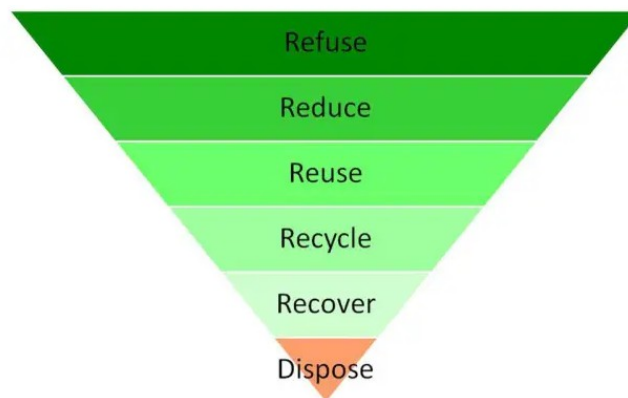

The New Haven Transfer Station will be closed on Monday, May 29, in honor of Memorial Day. The Administrative offices at 14 Trumbull Street will be closed as well.

Feature Is Source Reduction the Answer?

Often overlooked, systemic source reduction can and should be a strong adjunct to recycling



It is projected that by 2050, the amount of waste generated globally will double. According to a report by the World Bank, the global waste generation will reach 3.4 billion tons by 2050, up from 2.01 billion tons in 2016.

To address the issue of waste generation, waste diversion strategies have been developed, with recycling and source reduction being two of the most commonly employed approaches. Recycling, as most of us are aware, involves collecting and processing waste materials to create new products. Source reduction on the other hand, is a process of reducing the amount of waste generated in the first place.

According to the United States Environmental Protection Agency (EPA), the national recycling rate was 32.1% in 2018. This means that a majority of waste still ends up in landfills or burn plants, resulting in environmental problems such as greenhouse gas emissions, and ground and water pollution. In a better case scenario, a larger share of waste ends up in waste-to-energy facilities, which still emit some harmful compounds. In all instances, the more waste created, the more depletion of natural resources. And we must remember that even though recycling saves on natural resources, re-processing consumes more energy and produces more hydrocarbons. And there is the added back-end environmental price tag when it comes to simply transporting to facilities and markets. As you can imagine, limiting the amount of packaging and products in the first place would avoid all of these

issues. So it stands to reason that 30%* diversion of waste due to source reduction is better than 30% diversion through recycling. *(the amount estimated to be divertable)

This all sounds wonderful but there is a catch: The inherent problem here is that, at least in Connecticut, there are virtually no mandated practices for eliminating waste at the source. Whereas recycling is actually the law, equally applied to individuals as well as commercial entities, such things as products and packaging are typically not subject to restrictions. At this time, the only product ban enacted in Connecticut is for single-use plastic bags. It has always been left up to the consumer in most cases to implement source reduction. Manufacturers may in the long term respond to consumers choosing the more environmentally responsible products, but this requires a lot of participation and recurring education/awareness programs.

A comprehensive program for source reduction includes strategies such as redesigning products and packaging to use fewer materials, using more durable and reusable products, and reducing the use of disposable products. To be effective, this would require putting incentives in place or outright bans on certain goods over a predetermined time span. It is estimated that diverting everything possible from the waste stream in this manner could eliminate up to 30% of all waste.

An example of such source reduction regulation in practice is the European Union's Single-Use Plastics Directive, which aims to reduce the amount of plastic waste generated by banning certain single-use plastic products, such as straws, cutlery, and plates. The directive, which took effect in 2021, is expected to reduce the amount of plastic waste generated in Europe by around 3.4 million tons per year by 2030, according to the European Commission.

In addition to environmental benefits, source reduction has economic benefits. By reducing the amount of waste generated, businesses and municipalities can save money on disposal costs. According to a report by the Zero Waste Scotland, a Scottish government-funded organization, reducing waste through source reduction can result in savings, of up to 40% by implementing source reduction measures.

In conclusion, while recycling has been the traditional approach to waste diversion, source reduction presents itself as a more effective alternative. By reducing the amount of waste generated in the first place, source reduction can help address the global waste crisis, reduce greenhouse gas emissions, and save money for businesses. In order to implement this, legislatures, businesses, and individuals will have to prioritize source reduction.

Regardless of the future of regulation regarding source reduction, we can always participate as consumers, by choosing products from more environmentally responsible manufacturers and buying goods that last. And there will always be recycling, so keep up the good work!

Sources:

- "What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050." World Bank, 2018.
- "Advancing Sustainable Materials Management: Facts and Figures." United States Environmental Protection Agency, 2020.

- "Waste Reduction." Natural Resources Defense Council, 2011.
- "EU Single-Use Plastics Directive." European Commission, 2021.
- "Source Reduction - A Guide for Business." Zero Waste Scotland, 2019.

 **Essay** Diversion 101



We've all heard the phrase "Reduce, Re-use, Recycle." These "3 R's" all relate to minimizing waste, in essence, diverting materials and products away from becoming waste. Let's unpack this term and discover the advantages/disadvantages of various types of waste diversion:

First, it is important to put our discussion in context: Until there were humans on the planet, lifeforms did not waste energy or materials – what came out of the air, water and ground sustained life, and then returned into the air and ground and water with no waste. Humans over time were able to alter things mechanically and biochemically in order to serve them better, but this created things and materials that had a limited life-cycle, and were deemed unusable at the end of that cycle.

Second, let's be clear – there are a limited amount of materials on our planet. If we don't make use of those materials in the most efficient and lasting way, we will ultimately run out of resources.

Third, processing, manufacturing and moving materials (and people) costs money. It also takes energy, and using energy (at least 70-80% of that which is produced) causes a significant amount of by-products that are harmful to life and the sustainability of our planet. Even production of energy from sustainable sources (sources that don't deplete) could have deleterious effects on the ecology of the earth of which we are currently unaware, as they have not been brought to scale.

So you can see that humans are inherently responsible for adversely affecting sustainable life on earth (and by the same token, can positively affect future sustainability). In other words – we have to clean up our mess, for the good of our existence, and all other life-forms. No other species can do this (consciously) for us, nor should they have to!

All of this may seem self-evident, but it is important to have this perspective to understand the immediacy of the situation in these times. After all, humankind has expanded exponentially in the last century. With our understanding that we as humans have single-handedly created waste, we can deduce that we have an inordinately large impact on the environmental changes around us, and that this impact has increased radically in the last hundred years or so. In short, it is not so much as 'nature' but rather, '*human nature*' that is responsible.

The Three R's are a good way to frame the solution for this overwhelming problem. We can think of the solution as '*re-achieving sustainability*' (i.e. returning the planet as close to its natural state before the advent of humanity as possible) It is important to note that the three R's are listed in the order of efficacy, and so should be considered in that order as well if we are to get closer to re-achieving sustainability

Reduce – Reduction, or 'source reduction' (see article in this issue) is listed first for the simple fact that the less we use or alter natural resources (and concomitantly, the less we use energy to do so), the less we have to “clean up” in the first place. There is less waste to convert or divert simply because there is less waste created. So the less single-use plastic you use, for instance, the less re-processing involving collection, sorting, transporting, chemical re-processing and re-introducing into the usable goods market (which involves more energy and processing). Reduction at the consumer level takes much discipline and a bit of sacrifice of convenience. That is the cost to us. Reduction CAN be implemented at the legislative and incentivization level; these methods though rarely used can be most effective.

Re-use - Next up, if a material is not able to be source-reduced for whatever reason, *re-using* or re-purposing materials and goods is the next best diversion choice because it saves the most energy and natural resources simply by increasing the life-cycle of materials, however they are used: Making a single-use plate or cup into 'several use.' Converting a glass jar into a nail-holder requires almost no energy, and no material is wasted. One can see that these items may still be subject to limited life-cycles. Re-use can be looked at as “treading water” in that it halts at least temporarily the conversion of usable material to waste.

Recycle – Ah yes, we are very familiar with this approach! In fact, many of us go straight to the recycling solution without first considering reducing or re-using. Why is this? Most likely, it is due to (once again) human nature: We want what we want when we want it, and feel okay with getting it because we are led to assume it can be re-processed. Recycling sits well with human nature because we can participate in it with little inconvenience to our personal time and energy, and then once the items in our blue bin magically disappear from the curb, we don't have to think about where they go, or have any continuing responsibility. Though recycling is the last stop in waste diversion, and has many merits, it, simply by its dynamics, can breed much waste. Recycling in most countries is 'market-driven' and based on supply and demand, and the degree of profitability to be generated by those processing it. Because of this outlook, sustainability is often a side-effect, rather than the end

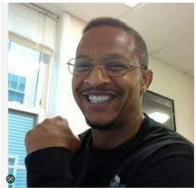
goal. Even at the consumer end, there is a great occasion for continued waste generation: Municipalities typically have laws mandating recycling, but the enforcement is 'soft' and sometimes non-existent. Not only that, but cultivating awareness of recycling practices in individuals is a herculean task, often underfunded and treated with apathy by an un-incentivised public. These factors make for lower participation rates and higher contamination rates.

It has been estimated that, at the end-user, or consumer level, 20% of the population in the U.S. participates avidly in the 3 R's, 60% are reachable and teachable by messaging, and the remaining 20% are unreachable (either because they don't care or are distracted by life-circumstances that take all of their attention). *It is the hope of the author that this article will be able to reach and encourage that middle 60%, in some small part enabling us to be more motivated to clean up our own mess!*



Announcement

Pierre Barbour retiring as Executive Director; Lori Vitagliano appointed as new Executive Director



It is with sadness that we say goodbye to Pierre Barbour as the Executive Director at the NHSWRA. Pierre was originally the CFO of New Haven Public Works, and from that position he took on the task of helping re-examine how and where waste and recycling are processed in the City. He was largely instrumental in bringing about the divestment of the Solid Waste & Recycling Authority from Public Works in 2009 and moved the operation to its own offices in 2014. He has been a principal operative in turning it into the self-sustaining, autonomous entity that it has become in the last few years. We at the Authority will always remember Pierre fondly as one who not only provided direction for us but also worked arduously *alongside* us in achieving the Organization's stated mission to provide a fount of information, awareness and waste diversion resources to the City of New Haven.



The New Haven Solid Waste and Recycling Authority is proud to announce that Lori Vitagliano will be its new Executive Director as of May 10, 2023. Some of you may know Lori in her former capacity managing HazWaste Central, Connecticut's first permanent Household Hazardous Waste collection site. Lori's experience is extensive; she has worked with cross-functional stakeholders on developing and implementing various environmental and material management programming. Her qualifications are vast; she has covered much ground working as the Government and Public Relations Specialist, and managing HazWaste Central for the South Central Connecticut Regional Water Authority for the past twenty-eight years. She has represented and advocated for that organization. This skill set, as well as her strong administrative and managerial experience, and her deep knowledge of materials management, will no doubt lend itself to a robust tenure at the Authority. We wish Lori well in her new position!

Calendar of Events:

Opening day at HazWaste Central, 80 Sargent Drive, New Haven (at the Regional Water Authority) Saturday, May 20. Make sure you register online before heading down!

<https://www.rwater.com/hazwaste/>

City of New Haven meeting schedule:

<https://newhaven-ct.legistar.com/Calendar.aspx>

New Haven Parks and Public Works info:

A Message from Parks and Public Works Resident Services:

Leaf bag pick up continues. Leaves must be placed in brown bags and should not weigh more than 50lbs. We will not pick up leaves placed inside plastic yard bags. Please do not place rocks, dirt or trash inside the leaf bags. Leaf bags must be placed next to trash and recycling totes the night before your weekly trash and recycling pick-up.

Bulk pick-up scheduling will be suspended for the month of June to concentrate on our milling and paving project. Bulk pick up will reconvene in July.

HazWaste Central located at 90 Sargent Drive is open for the season starting Saturday, May 20th. Their hours are 9am-12 noon Saturdays only. Pre-registration is required by logging on to rwater.com/hazwaste. Bring your paint cans, batteries, light bulbs, and other haz waste materials to this location. For more information, please call (203)401-2712.

The Parks and Public Works office located at 34 Middletown Ave. will be closed on Monday, May 29th in observance of Memorial Day. The residential drop-off station at 260 Middletown Ave. will also be closed. Weekly trash and recycling pick-up will be a day delayed.

Links:

New Haven Public Works-

<https://www.newhavenct.gov/gov/depts/pw/>

Public Works paving schedule-

<https://www.newhavenct.gov/home/showpublisheddocument/15028/637903861608081376>

See Click Fix-

<https://seeclickfix.com/new-haven>

NHSWRA contact info and link:



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