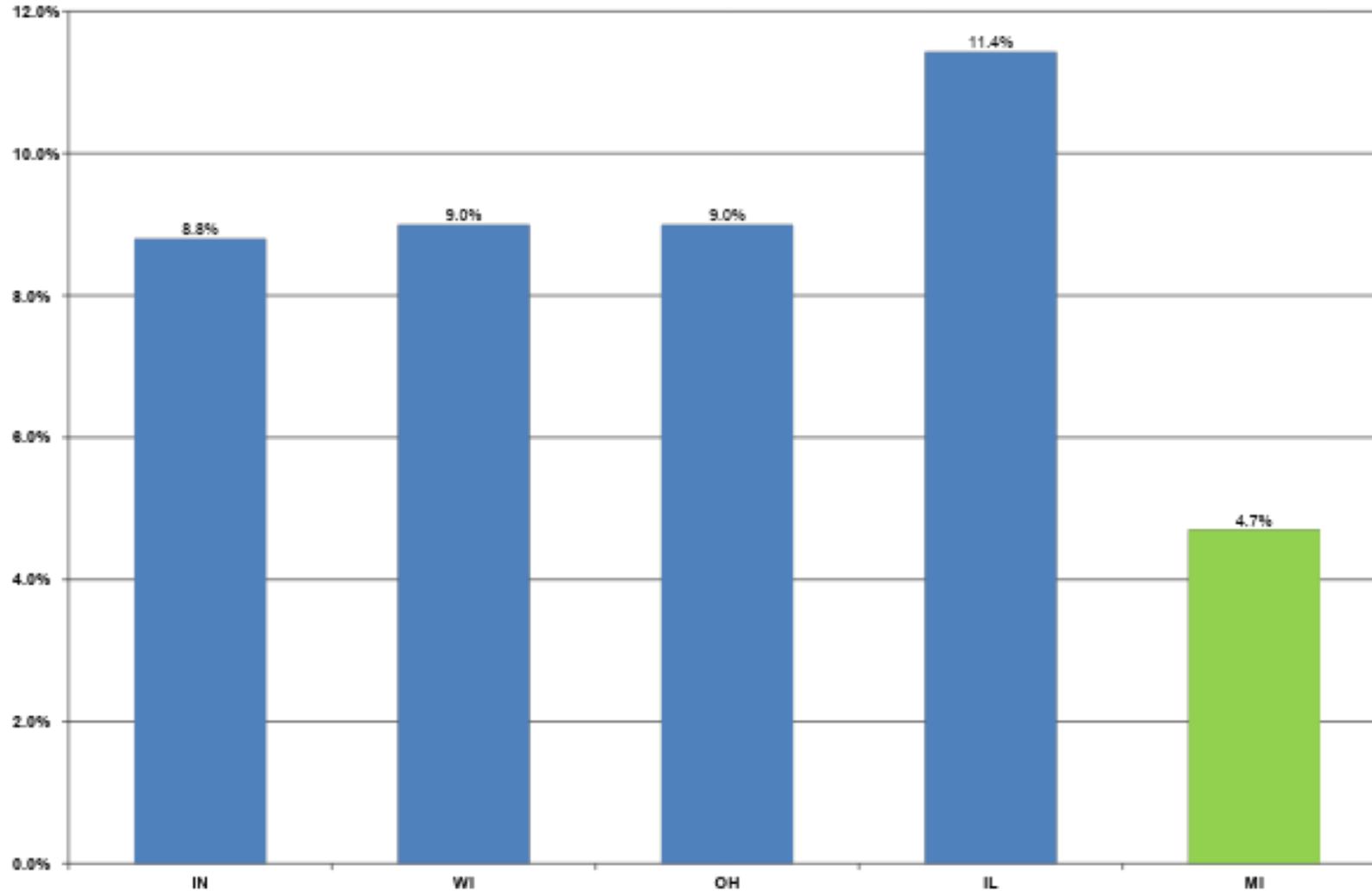
Beverage Containers As Percentage of Total Litter Collected in Hawaii



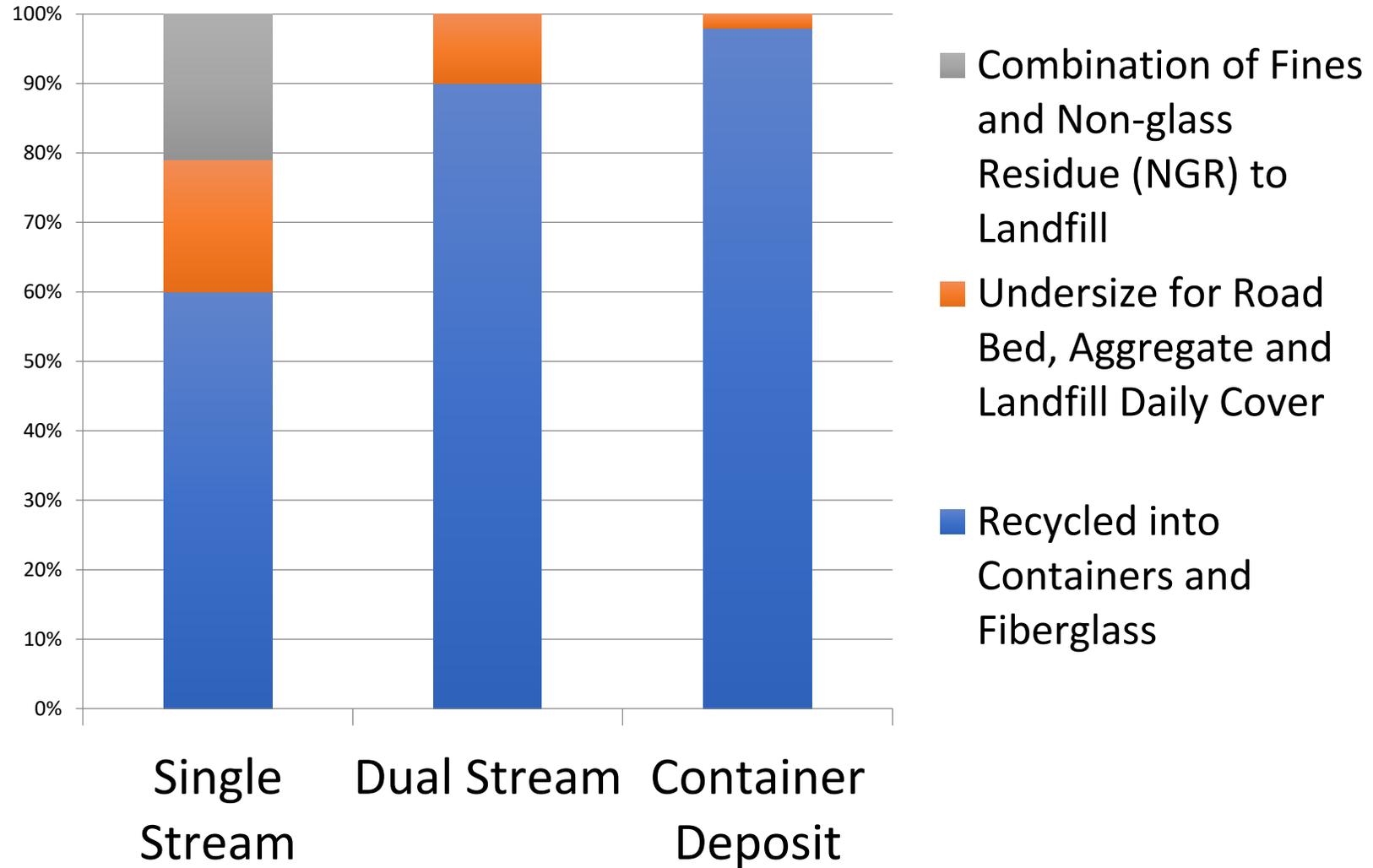
Source: Ocean Conservancy International Coastal Cleanup, 2003-2011

Deposits Reduce Beverage Container Litter – Great Lakes

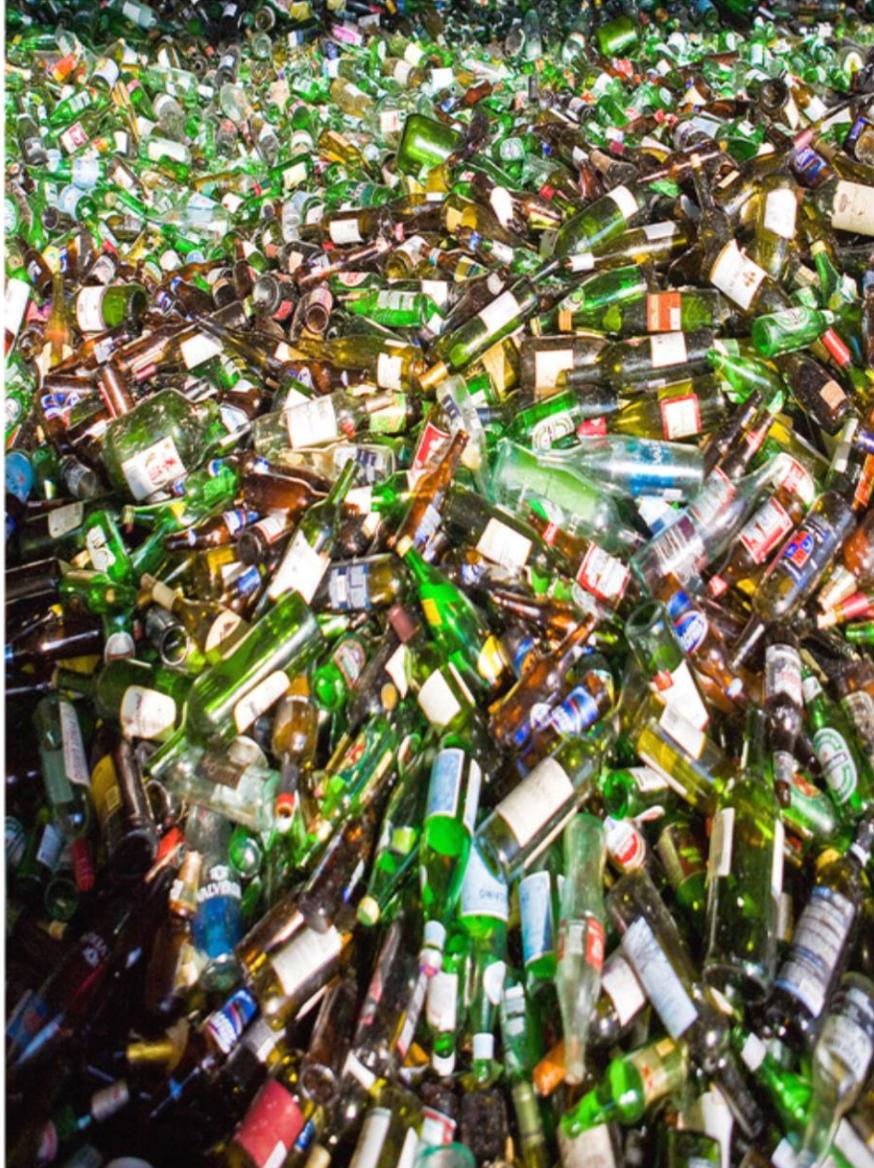
Beverage containers as a percentage of all beach litter in five States



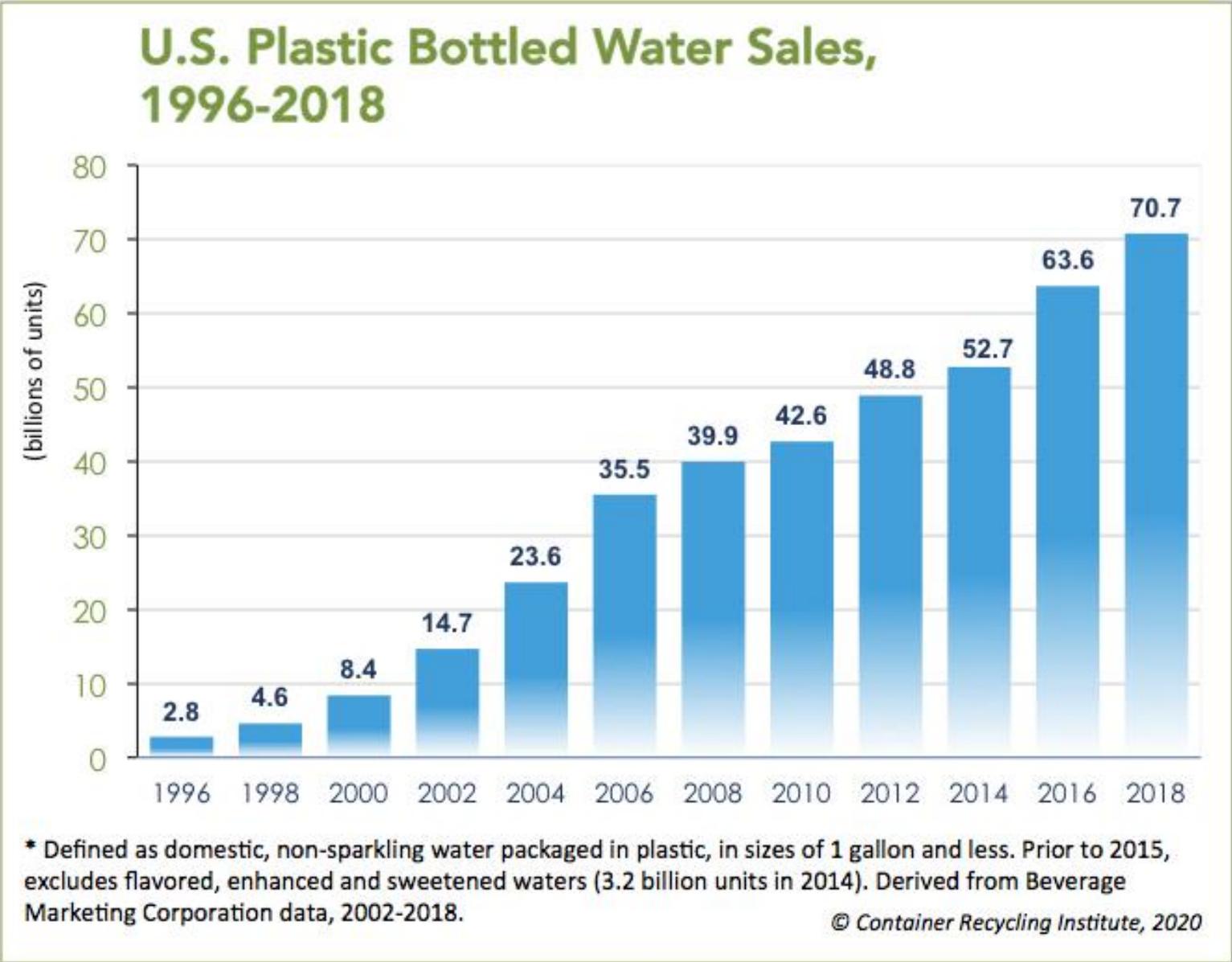
Glass Fines and Residue Rates



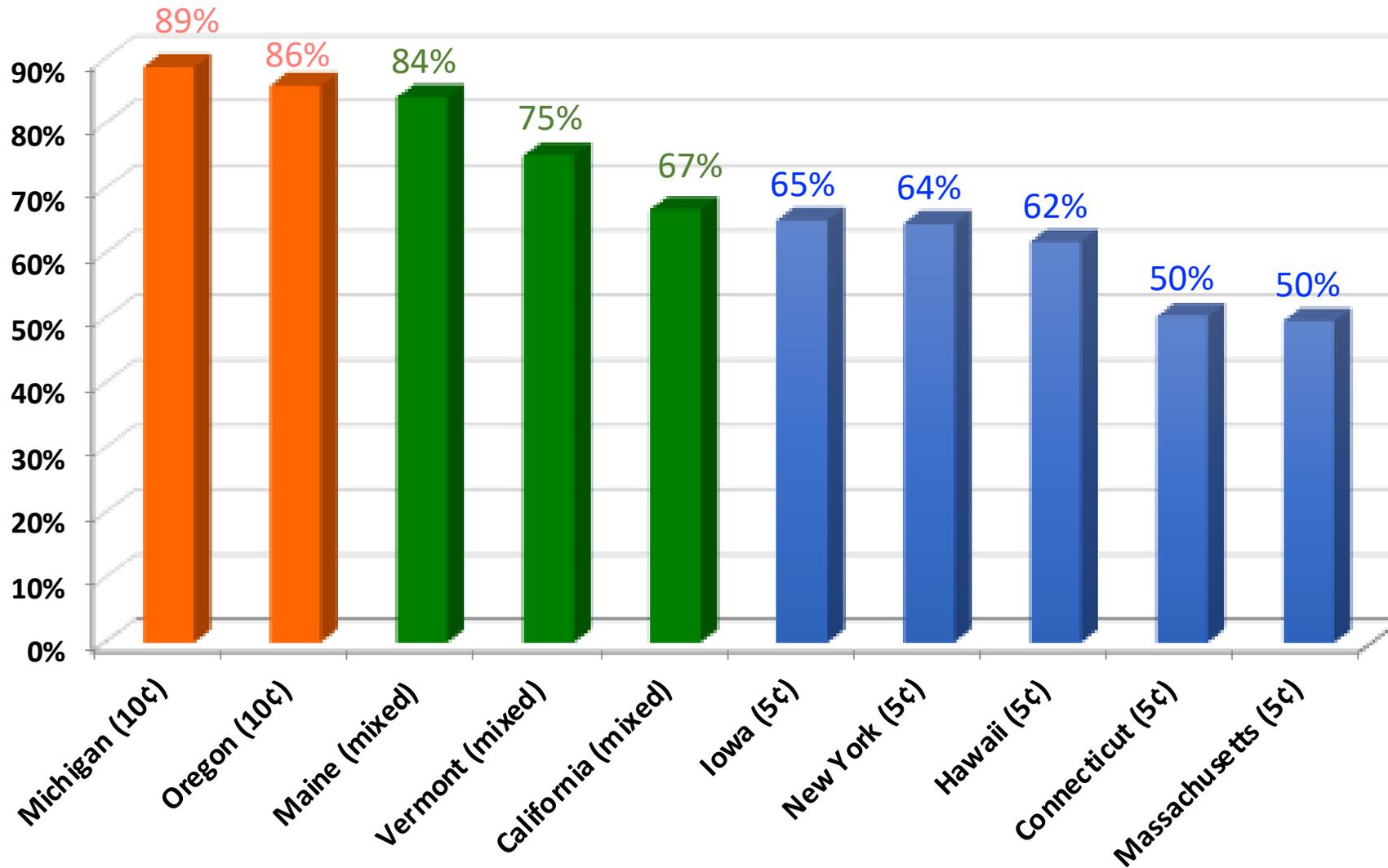
Glass: Deposit vs. Single Stream



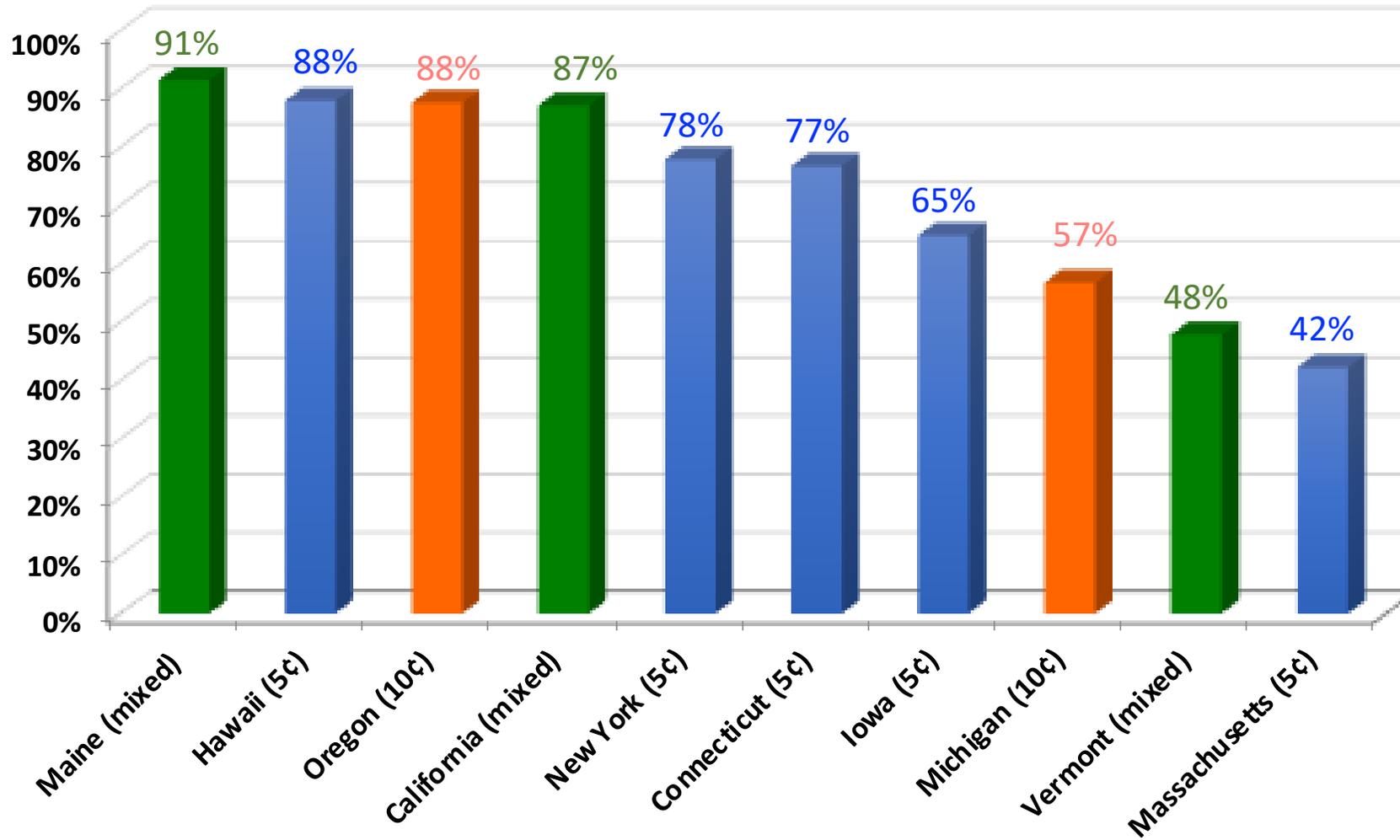
PET plastic water bottles are *the* primary source of beverage sales growth



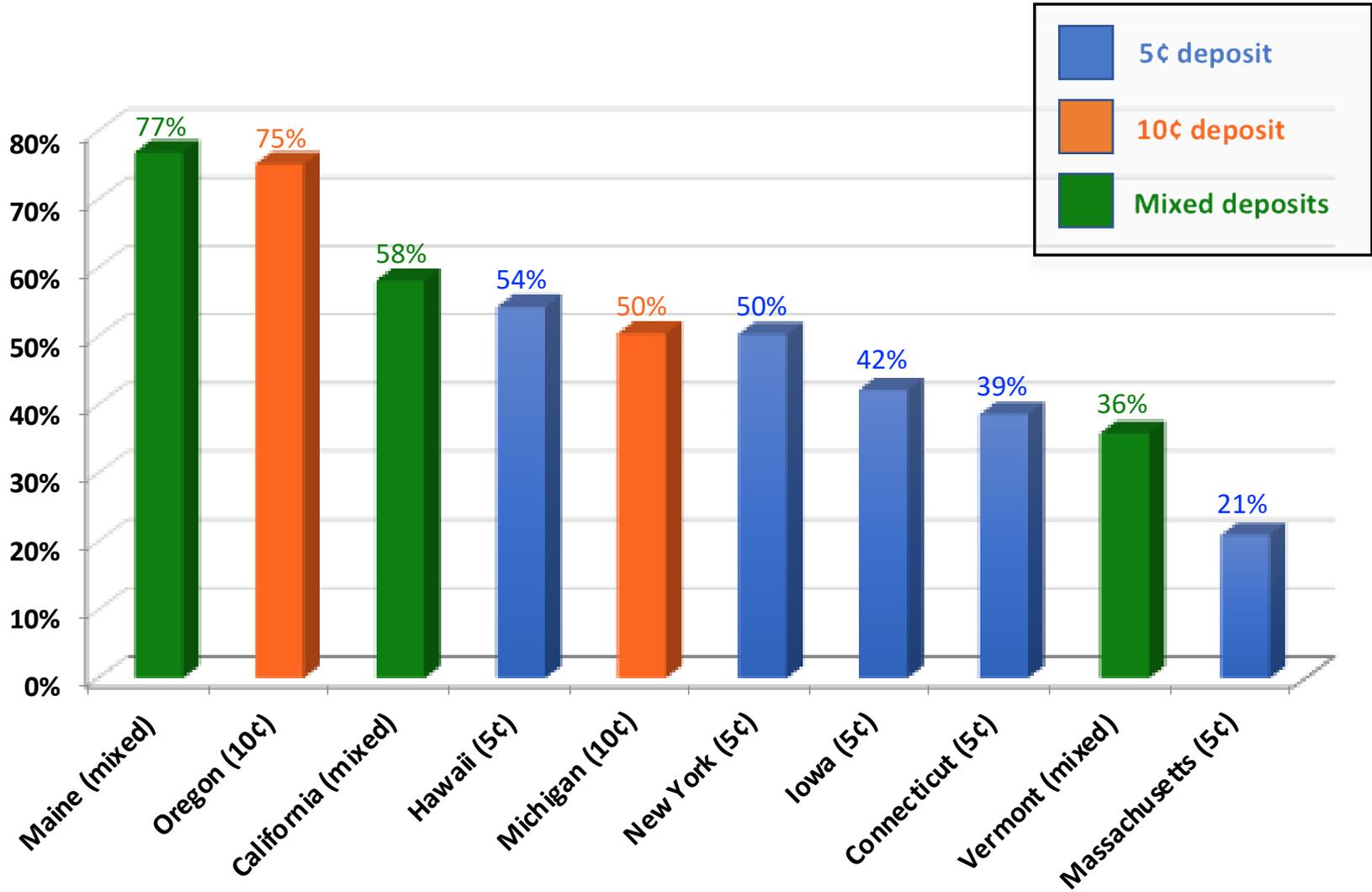
Redemption Rates for U.S. Deposit States, 2019



Percent of U.S. Beverage Units Covered by Deposits, 2019



Percent of U.S. Beverage Units Captured by Deposit Redemption, 2019



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U.S. States & Canadian Provinces with Deposits of ≥ 10¢, and/or Expanded Beverages

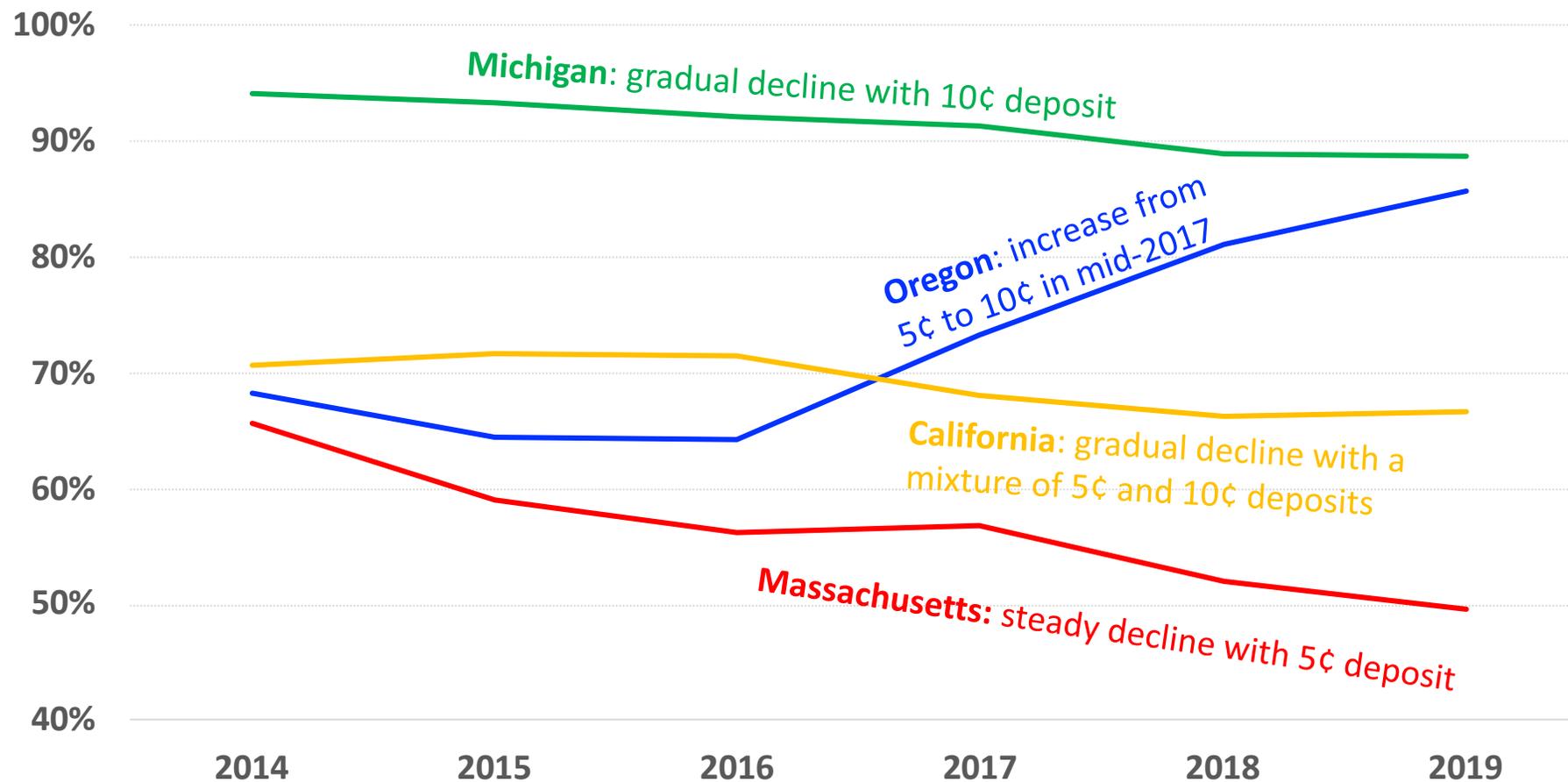
Location	Carbonated	Non-carbonated	Wine	Spirits (Liquor)	10¢ deposit adoption
California	5¢, 10¢	5¢, 10¢	X	X	2007
Oregon	10¢	10¢	under discussion	under discussion	2017
Michigan	10¢	X	X	X	1978
Maine	5¢	5¢	15¢	15¢	X
Iowa	5¢	X	5¢	5¢	X
Vermont	5¢	X	X	15¢	X
British Columbia	10¢	10¢	10¢	10¢	2020
Alberta	10¢, 25¢	10¢, 25¢	10¢, 25¢	10¢, 25¢	2008
Quebec	10¢	10¢	25¢	25¢	2022
Saskatchewan	10¢ - 40¢	10¢ - 40¢	10¢ - 40¢	10¢ - 40¢	1992
Yukon Territories	10¢ - 35¢	10¢ - 35¢	10¢ - 35¢	10¢	1992

For more detail on U.S. states, see Bottlebill.org, and for Canadian provinces, see “Who Pays What: an Analysis of Beverage Container Collection and Costs in Canada.” CM Consulting, Nov. 2020.

Unclaimed Deposits

- Under current program
 - \$3 million per year
- Under proposed program
 - \$7 million per year

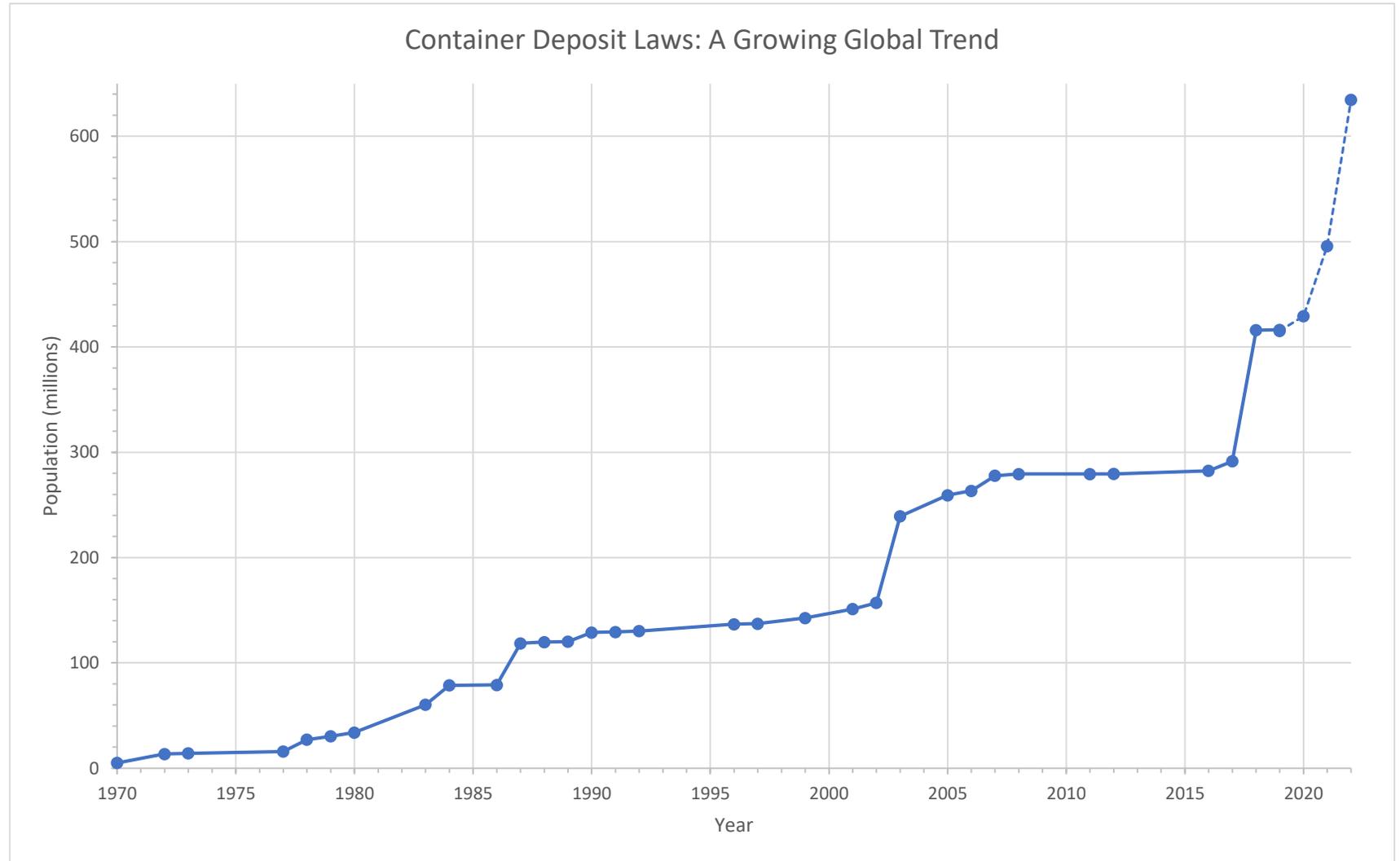
Redemption rate changes in selected deposit states, 2014-2019



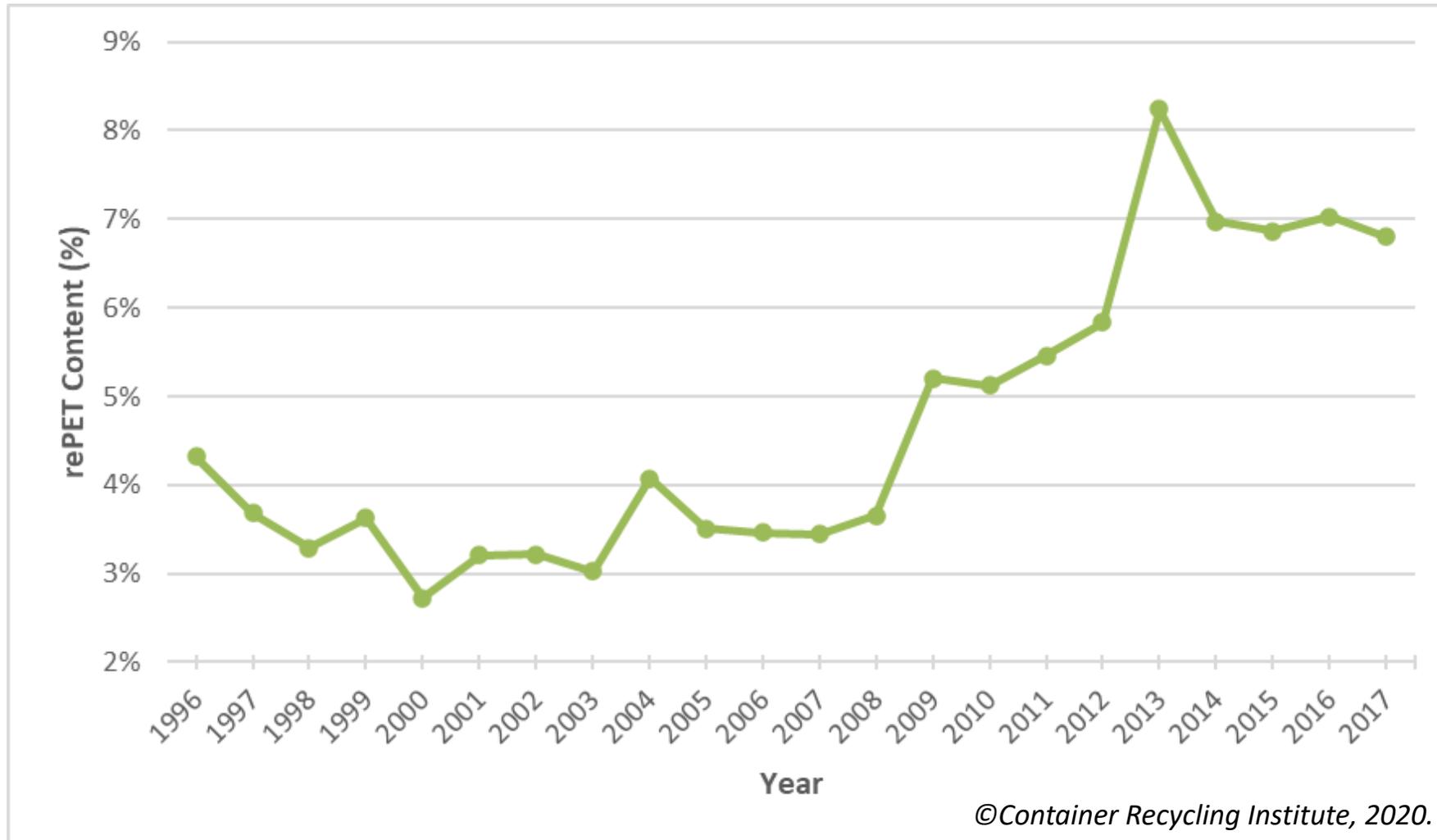
New Container Deposit Laws Enacted for 351 Million Since 2017

Region	Year Passed	Year Implemented	2018 Population (millions)
New South Wales, Australia	2016	2017	7.9
ACT - Canberra	2017	2018	0.4
Queensland	2017	2018	2.7
Maharashtra, India	2018	2018	121.4
Malta	2018	2019	0.4
Western Australia	2018	2020	2.7
Jamaica	2019	2020	2.9
Latvia	2018	2020	1.9
Slovakia	2019	2020	5.4
United Kingdom	2018	2021	66.6
Romania	2018	2022	19.6
Turkey	2018	2022	81.9
Portugal	2018	2022	10.3
Tasmania	2019	2022	0.5
New Zealand	2019	2022	4.8
Belarus	2020		9.5
Victoria, Australia	2020	2023	6.4
Singapore	2020	2022	5.9
Total			351.2

Existing and new laws will serve more than **640** million people



Recycled PET Content in Bottles (1996-2017)



Differences Between Deposit PET and Curbside PET (on average)

Metric	Deposit PET	Curbside PET
Processing Facility (extra transportation costs)	Facilities in MA & NY	Most plants that handle curbside PET are in the South
Pricing	Baseline deposit price	Worth 40% less than deposit baseline price (5-year average)
Percent Contamination + non-usable PET, other	85% production rate (NAPCOR/APR, 2017)	66% production rate (NAPCOR/APR, 2017)
Extra costs due to contamination	Minimal	Costs of transporting contaminants, extra cleaning costs and costs of disposing of contaminants
Product Use Potential	Food & beverage bottles, other food containers, many other uses	Fiber, carpet, strapping, etc.

U.S. Deposit Tons Recycled vs. Total Beverage Tons Recycled, 2017					
	Aluminum Cans	PET Bottles	HDPE Bottles	Glass Bottles	Subtotal, bottles & cans
All beverage sales	1,467,300	2,876,859	764,727	12,213,967	17,322,853
Deposit beverage sales	344,074	651,135	53,539	2,031,922	3,080,670
All beverage recycling tons	653,760	702,333	238,905	2,739,812	4,334,810
All beverage recycling rate	44.6%	24.4%	31.2%	22.4%	25.0%
Tons redeemed	263,084	389,799	19,357	1,306,969	1,979,209
Redemption rate	76.5%	59.9%	36.2%	64.3%	64.2%
Tons redeemed as a proportion of all beverage recycling tons	40.2%	55.5%	8.1%	47.7%	45.7%
<p>Source: data derived from "2017 Beverage Market Data Analysis," The Container Recycling Institute, 2020.</p> <p>© Container Recycling Institute, 2020</p>					