

SURVEY OF SOLID WASTE ISSUES AND NEEDS IN 50 STATES: PREVIEW SUMMARY FOR ROC

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Introduction

We conducted detailed telephone interviews with state solid waste authorities in all 50 states.¹ The respondents were from organizations like DNR, DEQ, and representatives from similar agencies.² We were interested in an array of data, including:³

- Landfill lifetimes, prices, and bans,
- Recycling programs and policies, and
- Tonnage disposed and diverted.

The results are summarized below – “issues” are discussed at the end of the document.

Landfill Bans, ADFs, and C&D

Bans: The most commonly banned material at the state level is tires:

- Almost two-thirds (64%) of the states ban tires in some form, 10 states ban them only when they are whole.
- More than half (56.1%) ban hazardous materials.
- Almost half the states (47.5%) ban oil.
- One in seven (14%) of states currently have an electronics ban.

Yard waste and recyclables are also banned from disposal in a number of states.

- Yard waste is banned from landfill disposal by 52.3% of the states.
- 8.6% of the states ban “separate recyclables” and another 5.9% ban all recyclables.

Almost two-thirds ban some sort of other material such as: appliances/white goods (9 states); computers; bulk oil; a toy in a cereal box with a lead acid battery (!) and mercury.

Enforcement: Many different solutions were given for enforcing landfill bans, including: inspections/inspectors including DEP and LF inspectors/attendants (12 states); visual inspections at the gate; signage and education; and permits.

C&D: More than half (55.8%) said they have C&D policies/programs. A third (37.2%) did not, and another 7% are considering enacting some type of program. Taking a closer look at C&D responses, Iowa mentioned having three processors (and others have them as well) and many states have statewide regulations; five require permits.

E-waste: Regarding e-waste policies/programs, more than half (54.8%) of the states reported they had something going on, while thirteen (31%) do not, and another six (14.3%) have some legislation pending or in the works.

ADFs: Almost half (46.5%) of the respondents (20states) said they have advanced disposal fees (ADF's). Of these, 16 out of the 20 states (80%) have some ADF for tires ranging from \$.25 - \$2.00. Other items include batteries, bottles, and white goods. Ten states have local landfills that charging ADFs. Nine states say advance disposal fees are enforced by the retailers, usually from outlets that are selling tires and putting some disposal fee on the sale.

¹ SERA undertakes periodic in-house-funded research on solid waste issues and topics as part of R&D and to augment in-house databases. Parts of this research may be used in an article for Resource Recycling; we assembled topics here we thought might interest ROC.

² Follow up interviews with recycling association coordinators will follow.

³ We also collected PAYT information, but that information is not presented here.

Disposal Methods and Landfills

What share of disposed waste is landfilled? Overall, the average was about 85%, with the responses ranging from about 20% (one said 3%) to nearly all. The average percent incinerated was about 8%, with responses ranging from none (most common response) to some states with more than 60% of their waste incinerated. The vast majority gave no other ways waste was disposed.

About what are the costs for landfill tip fees in your state per average ton? The responses averaged \$35.78 for the 25 states that had a hard number. Another twenty-four (24) gave a range. The range was \$23.55- \$74, with a majority stating tip fees ranged between \$15-35. Three states noted disposal fees as high as \$100.

Have tip fees changed much over the last three years? More than half (51.2%) said no, and 35% said there had been change, with 14 of the 15 states with changes saying the tipping fees had risen over the last 3 years.

Is there a landfill shortage in your state? Only five (5) out of 48 states say there is a shortage 10.4%. Forty one (41) states (85.4%) said no (2 didn't know).

About how many years do the landfills have left? The average response was a lifetime of 21.6 years for the 25 states that gave a hard number. Others provided ranges, varying from about 10 to 61 years.

About what share of landfill facilities are public? 70% are public, about 31.3% are private.

Is there a significant amount of waste coming in to your state?

- Yes -Twenty one (21) states, 46.7%
- No- Nineteen(19) states, 42.2%,
- Dnk- Two (2) states,4.4%
- Not a problem now, but may be one soon, Three (3) 6.7%

From where? Waste was imported from 31 states and 1 Canadian province(# in parentheses is how many times the state was mentioned) NY(4), MA(4), NH(3), TN(3), NE(3), CA(3), TX(2), NJ(2), IL(2), OR(2), UT(2), FL(2), GA(2), MS(2), NC, DE, AK, ID, MT, AZ, ND, MO, PA, RI, ME, AL, LA, WA, NV, and BC

Is there a significant amount leaving the state?

- Yes Eleven(11) states, 44%
- No Twelve (12) states, 48%
- Dnk One (1) 4%
- Not yet, but maybe soon One (1) 4%

Where is it going? Trash is being shipped out to 28 states, NY(2), NH(2), GA(2), IA(2), ND(2), KY(2), AL(2), VA(2), NE(2), MA, CA, WI, SD, NC, MS, IL, WY, MN, OR, PA, RI, CT, ME, SC, TN, LA, MI, WA

Any issues with landfill permitting? 31 states reported some sort of problem. The problems included such things as:

- "NIMBY"ism or siting was reported by 10 states
- Water or groundwater issues were reported 8 times
- Transportation of waste
- Safety
- New regulations
- Bans

Diversion Programs and Rates

Curbside Recycling: Based on the responses to the survey, the average (mean) share of communities in each state that have curbside recycling is about 40%. Several states suggested fewer than 5-10% of communities had curbside; another third stated half (50%) had curbside recycling programs. Ten percent of the respondents stated all or virtually all communities in the state had curbside. We also asked the population covered by programs, but many states lacked this information. Some stated 100% were covered, and 8 states were able to report that 65% or more were covered.

Dropoff Recycling: On average, stated said just over half the communities in the state had dropoff (55%). The state with the most reported 94% of communities had drop-offs. There were seven states that had half or more of communities with drop-offs.

Single Stream Recycling: The frequency of single stream recycling averaged between “somewhat common” and “not very common.” Four responding states said they have no single stream recycling. Nine said single stream is very common, and the other 26 responding states fell in between.

Yard Waste Programs: Only a minority of state coordinators was able to provide an answer to this question; those respondents indicated curbside yard waste programs were available to about one-third of communities. The single most common answer (5 coordinators) was “zero”. Five states indicated two thirds of communities had curbside yard waste programs.

Overall Diversion: About half of the coordinators provided data for this question. The average (mean) level of residential diversion per state was reported as 30.6%; two states reported a 48% residential diversion rates, and 13 states reported at least 30% or higher. Five of those reporting gave levels 17% or lower. The average (mean) number of states that have a recycling goal is 40.5%.

Most of the states (80%) were able to provide estimates of volumes. The average amount of total generation (trash plus recycling) is 1.43 tons per person annually based on a range of 0.84 tons to 2.6 tons/person/year. The average amount of trash is 1.01 tons per person annually. The amount of diversion per person (but this is based on a very small number of respondents) is 0.382 tons, or 764 pounds, with responses ranging from 0.08 tons to 1.05 tons/person/year.

State Issues, Innovations, and Desired / Useful Assistance

Respondents described their role as a state agency in dealing with towns and cities with involvement that included: overseeing solid waste permitting, inspecting, keeping records, and providing grants and education; also planning and policy-making; providing technical assistance; and funding research.

Trends and Innovations: Trends and innovations that were mentioned included: increasing recycling and yard waste diversion; mercury bans; bottle bills; rural recycling cooperatives, single stream recycling, bio-reactor landfills; wood waste; tire-derived fuel; requiring publishers to use recycled content paper; commercial recycling as the “next frontier”; recycling grants and marketing assistance; e-waste programs; selling landfill-generated methane for electricity; and looking at incineration.

Respondents described some other innovations that they were interested in: marine shrink wrap recycling for use in manufacturing plastic lumber and other products; grocery bag recycling programs through stores that sell them; mobile glass crushers, and the use of the material in golf courses and road beds; flow control; regional approach; the RecycleBank program; automated single stream recycling; and beneficial use approvals for specific waste materials. Other topics mentioned included: social marketing; stricter waste bans; using wood waste and tires for fuel; more composting.; increasing sustainable behavior.

Issues, Legislation, and Assistance: Table 1 presents the results of three questions – issues, legislation, and useful assistance.

- **Issues / Problems:** The biggest issues and/or problems for solid waste in states included: construction and demolition; hurricane debris; comprehensive planning; low diversion; e-waste; environmental justice; ground water; illegal dumping; out-of-state waste; lack of new landfill capacity; fires; lack of close markets; low tipping fees; mercury switches; permafrost and mobile homes!;
- **Legislation:** On the legislative side, respondents talked a lot about e-waste bans. There are also activities toward: bottle bills that are being updated and “tweaked”; batteries and tires disposal bans; bio-reactor landfills; flow control; mercury bans, with respect to mercury switches in cars; mobile home legislation (?); solid waste planning; and tire fee renewals. Safety issues came up in regard to fuels, mad-cow disease, disaster response, and pharmaceuticals.
- **Assistance:** When asked if EPA, NRC, SWANA, and others could help improve recycling or waste diversion; respondents talked about:⁴ a national outreach campaign, education and best practices and a number of items noted in Table 1.

⁴ Mentions on useful assistance included: beneficial reuse; bottle bill support or a national bottle bill; product stewardship; publicize the economic benefits of recycling; legislation to control imports; grants that help fund the federal Waste Reduction Challenge; information sharing, for instance with databases on websites; take-back policies for packaging; a uniform national electronics recycling policy and

Table 1: Issues, Legislation, and Desirable Assistance

Topics	Most mentions	Some Mentions
Solid Waste Issues	<ul style="list-style-type: none"> Increasing diversion / better programs / best practices Lack of landfills / permitting / placement e-waste low landfill rates and problems rural / low population / transport costs 	<ul style="list-style-type: none"> Illegal dumping Imports and exports of disposed materials / flows C&D Fiscal crisis / how to encourage recycling / funded by tip fees
Legislation considering	<ul style="list-style-type: none"> Ewaste Bottle bill tweak / bottle bill study / bottle bill new 	<ul style="list-style-type: none"> Tires, tire fees Mercury switches Surcharges / recycling fees C&D
Assistance Topics	<ul style="list-style-type: none"> National outreach campaign Education for coordinators / best practices Market development, strategies to lower transport costs 	<ul style="list-style-type: none"> NRC on bottle bill; or bottle bill info / options; pros/cons E-waste options Recycling benefits / economics / partner with industry; clarify job benefits to states Virgin subsidies Product stewardship

Drilling down on Assistance Issues: Help with E-waste and bottle bills were much-mentioned, as were landfill issues and strategies to increase / improve recycling. Longer term, it looks like there is an outcry for help on a nationwide outreach campaign. Some progress can be made on some of these in the short term; however, others are longer term in nature.

Table 2: Assistance Possibilities from States / Potential Timing Issues

Short term	Medium- to-Longer term
<ul style="list-style-type: none"> Education, reports,⁵ pros/cons, etc. for state/local coordinators on key issues including: <ul style="list-style-type: none"> illegal dumping, market development, better programs, rural, bottle bills product stewardship 	<ul style="list-style-type: none"> Peer/examples/case studies? E-waste options inventory / language C&D program stars, results, language Legislation / ordinances language from other states on bottle bills, bans, surcharges, reporting, other topics Update recycling economic spreadsheet
	<ul style="list-style-type: none"> National outreach campaign / branding Fiscal crisis / making a success with low tip fees... Success / long term / of subsidies and surcharges All items in short term list Corporate programs on remix, and others / recycling works LF permitting (?) Waste transport / research on transport across state lines (?)

Two of the NRC Board members⁶ have voluntarily undertaken efforts to accomplish one of the short-term things that can be accomplished – augmenting the resource of the “recycling library” that was put in place a couple years ago. The Recycling library currently has approximately 500 research reports -- gathered from agencies around the country – that provide research on a wide variety of topics that can be useful to recycling coordinators. This work is underway; in the meantime, the library is currently available to all members and has proven to be a valuable resource to avoid re-inventing the wheel. We anticipate this new round of work on the library will add perhaps 100-200 new reports. This recycling library is currently available as a service to NRC members through the web site. Please promote this resource to your members!!

Current topics on the NRC's Web library (available to NRC / ROC members) include:

Collection and Techniques	Facilities and Operations	Producer Responsibility	Special Wastes
Composting	Legislation and Regulations	Rates, Incentives, and	Waste Characterization
Economics	Markets and Market	Accounting	Waste Prevention
Education	Development,	Recycling	Zero Waste
Environmental Issues	Materials and Manufacturing	Source Reduction	

legislation; hard-to-recycle items; decreasing toxicity in products; and education and training; research, for instance on gypsum (drywall) recycling; etc.

⁵ Can be added to existing web library, and highlighted / advertised / rolled out with fanfare.

⁶ Lisa Skumatz (SERA, Colorado) and Michael Patton (MET, Oklahoma). By the way, if you have useful studies, please contact us!!

