Reduce the Amount of Waste Going to Landfills

In a Nutshell

This article documents potential health concerns for communities living near landfills. The resources below can help reduce waste, resulting in less landfill space needed in a community.

The “How To”

Reduce Food Waste

The EPA estimates that food waste makes up the largest category of waste going to landfills, at 22%. According to earthday365, we throw away approximately $1,300 of good food annually. Food conscience households can reduce how much they spend on groceries and can reduce the amount of food households throw away. Households can follow these five pointers to achieve reductions:

- Planning Ahead-Prior to shopping, routinely check your cabinets, fridge, and freezer for food and plan to make use of it.
- Expiration Dates-Consume foods with shorter shelf lives first. Some foods may be frozen and thawed for later use.
- Food Storage-Routinely wrap food or use storage containers such as Tupperware and bags to keep food fresher longer. Refrigerate leftovers.
- Measure Portions-Using scales and measuring cups is a good way to avoid cooking excessive amounts of food.
- Eat Leftovers-Plan your meals to include leftovers as a meal, as a side, or in a stew.

For more information on reducing food waste, visit the Composting and Food Waste Recovery tools or check out earthday365’s 'Too Good To Waste' Campaign. The Natural Resources Defense Council also offers a Policy and Program Toolkit for reducing food waste in cities.

Paper Reduction



se. Employees in the workplace may be encouraged to use emails for
instead of printing copies. Larger printed documents and paper manuals could
online. Teachers, administrators, and students can choose to communicate over

email and turn in assignments online. In the case that printing is necessary, ask that double-sided printing be used.

Reuse over Single-Use

The switch from single-use (disposable) to multi-use (reusable) items saves money and would lowers waste entering landfills. Cafeterias, homes, and workplaces could provide reusable trays, plates, silverware, and cups instead of using their disposable counterparts. Workplaces can simply not provide disposable cups for coffee or water. Employees would bring their own cup.

Single-Use Plastic Bag Waste

Recognizing the need to reduce the amount of bags going to landfills and the bags that pollute the environment and streams, some cities have chosen to adopt bans & fees on single-use plastic and paper bags. Click here to view which states and municipalities have enacted bag bans. In the St. Louis region, Edwardsville, IL, has implemented a single-use bag fee. Click here for ideas about how to enact bag ban legislation in your community.

Reduce Junk Mail

According to Los Angeles County Public Works, Americans will spend eight months of their lives opening junk mail. The Federal Trade Commission can help one reduce the amount of junk mail they receive. OptOutPrescreen.comoffers the option to opt out of credit and insurance mailings. The Direct Marketing Association allows people to opt out of receiving unsolicited commercial mail from national companies for 5 years.

Rechargeable Batteries

Rechargeable batteries may be used hundreds of times, reducing the amount of batteries purchased throughout the year. Batteries sent to the landfill contain corrosive materials and heavy metals that are very harmful for the environment. Reducing the amount of batteries manufactured conserves resources.

Gas from Trash Reduction

Hazards such as landfill gas is another reason to reduce landfill waste, as landfill gases (carbon dioxide and methane) are a natural byproduct of waste decomposition. Highly concentrated amounts of methane can be flammable. Most older landfills are not required to have gas monitoring wells in place, which can be dangerous for the safety of Missouri’s citizens. Missouri Department of Natural Resources's Solid Waste Management Program is working with facilities to lower and regulate their methane levels. However, Missourians can assist in this effort by reducing their waste.

Waste Management & Removal

Waste Management offers aRecycle by Mail program. Businesses can recycle fluorescent light bulbs and lamps, dental waste, mercury waste, aerosol cans, and UV lamps by mail. VisitWaste Management to find a recycler in your area. Also, Waste Management offers construction and demolition debris collection and recycling. Accepted materials include concrete, porcelain, rigid plastic, tile, lumber, metals, and more. The recycled material is converted into mulch, biomass fuel, gravel, dry aggregate for new concrete, road base, and more.

Planning & Zoning

Plastic Bag Ordinances

In Washington D.C., theAnacostia River Clean Up and Protection Act orBag Law adds a five cent charge on each disposable paper or plastic carryout bag. The Bag Law issuedrequirements for retailers when distributing bags. By law, employees are required to ask customers if they would like a disposal bag and how many. Customers are charged for each bag and the total is printed on the receipt. Each disposable bag must read 100% recyclable, and must read the statement "Please Recycle This Bag." Bag fee revenue is used for the following:

- Three cents for the clean-up and protection of the Anacostia River
- Two cents returns to the business

Many cities have adopted ordinances to either ban or impose a fee upon the distribution of single-use plastic bags. In the St. Louis region, Edwardsville, IL, has implemented a single-use bag fee. Click here to view which states and municipalities have enacted bag bans.

Trash Service Pickup

The frequency of trash pickup positively correlates to the amount being hauled away to landfills. Changing the pickup policy to once-per-week pick up instead of twice may reduce the amount of trash. Adding recycling pick up will reduce the amount of waste heading toward the landfill even further. In accordance withMissouri Solid Waste Management Law, each city and county has the authority to develop and implement solid waste management plans.

Other Waste Hazards Laws

The Missouri Solid Waste Management Law requires landfills to regulate methane gases on site to ensure their neighbors are not adversely affected. View the Missouri Department of Natural Resources information onSolid Waste Landfill Monitoring and Reporting.

The State of Missouri bans tires to be sent to the landfill. Scrap tires are either held onto or sent to a scrap tire collection center. Find out more about Missouri'sSolid Waste Management Scrap Tires Ordinance.

The EPA regulates the removal of old appliances such as window air conditioners, motor vehicle air conditioners, vending machines, icemakers, and refrigerators that rely onozone-depleting refrigerants such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), or Freon. These metals must have a verification of refrigerant removal before arriving at a disposal location.

Dollars & Cents

Batteries

Using rechargeable batters saves consumers dollars spent on buying new batteries. Although many rechargeable batteries and their chargers have higher upfront costs, about double to triple that of three packs of batteries, the yearly savings outweighs those costs.

Plastic Bags

Some advocates against plastic bag laws have stated the fee would disrupt economic revenue for retailers due to consumers spending more per bag. Proper incentives and alternatives to plastic bags should reduce the demand and supply for single-use bags. Many retailers sell reusable bags that consumers only purchase once. Consumers would bring their bag to shop with, avoiding any bag fees.

Plastic bag fees imposed by ordinances can fund waste reduction educational opportunities and clean-up funds. Retailers that collect fees actually keep a portion of the fee and can help alleviate reusable bag costs for customers.

Tires

The Scrap Tire Fee, a $0.50 cent-per-tire fee charged on new tires purchased in Missouri, funds educational tools for environmental welfare, cleanup, and enforcement activities. No more than 45% of the scrap tire fee is used for playground material. Missouri's Department of Natural Resources also provides grants for waste management. Grants are available for playgrounds that wish to use recycled tire material.

Measuring Success

The EPA's WasteWise Update: The Measure of Success-Calculating Waste Reduction provides steps to suggest, implement, measure, and evaluate waste reduction policies and programs. In order to measure success, the policies and programs selected must have tangible results. WasteWise suggest following these guidelines to lower the amount of waste entering landfills:

- Determine what the organization needs to measure, whether it may be waste prevention, recycling collection, or buying or manufacturing products with recycled content.
- Evaluate the sources available to find the measurement data. Sources may be discussions with employees, the amount of recyclables at the end of each workday or week, or purchasing records.
- Establish a baseline to know the status quo when the program first began.
- Identify changes, track program success, and motivate people.
- Calculate waste prevention results and total waste results.

WasteWise also provides formulas to calculate the reduction of paper used or how many containers were saved yearly and costs for them as well.

Household Measurements

From a household's perspective, less money will be spent if the household reduces food waste and paper use and switches to rechargeable batteries. Households may notice a reduction in their trash produced.

Plastic Bags

There are various cities that report bag fees and bans as successes, due to the resulting decreases in single-use bag litter.

Discover More



Solid Waste Management Association (ILCSWMA) provides solid waste education and
ste enforcement, recycling and waste prevention, and refuse collection and disposal.
state agencies and organizations, colleges, community groups, Keep Illinois Beautiful
firms, counties, municipalities, and townships.

epartment of Health provides household hazardous waste removal.

ecycle Center is a non-profit that collects clean and easily reusable trash from business
ldren to reuse for educational purposes. View a Living St. Louis video on St. Louis
ter.

Case Studies

Cincinnati Zoo & Botanical Garden Zero Landfill Challenge

Contact

Cory Christopher
Manager, School & Graduate Programs
513-475-6171
cory.christopher@cincinnatizoo.org

Address

3400 Vine St - Cincinnati, OH 45220

Description

The Zero Landfill Challenge is a program sponsored by the Cincinnati Zoo & Botanical Garden to educate and involve children in making their schools and communities less wasteful. The challenge is designed to be an educational experience for students, as well as a real way to implement more sustainable practices throughout

the Cincinnati Public Schools (CPS). Participating classes are challenged to create and carry out a real-life plan to reduce waste at their school, such as setting up on-site composting or finding new uses for recyclable materials on campus. Both CPS and the Cincinnati Zoo & Botanical Garden have already committed to reducing waste, water use, and energy consumption at their facilities - making the challenge an ideal collaboration.

Zero Landfill Challenge Informational Flyer

Cincinnati Zoo & Botanical Garden's Go Green Initiative

Cost

Cincinnati's Zero Landfill Challenge has virtually zero costs. The challenge utilizes free prizes, such as school field trips to the Zoo, to encourage participation and make the program engaging for students. One winning team was even awarded a painting done by a gorilla at the zoo - and painted on recycled canvas! For the schools participating in the challenge, there may be costs associated with the projects they complete for the challenge, such as composting bins or rain barrels. In the future, the Cincinnati Zoo & Botanical Garden may develop a sponsorship program to be able to reward the top schools with these types of items.

Lessons Learned

Spring 2013 was the pilot season for the Zero Landfill Challenge, so there is definitely room for the program to grow, evolve, and become even more successful. Building relationships with local schools by establishing a physical presence there and spreading information on the Zero Landfill Challenge were cited as potential areas for improvement. Program leaders are optimistic that over the next year or two, they will be able to build a strong relationship with CPS and other community partners to build-up the program and reach as many students as possible.

Zero Landfill Challenge Community Partners:

Polar Bears International

Alliance for Climate Education

Vermicomposting Center SIU

Contact

Brian Klubek PHD
618-453-2496

Address

3373 W. Pleasent Hill Road - Carbondale , IL 62901

Description

Southern Illinois University Carbondale's College of Agricultural Sciences and Plant and Service Operations maintain the Vermicomposting Center. Originally set up as a food waste processing center for the on-campus dining halls, now the Center is used for research, teaching, and education. Vermicomposting treatments have been used in turf grass across the campus.

The worms used are the red wiggler (scientific name *Eisenia Fetida*). They save 12,800 pounds of vegetable waste from entering the landfill each year.

Cost $0

Lessons Learned

Food waste composting reduces the amount of waste entering the landfill.

Zero Waste - San Francisco

Address

1455 Market Street - Suite 1200 - San Francisco, CA 94103

Description

San Francisco's Mandatory Recycling & Composting Ordinance was passed in 2009, requiring all households and businesses to participate in a recycling and composting program, with the goal of reaching Zero Waste by 2020. Every household and business is legally required to sort their waste into three separate rollcarts – blue for recyclables, green for compostable materials, and black for landfill waste – to keep all unnecessary waste out of landfills. Waste receptacles are monitored by Recology staff and fines can be imposed on those that consistently fail to recycle and compost properly. Alternately, discounts can be awarded to businesses with high diversion rates. Smaller black landfill waste bins can also save money for those who do more recycling and composting. Currently, San Francisco is diverting about 80% of its waste away from landfills. This is one of the highest waste reduction and diversion rates in the United States and has already surpassed the city's original goal of a 75% diversion rate by 2010. The next goal is to reach a 100% landfill diversion rate (Zero Waste) by 2020.

SF Environment – Zero Waste

Cost $0

Lessons Learned

Enforcement and education seem to be potentially problematic areas, but also pose fresh opportunities for the city. The higher the rate of community participation, the higher the city's diversion rate will be. Realizing this,

the city’s Department of Environment has established teams to monitor trash bins and reach out to the public to help them understand the importance of diverting waste from landfills and the proper way to sort. While there has been some resistance to the mandatory recycling requirements, the teams report that a majority of residents have been cooperative and that many are open to learning better waste management practices. Although citations and fines can be issued to those who consistently fail to compost and recycle, this approach to enforcement has yet to be used.