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Attachments: [Landfill Liability and the Future of Recycling An Ounce of Prevention is Worth a Pound of Cure \(Commentary\).pdf](#)

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Hi Sam and workgroup members,

Attached please find a pdf of an article apropos to your current proceedings. I hope you will all read it. Please incorporate this into the record?

Thanks,
Debbie Palmer



Landfill Liability and the Future of Recycling: An Ounce of Prevention is Worth a Pound of Cure (Commentary)

Neil Seldman | Apr 30, 2020

By hiding the real costs of landfills to the public, the true value of recycling is hidden, as well as the critical gains from avoiding environmental disasters associated with releases from waste containment. Bad decisions will follow from incorrect price signals to public decision makers when the cost of prevention cannot be compared to the future costs of managing environmental calamities.

A major cause of under-pricing landfills is the failure of landfill companies or the municipalities to

account for the long-term liability of existing landfills, in contravention to the most basic rules for recognizing future costs that will be incurred by failing to act prophylactically today.

The waste in landfills is dangerous and will be a long-time threat as old landfills become local and regional disasters. Critical safety components are only warranted for decades. In the U.S. landfill companies only need monitor landfills for 30 years. After this relatively brief period, the taxpaying public remains liable for the degradation of facilities and their environmental impacts and costs. In Canada by contrast landfills must be monitored for up to 400 years and are reevaluated every three years.

Europe directly addresses the major reason why landfills are a long-term threat to the environment: Nearly half of buried discards are left to decompose and mobilize the pollutants, as well as produce huge volumes of methane. The EU Landfill Directive prohibits landfilling untreated food scraps, paper and yard debris.

In the U.S., under the Superfund law, municipalities will ultimately be legally responsible for waste they send to landfills. If the future cost to remediate failed landfills is not included in tipping fees, residential and commercial customers will not get the proper signals from the market price for dumping. To realize that the real value of recycling, which diverts discards from the current obsolete and failed system, all responsible managers should address the real costs of storing waste until landfill failure.

Introduction to a grave problem

Because landfills remain an ongoing threat to human health and the environment at present, and until they fail, they are intrinsically more dangerous than the typical factory that closes. When that landfill has filled up it must be carefully maintained, essentially forever at significant cost. And when something goes seriously wrong because of inadequate maintenance, natural disaster or the natural failure of containment components, there will be catastrophic costs and damage. Many current Superfund sites are old landfills.

Even if landfills are well maintained there still will be capital expenditures. The larger the landfill With larger landfills the costs increase exponentially. This is an ominous sign for U.S. cities as the last 40 years have seen a dramatic increase in the size of landfills, which are reaching

3,000-6,000 tons per day, while smaller public landfills have declined. Leachate collection, methane collection and containment failures at large landfills built by waste companies are financial and environmental calamities waiting to happen.

It is much harder to find the problems in mega-landfills. Because of these long-term risks, the U.S. EPA rules require that landfill owners have some form of financial assurance for known issues as well as minor and predictable maintenance for generally 30 years after they stop taking in waste.

Municipal planners are not ready for what may be coming. No one wants to address this issue of extremely high risk. By avoiding the calculation of future risk current accounting methods artificially *underpriced* the cost of using landfills today. If cities and businesses or waste companies had to account for these future costs, the cost of landfill would increase considerably, making source reduction, recycling, composting and reuse an economic windfall for the public. Albert Einstein pointed out that a smart person solves a problem, but a genius avoids a problem. Avoidance (recycling) is the name of the game when it comes to safe and cost-effective landfill disposal.

The fundamental fallacy of the entirely arbitrary 30 years post-closure care period is that the prospect of catastrophic site failure increases as the containment components age and deteriorate.

Furthermore, the EPA does not address the fact that containment components age and deteriorate. In light of the reality of component failure, inadequate financial assurances leave the public ultimately responsible for ecological and financial disasters. The current false sense of assurance does not reflect that a once-strong waste company can go bankrupt at any time when its landfill liabilities exceed assets. That already may be the case, because the true liability is not on the books yet.

In many cases, the taxpayer will be compelled to bail out the landfill company's responsibilities or suffer the perils of unchecked pollution release. The landfill disasters experienced so far are tiny compared to the massive volume of pollutions that these monster landfills can and will eventually unleash. There is no statute of limitations, no maximum cap on liability, liability and no current

remediation concept for the municipality that experiences a landfill failure.

Even if the landfill is privately owned, cities and businesses that sent garbage to the landfill and paid someone to take are still liable, even if the private operator paid fees for closure and post-closure care. The Superfund law holds the cities and businesses legally responsible to pay for post-care a second time, no matter how much more it costs. There is no statute of limitations or maximum cap on liability. Insurance companies insist on waivers of pollution liabilities in their policies. Insurance coverage is not going to pay for landfill failures under general liability insurance policies or any other policy we are aware of. If a city sends waste or incinerator ash to a landfill and the landfill fails, the city likely will be held as responsible party for its prorated fair share of waste/ash sent to the particular landfill. If the original landfill owner has gone out of business or is protected by corporate structure, the municipality will be required to pay, based on the idea it can generate sufficient revenue through taxes.

Policy Development

The Solid Waste Association of North America (SWANA) is the national trade association for private and public waste and recycling managers with a mission to protect the water, land and air from waste and to advance solid waste management to resource management.

In 2013, SWANA's long-term management committee was tasked to gather information from other experts in the field to prepare recommendations for policies based on its findings. Rick Aho, a landfill engineer and member of the Wisconsin Chapter of SWANA, chaired the committee, which worked from 2013-2017 gathering data from SWANA membership, regulatory agencies and other sources. In 2017 the committee recommended a policy to serve as a resource for its members. The policy's point was that without pretreatment as required by the European Union, landfill liability and therefore the need for protective long-term care will effectively continue forever.

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Proposed Technical Policy For Consideration For Adoption By SWANA 2017

The Long-Term Care of MSW Landfills

The landfill long-term management committee of SWANA's Landfill Technical Division said it believes that SWANA should advocate a position regarding the long-term care (beyond the end of the post-closure care period) of Subtitle D landfills.

The committee's conclusion is that the liability of closed Subtitle D landfills will likely exist beyond the end of the post-closure care period. Based on our findings we overwhelmingly agreed to the following policy statements:

There should be a regulatory oversight of facilities in long-term management.

1. There will be costs associated with facilities in long-term management.
2. The length of the post-closure care period should be defined by the state involved and be based on site-specific testing.

The committee said it believed that state government should continue regulatory oversight during the post-closure care and long-term care period to ensure that any environmental controls deemed necessary for the continued protection of public health and the environment are effectively and continuously implemented at the site. In other words, a policy of perpetual containment. No unmonitored landfill can withstand the test of time against nature's relentless attack on human-made structures. Constant vigilance is required.

The committee policy was to be a "line in the sand" for the association to address the looming public liability of perpetual waste "containment." "If the liability of the waste is not experienced in post-closure timeframe, then all the liability will be experienced during long-term management, the undefined timeframe after current regulations," said Anderson of the Center for a Competitive Waste Industry, Madison, Wisc., who has been focused on these landfill issues for decades. "Rotting waste is a liability forever, and the cost to address the damage – particularly large, undetected long-term damage can financially cripple a community." Aho adds, "Organics are the liability in the landfill."

"Everyone certainly seems to be shying away from the obvious questions," Anderson said. Until the landfill liability issue is settled the general public, businesses, cities and landfill owners as well as the membership of SWANA will be in the dark regarding their concerns about environmental and financial vulnerability. "The degradation of plastic landfill liners is the weakest link in

protecting the environment. It is virtually impossible to track leaks in large landfills.” While plastic liners underground themselves may last 500 years, one slice by pipes, sharp edges under pressure from water, or pressure from gas or heat are factors that can ‘unseal’ the containment system. So too can the failure of other components within thousands of square feet of plastic material: faulty tie-ins, weak seams, weak links between leachate collection and gas intersections. There is no perpetual storage. Degradation of complex landfills will always occur. There are weak links throughout the system. Currently stable landfills remain a future threat.

EPA needs to establish perpetual care regulations to replace its 30-year limit on legal responsibility.

Costs will increase in time if there is no treatment. Anderson concludes, “The reason why perpetual storage is not good science is because physical studies have shown that more than 50-70 percent of the original discarded carbon remains entrained in the waste mass after closure with a final cover, which – until the cover eventually degrades – minimizing bioactivity that mobilizes releases. Any cover that is not maintained will soon deteriorate, permitting moisture to re-enter the site that will ignite further biodegradation.”

Aho believes current SWANA policy contains vague, undefined terms and does not address looming long-term liabilities and the costs that current landfills are expected to face, per the findings of the 2017 technical committee recommendations.

Clearly, inclusion of these liabilities on the books as required by standard accounting practice will lead to long-term costs for cities and landfill companies and will have an adverse effect on value and stock price. Current accounting of landfills must be modified to cover generational costs. This will finally give the public realistic measures of current costs vs. future risks, including future costs and future impacts on climate change.

Determining the real-world financial risks of the current system is absolutely necessary for the public and officials to make the choices that will govern the laws on post-closure management and liability for the next generations. It is impossible to evaluate future municipal financial health without these inclusions.

Both Aho and Anderson call for governors to aggressively step into the fray to correct the obvious

failures of the Superfund and RCRA Subtitle D policies. They fear that without this intervention, the unsuspecting taxpayer will bear the brunt of the accumulated problems. The existence of mega-sized landfills hundreds of feet high with tens of millions of tons of rotting waste and failing containment systems will be both financially staggering and ecologically devastating.

Sustainability requires that we no longer kick the problem that is the current landfill liability policy down the road to our heirs. The risks are escalating as we deliberate. Unsustainable landfill policies and hiding costs also impact and undermine proper investments in comprehensive waste and environmental damage policies and programs. By investing in reduction recycling, composting and reuse, the public greatly reduces future liabilities and contributes to environmental and economic health of the country.

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