

# **TRENDS IN WASTE GENERATION AND DISPOSAL**

**SPSA Board of Directors  
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# WHAT'S INCLUDED IN THIS PRESENTATION?

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1. A review of a considerable amount of literature
2. Discussions with various people
3. The establishment of 4 categories in which trends are outlined

# 1. GENERAL TRENDS SEEN IN THE LITERATURE

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- A. Waste's perception of having "no value" has changed over the years to one where waste produces multiple commodities with "value" and this continues to change how items in our waste are viewed by the public and the business community.
- B. Reducing first, reusing second, and recycling third must be the key focus in waste management.
- C. The general state of the economy has impacted consumers's confidence and hindered purchases of commodities thus reducing per capita waste generation is an accurate summation. Decline in disposable income has brought about reduced consumption. Slower growth in salaries and higher prices for commodities will continue to impact the ability of consumers to make purchases and this impacts the growth in the generation of waste.
- D. Predictability of the future waste stream will continue to be difficult at best.
- E. Virginia's waste stream has been declining since a peak in 2005 and the severe 2007-2009 recession contributed even further to lower solid waste volumes. Until the economy begins to pick up considerably, the waste stream will continue to have stable or lower volumes.

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F. [Per capita waste generation](#) shows that the Virginia "net" rate (after recycling etc) in [2007 was 3.02 lbs/capita](#) and it declined through 2010 to 2.46 lbs/capita and went back up in 2011 to 2.56 lbs/capita. In the [Jan 2012](#) report of the Washington Metropolitan Region total per capita generation rate of [2.5 lbs/capita](#).

G. In Southeastern Virginia the presence of a [strong tourism base and the military impacts waste generation](#) and has a high correlation to the amount of waste generated within the region.

H. It is sensed that [waste generation tonnages will not increase appreciably](#) over the next several years.

## 2. DISPOSAL METHODS TRENDS

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- A. [Landfilling](#) will continue to be the predominant MSW method of disposal in the future years.
- B. [Waste to landfills](#) in the United States will [continue to decline](#) although disposal amount may increase slightly because of continued increases primarily in recycling, composting and source reduction efforts.
- C. [Energy recovery](#) from waste such as pyrolysis, gasification , anaerobic digestion, mixed waste composting, plasma arc and chemical decomposition [will continue to fail to make economic viability](#). (In a study involving 22 conversion technologies evaluated, the service fee requirement ranged from \$136 to \$900 per ton.

# 3. SOURCE REDUCTION

- A. The [single most cost effective way to reduce waste generation is through source reduction](#). [Source reduction: reduces the amount of material needed to complete a specific task reusing a product in its original form or using repairable, refillable and durable products which last for long periods of time. Source Reduction reduces waste disposal and decreases expenses. It cuts back on the use of natural resources. It preserves resources and reduces waste significantly. It also results in economic saving for schools, communities, businesses and individual consumers. Source Reduction and reusing materials have proven to be more sustainable and economical than other options.]
- B, [Reducing manufactured product waste](#) is a trend that must continue to be in the forefront. Extended Producer Responsibility (EPR) for beverage containers was in 11 states in 2005. Maine has 2004 legislation that requires computer makers to finance the recycling of computers and TVs collected in the MSW system.
- C. [Retail sales and waste disposal fees are significant determinants of waste generation](#). [Per capital sales of [eating establishments](#) proved to have the greatest influence on waste generation. [Tourism areas](#) have a greater impact on waste generation also. [Variable retail sales](#) (increases and decreases) was the best single predictor of per capital waste generation.]
- D. An [increase in tipping fees](#) will continue to be associated with a decrease in waste both deposited at the landfill and recycled.

## 4. RECYCLING

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- A. [Recycling efforts will continue to increase](#) moderately for materials, yard clippings and woody waste thus reducing waste quantities from these sectors from being disposed of in landfills or incinerated.
- B. [Market demand for recycle products will continue to increase](#) on a more moderate pace in the future. (EPA for 2010 showed market demand for recovery over the last decade increased from 15% to 34.1%.)
- C. [Recycling will continue to cost more per ton](#) than will the disposal of waste by landfilling. [Most local governments subsidize recycling thus reducing revenues necessary for other municipal services such as education, law enforcement, fire and rescue etc. Recycling has seemed to have reached a plateau. [Incentives](#) offered to consumers may be necessary to push the recycling rates higher.]
- D. Until there are sufficient [penalties for citizens who do not recycle](#) as policies dictate, the full reach of recycling materials will not be realized.
- E. The [prices for recyclables will continue to fluctuate](#) frequently as well as the demand for recyclables. [[However, the need](#) for local governments to get rid of the material which they have collected is remaining rather constant and thus requires them to sell materials at varying prices through the year making it difficult to forecast revenues accurately.]

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F, [Recycling percentage mandates](#) for annual recycling rates will continue to impact waste generation, increase the cost to provide the recycle services and the local cost for providing the service.

G. Reducing [food waste](#) from restaurants, fast food, supermarkets, schools and the like offers great opportunity to reduce the amount of waste being landfilled.

H. [Electronic waste](#) will continue to be an area where growth in the amount of items being disposed will continue to grow in the future.

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Discussion??

# WHY DO WE NEED TO LOOK AT TRENDS?

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1. Do we know what's going to possibly impact waste generation and thus waste disposal?
2. Are there things out there that we need to know?
3. Are there things out there that could cause us problems and concerns?
4. Are we set up to recognize the challenges and to adequately prepare and effectively address the issues that will confront us?