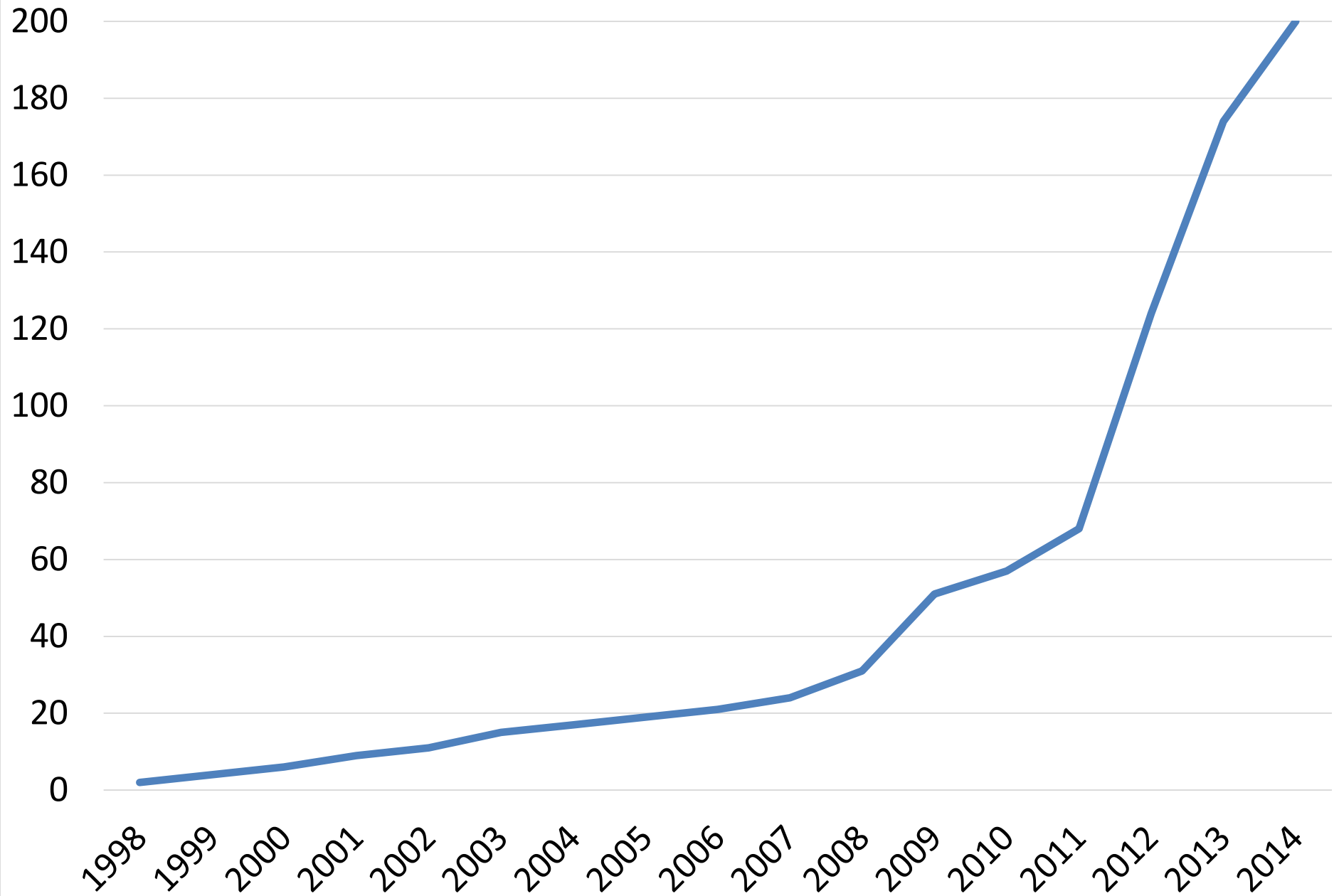


# How green is that grocery bag ban?

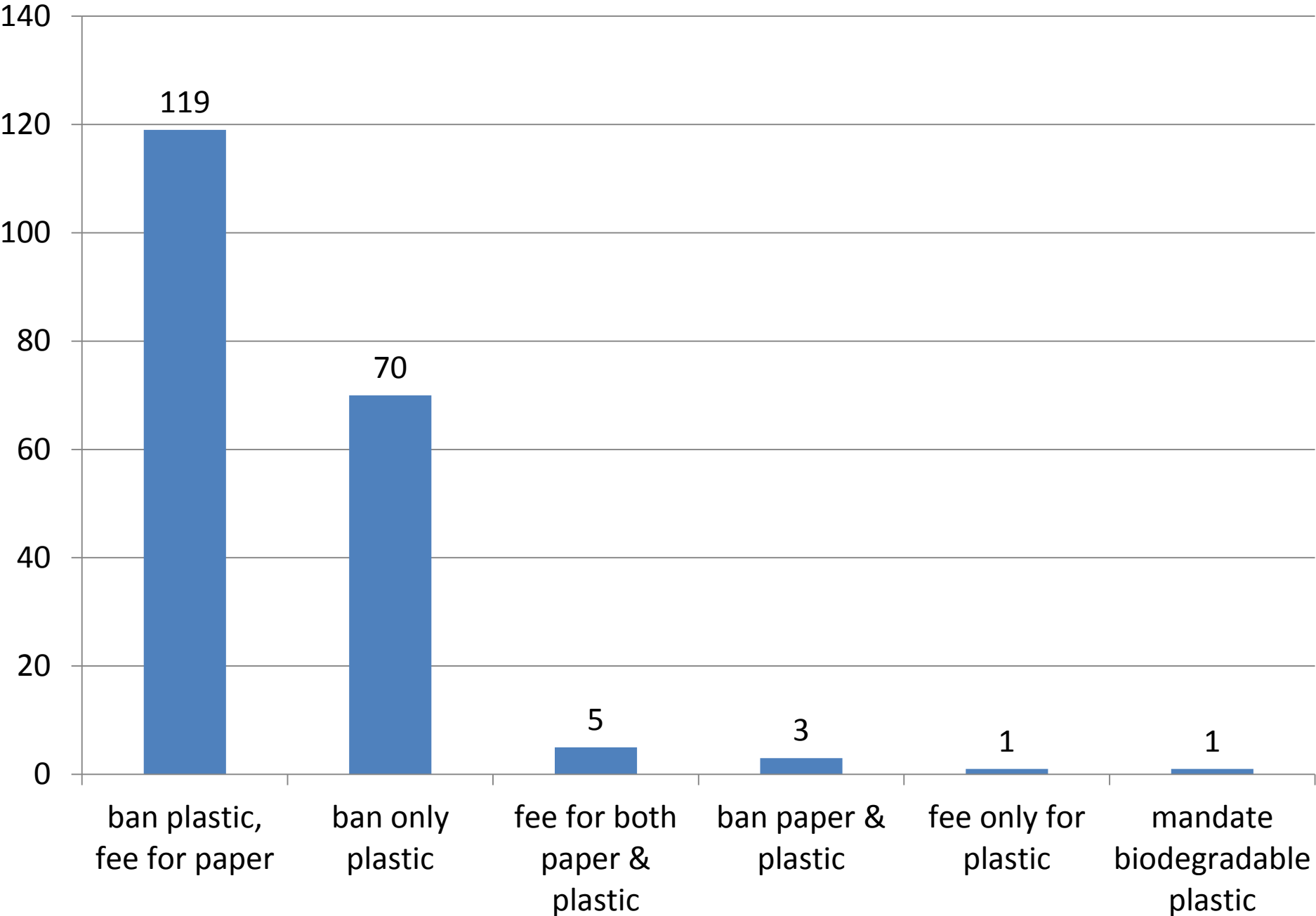
Julian Morris

Reason Foundation

# Plastic Bag Bans, Taxes & Fees in the U.S.



# Types of plastic bag ordinances in the U.S. (1998-April 2014)



# New Mexico bag bans

- Santa Fe (passed August 2013):
  - Retail establishments prohibited from distributing “single use” plastic bags less than 2.25 mils thick
  - Minimum fee of 10c on paper bags
- Silver City (passed 8 July 2014):
  - Retail establishments prohibited from distributing “single use” plastic bags less than 2.25 mils thick, or paper bags with less than 40% post-consumer recycled material, unless they are certified by the Forest Stewardship Council.

**WHY?**

# special interest groups claim that plastic grocery bags:

Cause waste

Result in litter

Threaten marine life

Clog storm drains – causing flooding

Consume too much oil and other resources

Consume too much energy

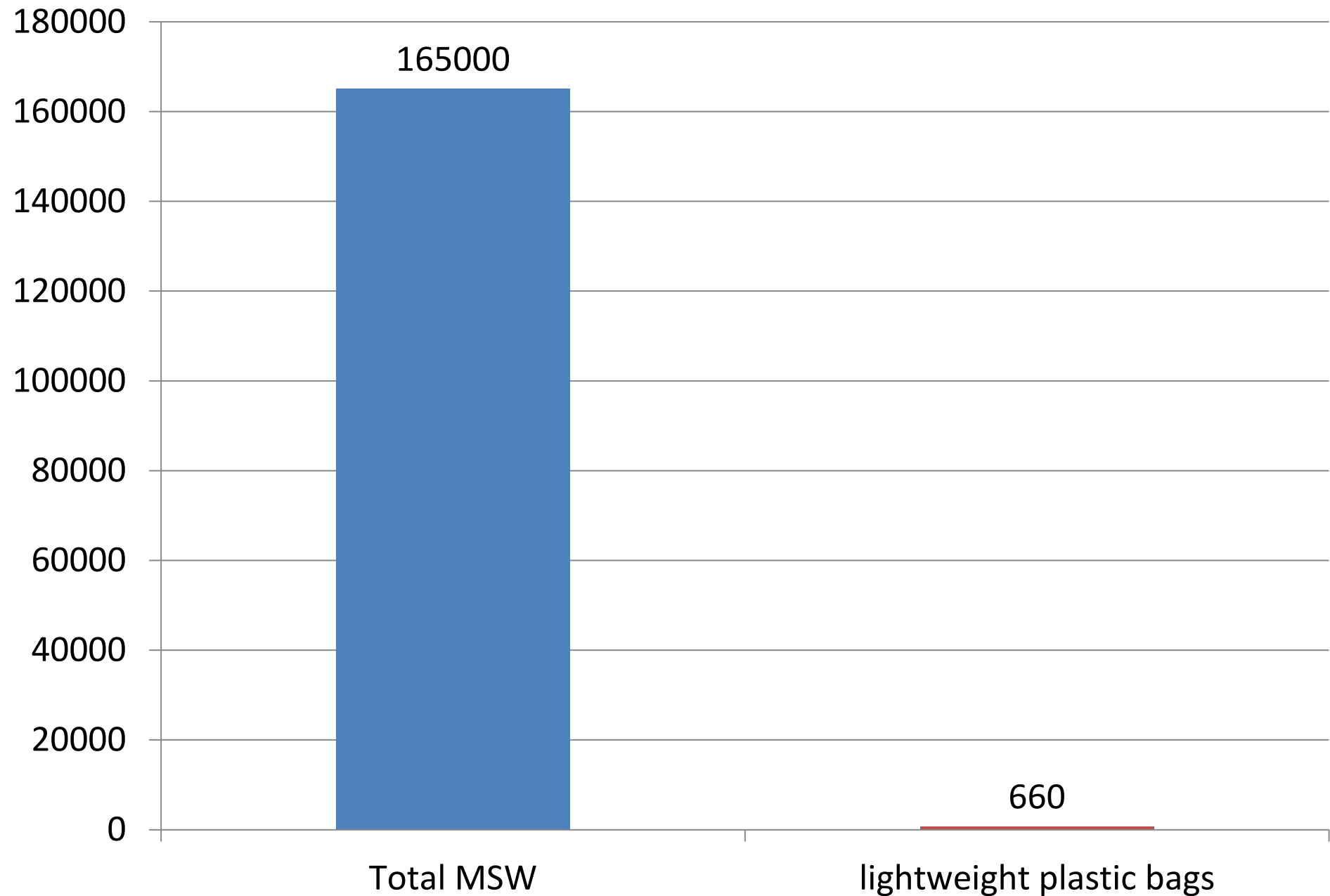
Contribute to global warming

DO

THEY?



# Waste discarded in the U.S. (1000 tons)







# Plastic Bags as a Proportion of Visible Litter

Survey	Year	Proportion Plastic bags	Survey	Year	Proportion Plastic bags
Toronto	2012	0.8%	Durham	2003	0.3%
Edmonton	2011	1.1%	Peel	2003	0.1%
Alberta	2009	0.0%	York	2003	0.4%
San Francisco	2008	0.6%	Toronto	2002	0.6%
San Jose	2008	0.4%	Florida	2002	0.5%
Keep Am. Beautiful	2008	0.6%	Florida	2001	0.7%
Alberta	2007	2.0%	Florida	1997	0.6%
San Francisco	2007	0.6%	Florida	1996	1.0%
Toronto	2006	0.1%	Florida	1995	0.7%
Toronto	2004	0.2%	Florida	1994	0.6%

*Source: Steve Stein*

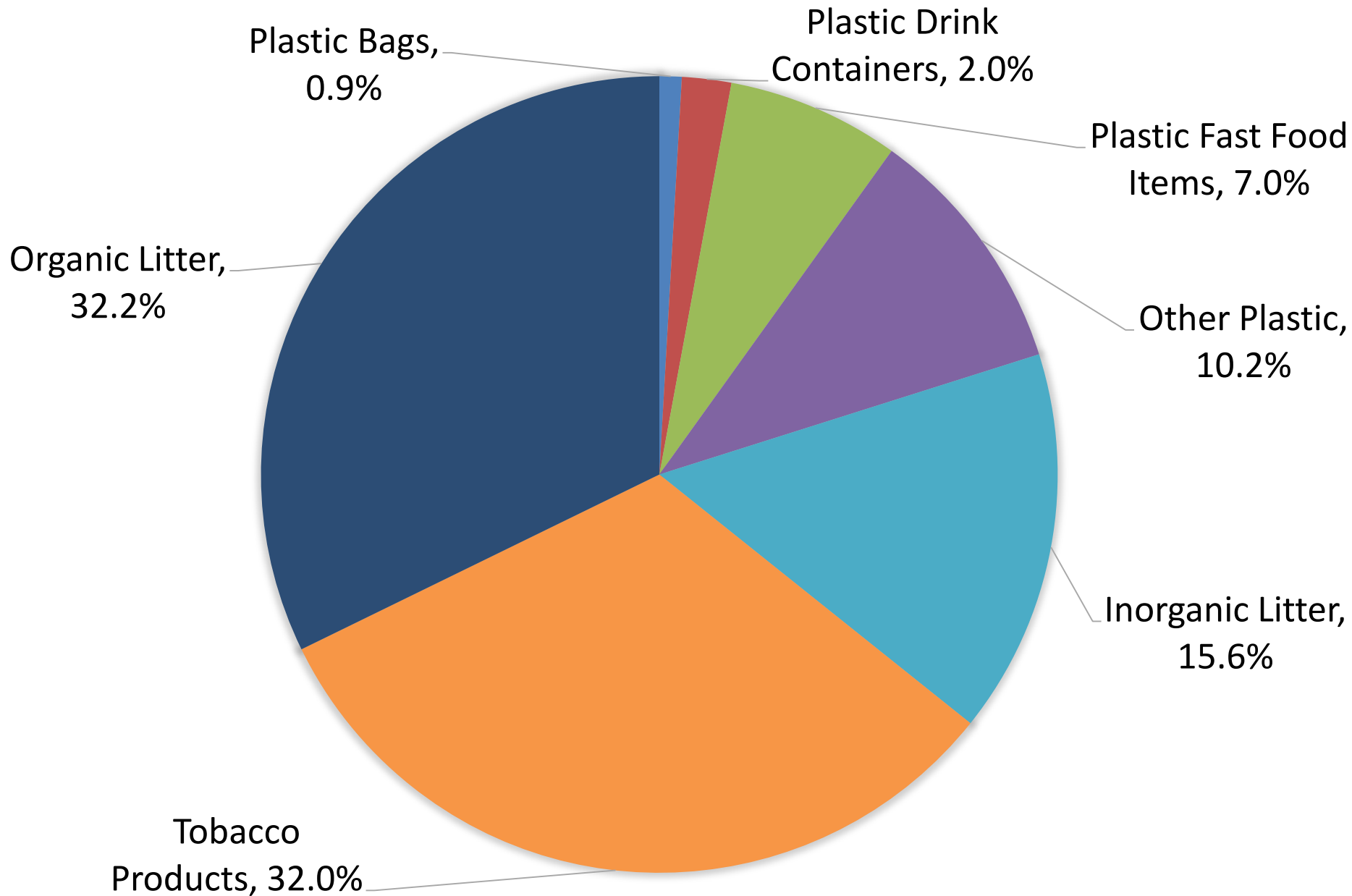


# Are plastic bags a threat to marine life?

“It’s very unlikely that many animals are killed by plastic bags. The evidence shows just the opposite. We are not going to solve the problem of waste by focusing on plastic bags. ... With larger mammals it’s fishing gear that’s the big problem. On a global basis plastic bags aren’t an issue.”

– David Santillo, Greenpeace

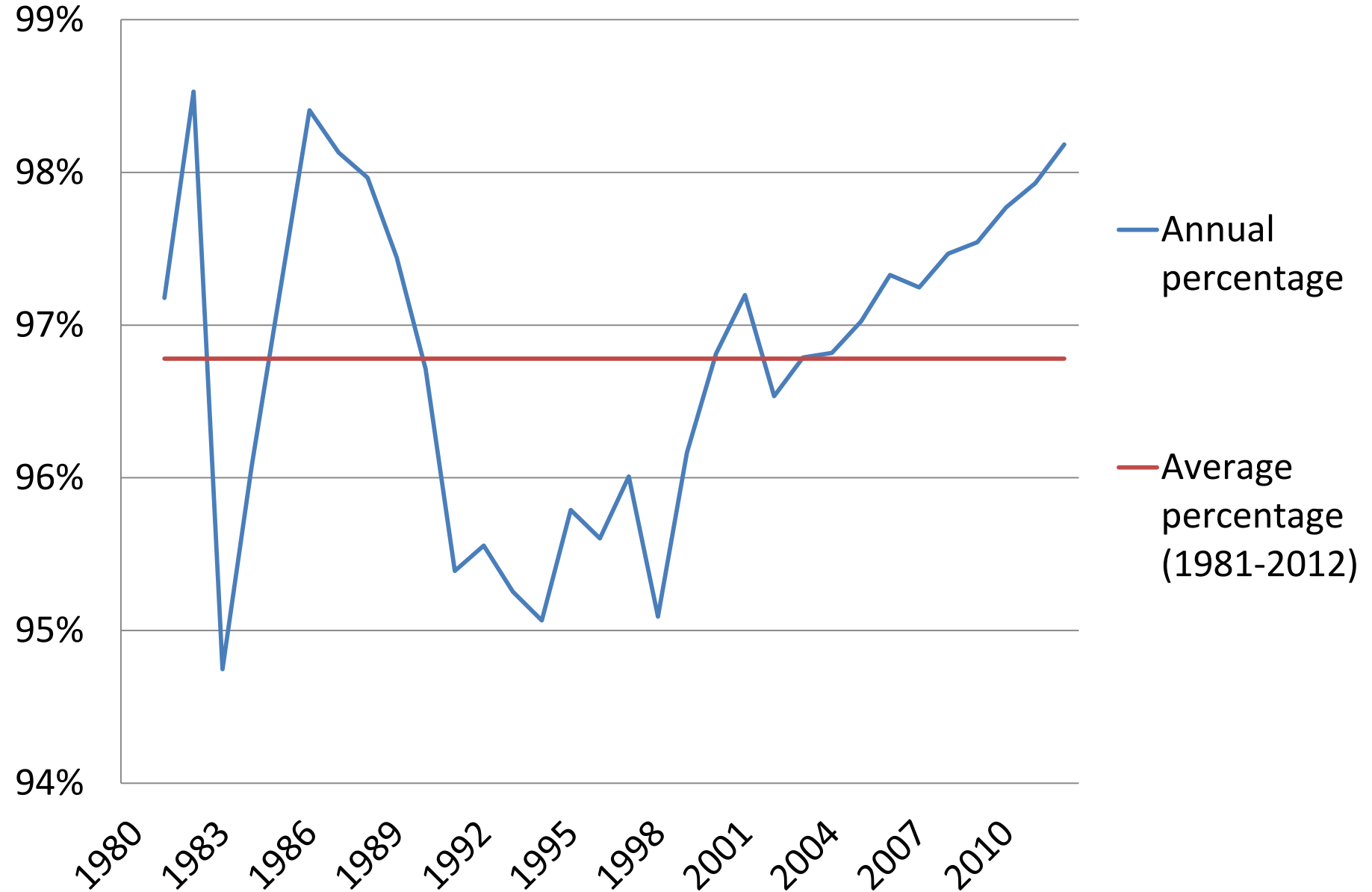
# Types of Litter Found at Storm Drains



**Source: Keep America Beautiful**




# Proportion of U.S. Ethylene Derived from Natural Gas



# As to the other claims...

- ALL bag options result in the consumption of energy and water, as well as emissions of greenhouse gases (GHGs)
- Various life cycle assessments (LCAs) analyzed impact of different bags on these measures from cradle (resource extraction) to grave (disposal).
- We reanalyzed these LCA data for the following bag types:
  - HDPE (standard lightweight plastic grocery bag)
  - LDPE (thicker, heavier “reusable” plastic bag)
  - Kraft Paper (standard paper grocery bag)
  - NWPP (popular “reusable” carrier bag)



We took into account the *actual use rates* of each bag type

Bag type	Actual use rates
HDPE	1.6
LDPE	3.1
NWPP	14.6
Paper	1

*Sources: Surveys by Edelman-Berland and APCO*

# We also took into account the potential for bag reuse to spread disease

- In 2010, nine members of a soccer team in Oregon were infected with norovirus after eating food from a reusable bag that had become contaminated with the virus.
- Several other disease outbreaks linked to reusable bags
- For a 2010 study by researchers at Loma Linda University and the University of Arizona, reusable bags were “collected at random from consumers as they entered grocery stores in California and Arizona”:
  - “Large numbers of bacteria were found in almost all bags and coliform bacteria in half.”
  - “In interviews, it was found that reusable bags are seldom if ever washed and often used for multiple purposes.”
- Recent survey by Edelman Berland: only 16% of shoppers cleaned their reusable NWPP bags “once a week or more.”

... and the appropriate response – exemplified by these recommendations for reusable bags from the California Department of Health ...

**At home:**

- ***Reusable grocery bags should be machine or hand-washed frequently! Dry the bags in a clothes dryer or allow them to air dry.***
- ***Store grocery bags away from sources of contamination, such as pets, children, and chemicals. Storing reusable grocery bags in the trunk of cars is not recommended. During the warmer months, the increased temperatures can promote the growth of bacteria that may be present on the bags.***

**At the store:**

- ***Place reusable bags on the bottom shelf of the grocery cart (below the cart basket where food products are placed).***
- ***When selecting packages of meat, poultry, or fish, consider putting the packages in clear plastic bags (often available in the meat and produce sections) to prevent leaking juices from contaminating other food items and the reusable grocery bags.***

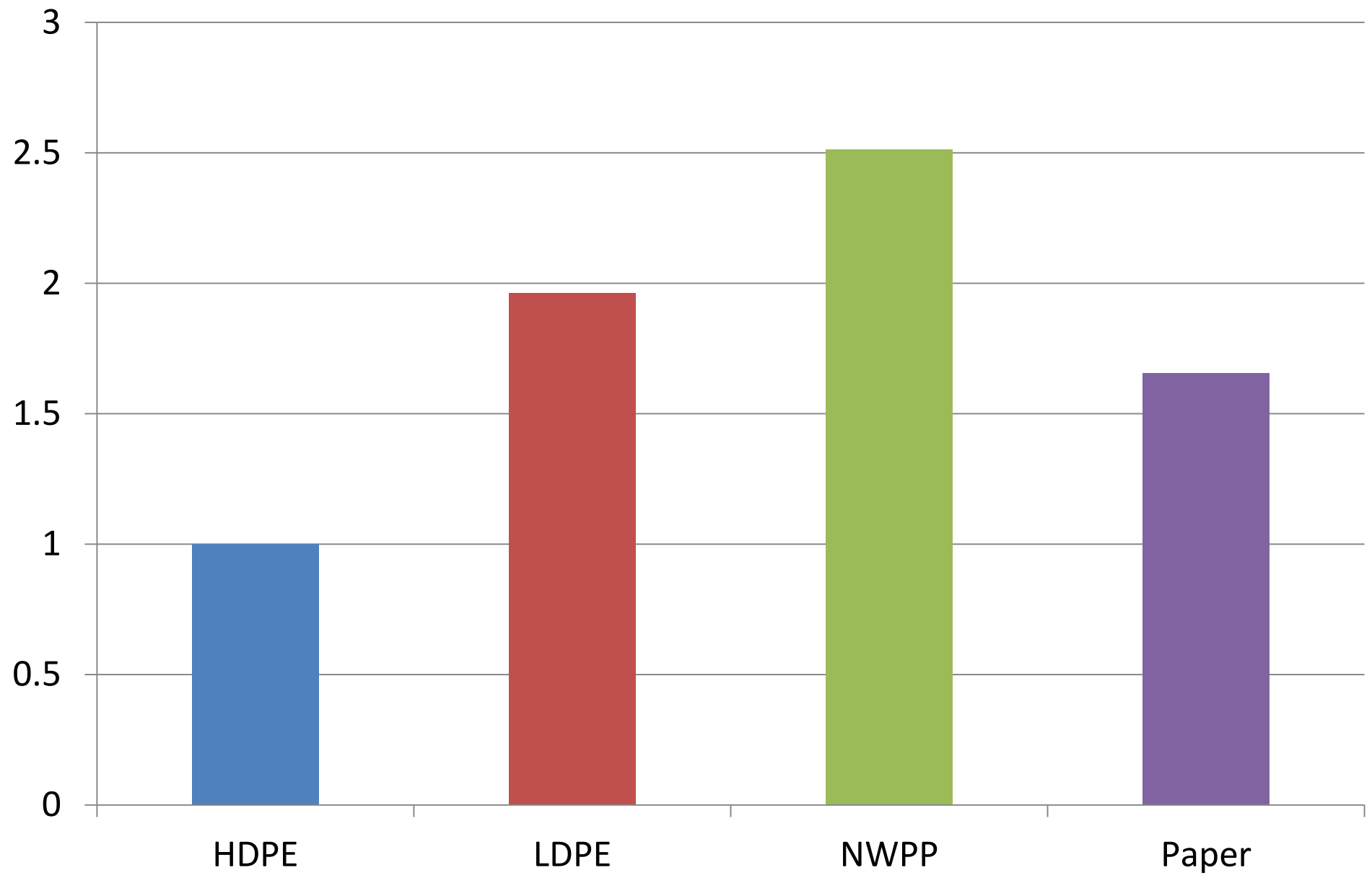


... which have implications for energy and water use – and GHG emissions ...





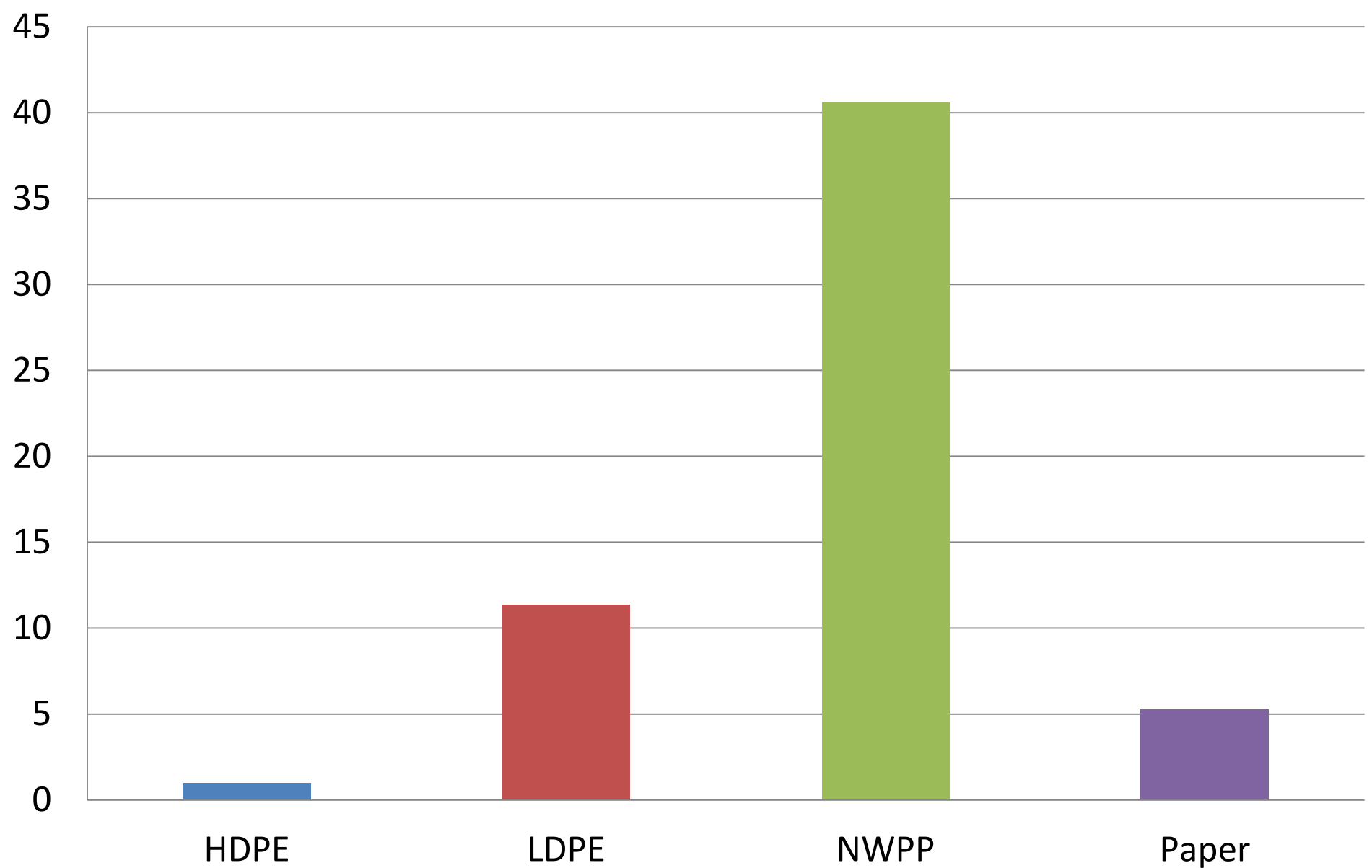
**Relative consumption of non-renewable energy resources for typical weekly shop using different bag types, accounting for use rates, cleaning.**  
(LCAs used are *maximum* impact of HDPE, *minimum* impact of other bags.)





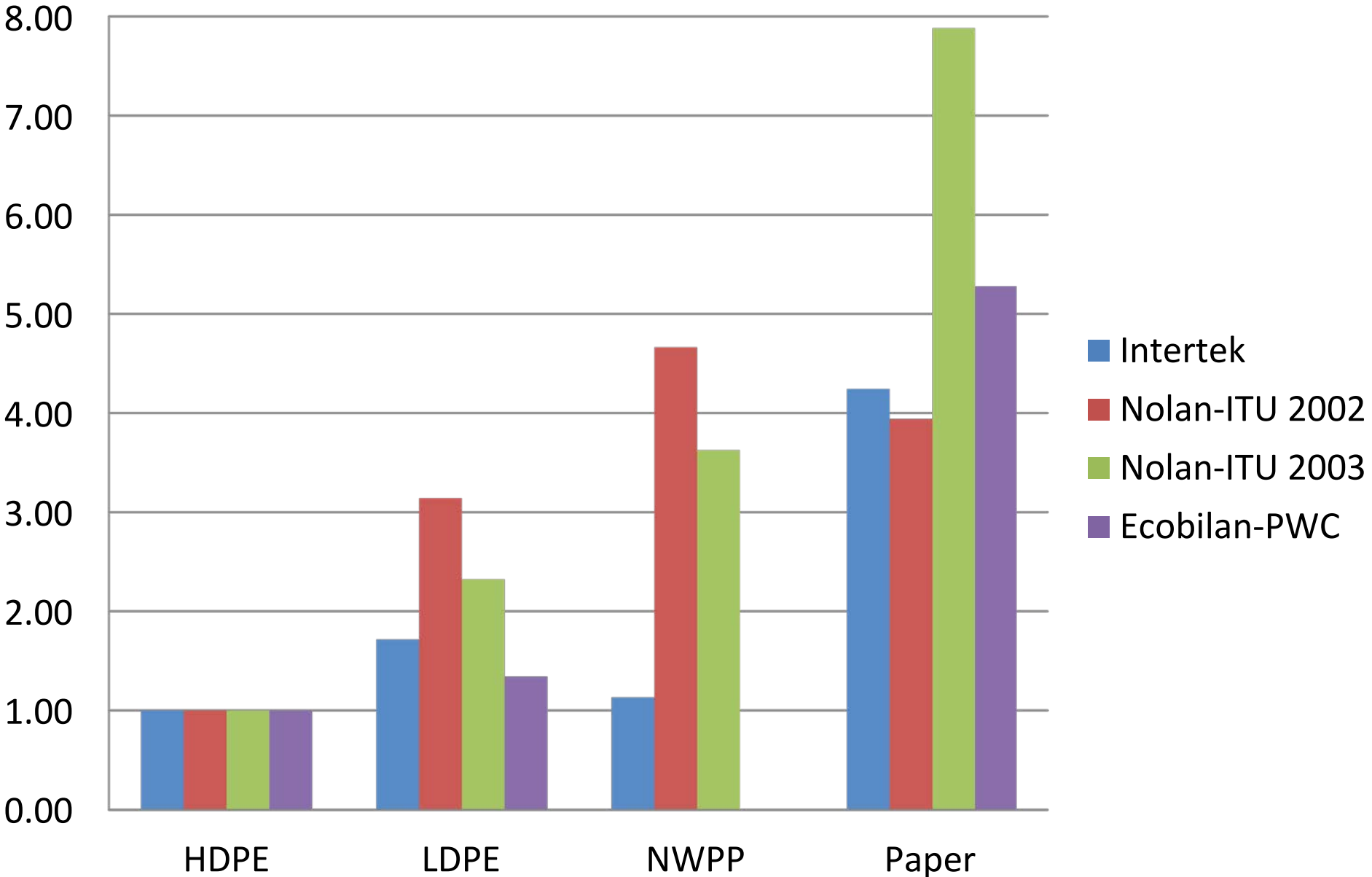
# Relative consumption of water for typical weekly shop using different bag types, accounting for use rates, cleaning

(LCAs used are *maximum* impact of HDPE, *minimum* impact of other bags)





# “Global Warming Potential” of Alternative Shopping Bags Relative to HDPE, various LCAs



## **Conclusion:**

**Plastic bag bans are environmentally counterproductive and economically harmful**

- When combined with mandatory fees on alternatives, consumers are effectively forced to buy alternative bags that have a worse environmental profile
- Without mandatory fees, consumers are less likely to reuse bags
- Either way, the result is likely to be an increase in the use of energy and water, as well as higher costs for consumers

# Americans don't want plastic bag bans

- 60% of Americans oppose plastic bag bans, while only 37% are in favor.
- Opposition is non-partisan, though it is stronger among independents (64%) and Republicans (71%) than Democrats (52%).

– Reason-Rupe poll, 2013