

WASTE

“Waste equals food, whether it’s food for the earth, or for a closed industrial cycle. We manufacture products that go from cradle to grave. We want to manufacture them from cradle to cradle.”

~William McDonough

LINEAR CONSUMPTION

Currently, the world’s economies operate on a destructive take-make-waste, linear production system. On a planet with finite resources, this type of system is simply not sustainable. As the mass production of consumer products has increased, it has encouraged a society where disposability is rewarded and where our desire to keep up with the latest trends now outweighs our traditional desire to invest in quality products that are built to last. As the human population and its industries continue to grow, our inexhaustible addiction to this type of consumption will inevitably leave us with a planet barren of our most vital resources. This has never been made clearer than in the staggering statistic that only 1% of all items produced in the world are still in use within 6 months of their creation. That means that 99% of the world’s manufacturing effort becomes part of the waste stream in less than a year.¹

Although the United States has only 5% of the world’s population, we’re consuming 30% of the world’s resources and creating 30% of the world’s waste.² For every 100 pounds of products manufactured in the US at least 3,200 pounds of waste are created.³ To put this in perspective, it’s estimated that if everybody on Earth consumed at the same rate as Americans, we would need about 4 planets worth of resources to sustain us.⁴ The world’s rainforests are being destroyed at a staggering rate of around 50 thousand square miles per year, the equivalent of 48 footballs fields every minute.⁵ Junk mail alone, which usually travels directly from our mailboxes to our trash cans or recycling bins, consumes a shocking 100 million trees a year.⁶ “There is not enough readily accessible lead, tin, copper, iron ore, or bauxite to sustain the throw-away economy beyond another generation or two.”⁷ By 2050, we will have run out of copper, zinc, and lead.⁸

While some of these statistics are daunting and seemingly abstract, the fact remains that we simply do not live on a planet with unending, renewable resources. Moving away from this dead-end system of linear consumption is going to require a fundamental shift in the way we use resources as well as a collective commitment to reducing our demand and finding new ways to reuse and recycle our products. This is especially evident when considering one of the most resource depleting and waste generating culprits: plastic.



LINEAR VS CLOSED LOOP

Linear production systems consist of products or services that begin at a single point, fulfill their intended use and then become obsolete because they were intended for one-time or short-term use. Once their job is done they are “thrown away”. This type of resource-depleting system has been called cradle-to-grave, as it demonstrates a single, linear process of creating, consuming and casting off.

By contrast, there are several scientifically devised strategies for drastically changing our approach to our natural resources in an effort to curb our detrimental disregard for sustainability.

Cradle to Cradle is an approach to design, devised by architect William McDonough, which calls for intelligently designed products and systems modeled on nature’s own **closed loop** system which has the ability to turn the waste from one organism into the fuel for another.

Life Cycle Analysis (LCA) is another technique which is used to deeply assess the environmental aspects and potential impacts associated with a product, process or service and allows the results to influence its design, manufacture and use. By utilizing the tools of Cradle to Cradle and LCA we are able to adapt cyclical models patterned after nature, where resources are either recycled or upcycled into a better products rather than **downcycled** into inferior products.

PLASTIC, PAPER AND RECYCLING

The United Nations Environment Programme estimates that globally, people dispose of 16,000 plastic bags every second.⁹ Plastic bags and packaging are one of the greatest sources of landfill waste. Annually, enough plastic is thrown away to circle the earth 4 times.¹⁰ The international impacts of plastic on the landscape and human health are starkly described by The Guardian: “In many parts of the developing world it acts as a near ubiquitous outdoor decoration, along roads in India, around villages in Africa and fluttering off fences across Latin America. And when it is not piling up, it is often burned in the open, releasing noxious smoke.”¹¹

Americans consume nearly 35 billion single-use plastic water bottles annually and, despite being recyclable, the majority – that’s about 845 per second – end up in landfills where they will not decompose for thousands of years.¹² Each year, Americans also use approximately 1 billion single-use plastic bags which create 300,000 tons of landfill waste.¹³ Plastic bags do not biodegrade, instead light breaks them down into smaller and smaller particles that contaminate the soil and water and are expensive and difficult, if not impossible, to remove. When the small particles from photo-degraded plastic bags get into oceans and rivers, they are ingested by filter-feeding fish and other marine animals and then passed up the food chain, ultimately making their way to humans.

Because of the numerous negative impacts associated with plastic bags many people believe paper bags are a better choice. Paper bags do come from a renewable source, and create four times less solid waste than plastic bags. They are also recyclable and biodegradable, can be broken down as part of compost. However, the production of paper bags creates 70% more air pollution than plastic ones, and takes four times the energy to make.¹⁴ As you can see, the negative environmental impacts of paper and plastic bags and other plastic packaging are plentiful and they should be rejected in favor of reusable items whenever possible.



HOUSEHOLD HAZARDOUS WASTE

According to the EPA household hazardous waste (HHW) is “leftover household products that can catch fire, react, or explode under certain circumstances, or that are corrosive or toxic.”¹⁵ Some common examples include paints and solvents, motor oil, antifreeze, pesticides, insecticides, herbicides, fungicides, thermometers, fluorescent lighting, electronics, aerosols, cleaning products, batteries, and even ammunition. It is difficult to grasp the extent to which this specific form of waste is impacting the planet simply because the systems for tracking and controlling these pollutants vary from country to country and in some places don’t exist at all. The United States regulates HHW through The Resource Conservation and Recovery Act (RCRA).¹⁶ The average U.S. household generates more than 20 pounds of household hazardous waste per year. As much as 100 pounds can accumulate in the home, often remaining there until the residents move out or do an extensive cleanout.¹⁷

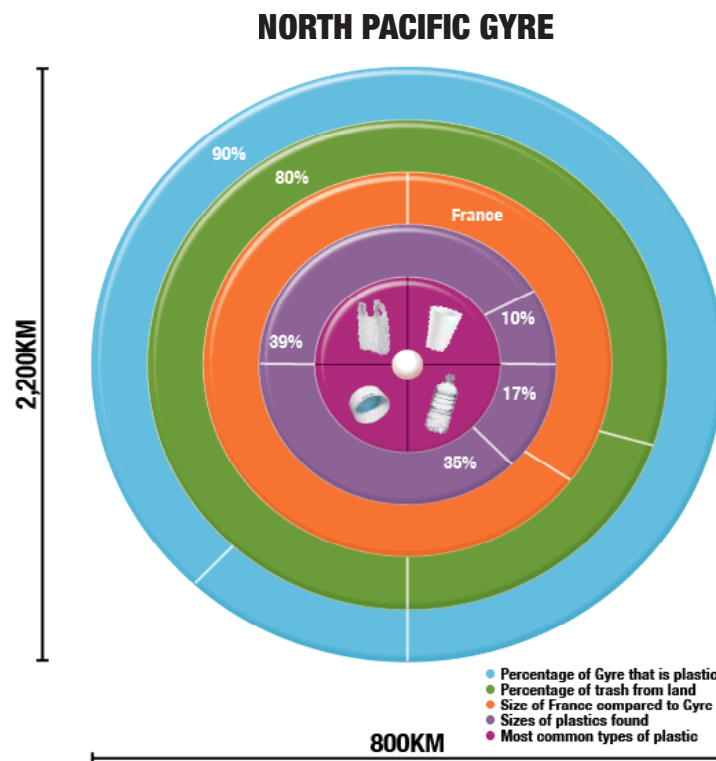
These substances can also potentially cause physical injury to sanitation workers when disposed of improperly and can contaminate septic tanks and wastewater treatment systems if poured down drains or toilets. They can also contaminate bays and oceans when poured down the drain. Left around the house, they present hazards to you and your family, particularly children and pets. While federal law has excluded HHW from the definition of waste, under California law, disposal of hazardous waste in the garbage, down storm drains, or onto the ground is prohibited.¹⁸ Many cities have collection programs for HHW to reduce the potential harm posed by these chemicals. Solution #2 in the next section provides details about these HHW collection programs.

LANDFILLS, POLLUTION & ORGANIC WASTE

So what happens to the waste from items that we consume, the plastic that isn't recycled and the hazardous materials we have in our homes? Most people would say that we "throw it away" implying that there is a place called "away". In reality, "away" is simply a landfill; a place far enough from the majority of the population to dig a large hole and attempt to bury our garbage and forget about it. The public at large is generally unaware of where their trash goes, how it gets to where it's going, or what happens to it once it gets there. Contrary to popular belief, landfills do not degrade material: their function is simply to store materials and prevent contamination. And once materials have been deposited into landfills they pose new problems. Although HHW collection programs do exist in many communities, a large amount of hazardous waste still ends up in landfills. Because of this, attempts are made to reduce the risks associated with dumping hazardous waste into landfills by installing barrier technology that is meant to prevent (or greatly restrict) migration of liquids into the ground. No barrier or liner, however, can keep all liquids out of the ground forever. There is currently no leak-proof solution to protect soil and ground water from hazardous landfill contaminants. And it turns out that leachate isn't the only danger associated with landfills.

The methane gas that is created when food waste and other organic matter decomposes in landfills represents one of the largest contributors to global warming.¹⁹ While much of the world's population struggles daily to find enough food eat, in America, 31% of the food supply at the retail and consumer levels goes uneaten. The estimated total value of food loss at the retail and consumer levels in the United States was \$161.6 billion in 2010.²⁰

Unsurprisingly, the United States leads the industrialized world in municipal solid waste generation, more commonly known as household trash. Each person currently generates an average of 4.38 pounds of waste per day. Compare that to Germany and Sweden who generate the least amount of waste per capita for industrialized nations, with just under 2 pounds per person per day.²¹



BIODEGRADABLE PLASTIC

Although in theory, biodegradable plastic cups, utensils and containers made from renewable materials instead of petroleum-based plastics sounds like a great idea, there are actually some very troubling issues with these products. Bioplastics are derived from plant-based materials such as vegetable oil, cornstarch and other renewable biomass sources. One concern is that they are usually produced using Genetically Modified or GMO corn, a controversial agricultural process that many believe carries inherent environmental and health risks. Additionally, most bioplastics end up in landfills where they are extremely slow to breakdown. Although they are biodegradable, bioplastics cannot be composted in home compost heaps or worm bins so they require industrial composting facilities that are sometimes difficult to find or simply unavailable. Finally, because they are derived from alternate sources, bioplastics contaminate the plastic recycling process when they are accidentally thrown into the mix.

Action Items

What the City of Santa Monica is Doing:

FOOD SCRAP COLLECTION - YOUR GREEN CART JUST GOT GREENER

Organic material like food and yard debris are a huge portion of the material we throw away, and when sitting in a landfill, emits harmful methane gas. Organic material is 100% compostable! Santa Monica accepts all food, food-soiled paper, and yard debris in your green curbside cart but strictly prohibits any type of plastic materials, glass or metal.

Looking for an easy way to collect your food scraps? Purchase a kitchen collection container for \$15.67 from the Resource Recovery & Recycling Division. Containers are dishwasher safe!

Stop by the Resource Recovery & Recycling Division offices at the City Yards, 2500 Michigan Ave, Santa Monica, CA to purchase your container TODAY!

COOKING OIL AND GREASE RECYCLING

Available in Santa Monica Downtown Parking Structures 2 through 6 and at the Household Hazardous Waste Facility

In an effort to reduce greenhouse gas emissions, combat climate change and curb the growing number of clogged sewers plaguing residents and businesses, the City of Santa Monica collects fats, oil and grease (FOG) free of charge from City restaurants to be turned into biofuel.

Biofuel is a domestic and renewable fuel derived from natural oils, which simultaneously reduces air pollution and our dependence on fossil fuels, and without the toxic side effects of other clean air efforts like the addition of MTBE to gasoline.

The City also collects oil/grease as part of the curbside HHW collection program.

HOUSEHOLD HAZARDOUS WASTE

HOME COLLECTION PROGRAM

The City provides residents with a convenient Curbside Pickup Program for HHW. To schedule a pick up call 800-714-1195. The program increases the reach to all residents regardless of abilities and/or access to transportation. The service takes approximately two weeks to complete from the initial contact. For additional information please visit sustainablesm.org/hhw or <http://www.stericycleenvironmental.com/santa-monica/>

PRESCRIPTION MEDICATION

Unwanted or expired prescription drugs can be safely disposed of 24 hours a day, seven days a week. This service helps to act as a safeguard against harmful contaminants entering the environment when drugs are improperly flushed down the toilet or thrown in the trash. Location: Public Safety Building, Main Entrance, 333 Olympic Drive, Santa Monica, CA, 90401

YOUR GREEN BIN JUST GOT GREENER.
SU BOTE VERDE ACABA DE ENVERDESER.

Food is now accepted.
Santa Monica takes one giant step toward the goal of a zero waste future by introducing food scraps to yard trimmings collection. These valuable resources will be sent to a composting facility for processing. Below are a few guidelines for you to get started.

Ahora se acepta comida.
Santa Monica a tomado un paso gigante hacia la meta de reducir basura a un porcentaje de zero, con la introducción de colección de comida y recortes de jardín. Estos valiosos recursos serán mandados a un centro donde se convertirán en abono. Abajo encontrara un guía que demuestra como empezar a contribuir hacia esta meta.



WHAT GOES IN THE GREEN BIN: QUE VA EN EL BOTE VERDE:

ALL FOOD TODA LA COMIDA



YARD TRIMMINGS RECORTED DE JARDIN



PLEASE NO: PLASTIC, GLASS, CANS, METAL

Resource Recovery & Recycling Division
www.smgov.net/recycling
310.458.2223

POR FAVOR NO: PLASTICO, VIDRIO, BOTES, METAL

DO YOU...

- * DROP LITTER AND NOT PICK IT UP?
- * THROW BATTERIES AWAY IN THE TRASH?
- * THROW BROKEN APPLIANCES IN THE TRASH?
- * THROW ELECTRONIC EQUIPMENT IN THE TRASH?
- * USE STYROFOAM CUPS/PLATES/CONTAINERS?
- * USE SINGLE-USE CARRY OUT BAGS AT THE GROCERY STORE?
- * BUY INDIVIDUALLY WRAPPED PACKAGES OF SOMETHING?
- * THROW LEFTOVER FOOD AWAY?
- * KNOW WHERE THE TRASH YOU TROW AWAY ENDS UP?

NOW YOU CAN...

1. REDUCE HOW MUCH YOU CONSUME AND REUSE ITEMS WHENEVER POSSIBLE.

- Bring your own reusable container.

- * It's quick and easy to do and diminishes the demand for natural resources for the production of paper or plastic. It also reduces the amount of waste going to landfills. Some stores also give you a discount for using your own cup! Put one in your backpack, briefcase or car. bringyourown.org

- Bring your own reusable bag.

- * *Effective September 1st, 2011 the City of Santa Monica began enforcing its Single-Use Carryout Bag Ordinance. This ordinance prohibits all 1,875 retail establishments in the city from providing single-use plastic bags to customers and requires that customers pay a fee for paper bags which must be made of 100% recycled material, 40% of which must be **post-consumer recycled** content.* For more about the Single-Use Bag Ban and the Share a Bag Program go to sustainablem.org/bag. Remember to bring your bags by keeping them by the front door or investing in a few compact, foldable bags that fit easily inside your purse or backpack. reuseit.com is a great resource for reusable products.

- Bring a reusable plate, utensils and cloth napkin-This is useful at school or in the office. You can even use these items to take home restaurant leftovers.

- Use a reusable microfiber cloth instead of paper towels to clean. These create less dust and less waste.³⁰

- When ordering take-out food, ask them to leave out disposable napkins, condiments and utensils.

- Reuse paper and plastic bags - On the off chance you forget your reusable bag, reuse your paper and plastic bags.

- Reuse paper and envelopes - At home or in the office, remember to use both sides of the paper, use print preview and open envelopes in a manner so they can be readdressed and sent out again. Collect used paper and cut it into smaller sizes to make note pads.

- All non-recyclable plastic disposable food service containers, such as Styrofoam® and polystyrene (#6 w/ chasing arrows), whether foam or clear, are banned in all Santa Monica food establishments. Learn more at sustainablem.org/container or call 310.458.4925



- ❑ Buying used items from yard sales, second hand stores or online websites is a little bit like treasure hunting! It also keeps materials out of landfills and supports the local economy. See *Shopping Solution 6 in the Shopping & Food chapter for more info. The City of Santa Monica hosts a Citywide Yard Sale each year. To learn more about the event call 310.458.2223 or visit www.smgov.net/r3events.*
- ❑ Consider organizing a Clothing Swap with your friends and neighbors. Consider being part of Santa Monica's Halloween Costume Swap visit www.smgov.net/r3events for more information.
- ❑ When moving, choose more sustainable options like RentAGreenBox.com. RentaGreenBox.com uses reusable moving boxes made from recycled plastic, biofuel moving vans, "poopie palettes" made from recycled baby diapers, and packing material (peanuts) made from recycled paper.



❑ 2. RECYCLE EVERYTHING YOU CAN AND COLLECT FOR HAZARDOUS HOUSEHOLD WASTE.

Recycle plastics, paper, glass and cans. The Blue Bin recycling programs sort out all materials after pick up, and remove unrecyclable material, but when in doubt first check your waste haulers website as to whether or not to put material into the Blue Bin. If you're still unsure then put it in and give it the chance to be recycled. If you live in an apartment that does NOT have a recycling service you can ask your facilities manager to order a blue container for the complex (a lot of recycling containers are in communal areas or in alley ways), or you can drop off your recycling at the Santa Monica Community Recycling Center. For more information visit: <http://www.smgov.net/R3>

In 2014, the Santa Monica Zero Waste Strategic Plan was adopted, with a goal of becoming zero waste by 2030.

- * <http://www.smgov.net/departments/council/agendas/2013/20130319/s2013031904-A-1.pdf>
- ❑ Give away or donate things you don't use. Local charities, non-profit organization, and schools are always looking for free materials. Get in touch with the groups in your community and see if they can use your 'trash'.
 - * Local Reuse Guide available at http://www.smgov.net/uploadedFiles/Departments/Public_Works/Solid_Waste/Reuse.pdf
- ❑ Donate to reDiscover. reDiscover is a community art center, reuse warehouse, gallery and event space. They recycle everyday discards donated by business and give them new purpose as hands-on learning materials. This promotes resource conservation, creativity, and community engagement through material reuse. Visit rediscovercenter.org/
- ❑ Recycle Office Supplies - printer cartridges, toner, and other supplies can be recycled.
- ❑ Recycle Clothing & Textiles - dropoff bins are available at The Resource Recovery & Recycling Division, 2500 Michigan Ave, Santa Monica.



- ❑ Recycle on Campus-If you are a student, use the recycling bins on campus.
- ❑ Create a Hazardous Household Waste (HHW) container or bin and collect any material that could potentially contaminate our ground water if it was sent to a landfill. Separate all recyclables from these toxic materials. Examples of HHW include batteries, anything with a plug or electronic display, and used lightbulbs. When the container is full take it to the nearest HHW facility during open or drop off periods. Remember to leave all materials bound for the HHW in their original container (ex. leave paint in the paint can). In 2012 Santa Monica residents kept more than 250,000 pounds of hazardous waste out of the landfill by using the City's hazardous waste collection program. Even better, more than 90% of the materials collected were recycled – everything from paint and electronics to pesticides and automotive products are collected, separated, and processed.

WHAT SHOULD BE PUT IN HOUSEHOLD HAZARDOUS WASTE?

Household Products	
Abrasive cleanser	Mercury thermometers
Aerosol spray cans	Metal polishers
Adhesives	Mothballs
Air fresheners	Nail polish remover
Batteries	Oven cleaners
Drain cleaners	Rug & upholstery cleaner
Drugs	Rust removers
Florescent light tubes	Shoe polish
Furniture polish	Smoke detectors
Kerosene / Propane	Spot removers
Lighter fluid	Toilet bowl cleaners
Liquid cleaners	Photo processing chemicals
Automotive Products	
Antifreeze	Motor oil & oil filters
Batteries	Refrigerants
Degreasers / Cleaners	Solvents
Fuels	Transmission fluid
Garden Products	
Fertilizers	Pet care
Herbicides	Pool chemicals
Pesticides	Weed n feed
Paint Products	
Latex paint	Stains/Varnishes
Oil-based paint	Strippers
Solvents/Thinners	Wood Preservatives



- ❑ Collect one-time use batteries in your Hazardous Household Waste Bin. Batteries cannot be recycled in the blue bin and need to be taken to a Household Hazardous Waste collection center or battery drop off container. The Sustainable Works office has a battery drop-off container. Replace one time use batteries with rechargeable batteries.
- ❑ Collect all materials for Recycling or HHW from *Construction and Demolition* projects during remodeling or renovation. Check the SMOSE Green Building Guidelines.

Collect Computer and Electronic components, **E-Waste**

Certain components contain materials that cannot be recycled, make them hazardous, or undesirable in a landfill. California law views unwanted picture tubes from televisions and monitors as hazardous waste and they cannot be placed in the trash.

- * Electronic recycling in Santa Monica is free. Under no circumstances should electronic waste be left at the curb or in the alley, or placed into the trash or recycling cart for collection.
- * californiarecycles.com

If you have electronics that are still usable, list them on LACoMAX the county wide online materials exchange - ladpw.org/epd/lacomax, or donate them to your favorite charity.

3. COMPOST.

Start Composting! composters.com

The City of Santa Monica, Resource Recovery and Recycling Department, offers compost containers and worm bins at discounted rates for residents. Call 310.458.2223 or go to smgov.net/swm

- * RRR offers quarterly compost giveaways for residents. Visit: <http://calendar.smgov.net/other/events/signup.asp?ID=601&ret=http://www.smgov.net/departments/ose>

There are two main types of Composting:

1) Garden Composting 2) Worm Composting (Vermicomposting)

Other forms of Composting include:

- * Probiotic Composting units
- * NatureMill offers a composting option using a little power to recreate garden composting in a compact kitchen appliance. naturemill.com

- Recycle green waste - After mowing the lawn, pruning, or pulling weeds, collect your yard scraps and put them in the compost bin. This keeps them out of the landfill and creates a healthier lawn by allowing vital nutrients to go back into the soil. You can also compost all food scraps, vegetable scraps, egg shells, coffee grinds, meats, cheese and other dairy products.

- Recycle brown waste - Wood chips, branches and straw can also be composted.

- Visit smartgardening.com or call (888) CLEAN -LA for the dates and locations of free SmartGardening composting workshops across the County.

Benefits of Composting:

- * Keeps organic wastes out of landfills
- * Provides nutrients to the soil
- * Increases beneficial soil organisms
- * Suppresses certain plant diseases
- * Protects soils from erosion
- * Assists pollution remediation
- * Reduces the need for fertilizers and pesticides

Visit the Support Tools for directions on "How to Vermicompost" or to see vermicomposting in action, visit the Vermitech on the Santa Monica College campus!



4. CHANGE YOUR BEHAVIOR.

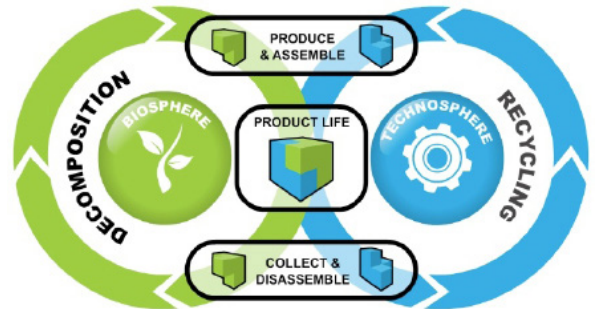
- ❑ Purchase well designed, quality items that are designed to last and not “designed for the dump!”
- ❑ Share resources – There is a wealth of resources in your community and many people who are willing to share their tools, appliances, books and more. Tap into these resources and start borrowing the things you need instead of purchasing them. See *Shopping solution 3 in the Shopping & Food Chapter for a list of sharing resources.*
- ❑ Pick up litter - cigarette butts, plastic bags, and other small bits and pieces of trash will end up in the ocean if we don’t pick it up.

5. CLOSE THE LOOP. PURCHASE PRODUCTS MADE FROM THE STUFF YOU RECYCLE.

By purchasing recycled content products you are doing your part to help maintain market demand for recyclables and ensure the continuation of recycling programs. If consumers purchase more products with recycled content, manufacturers will continue to use it in their products and expand the usage to even more products.

❑ Buy Recycled Content Products and Packaging

- * Office Equipment and Supplies: copier & printer papers (laser & ink jet), legal pads, notepads, envelopes, transparencies, toner cartridges, bulletin boards, push pins, pens, pencils, scissors, rulers
- * To learn more about the benefits of recycled paper visit Green Americans Better Paper Project at greenamerica.org/better-paper-project/
- * Packing and Shipping Products: corrugated containers, shipping mailers
- * Paper bags made with 100% recycled content and a minimum 40% **post-consumer recycled** content
- * Building and Construction Materials: plastic lumber, steel framing for construction, roofing, wallboard, flooring, insulation, paint, aluminum gutters, down spouts, siding
- * Clothing and Accessories: clothes made from recycled plastic, soda bottles, recycled cotton tennis shoes.
- * Groceries: steel food cans, glass bottles and jars, food product boxes, cereal, cookie, and cracker boxes, egg cartons, laundry detergent bottles, aluminum beverage cans.
- * Automobiles: re-refined motor oil, retread tires, used parts, cars (the average automobile has 44 percent recycled steel)
- * Home Furnishing and Decorating: decorating accessories, carpeting, door mats, furnishings, wallpaper, steel appliances
- * Gardening and Yard Supplies: hoses, mulch, patio furniture
- * Recreation and Sporting Goods: camping and hiking equipment, golf accessories, recreation mats, playground equipment, boating supplies
- * Toys and Gifts: bicycles (contain recycled steel), recycled wrapping paper, greeting cards



6. REPAIR INSTEAD OF DISCARD

- ❑ Invest in quality items that are built to last and do your best to maintain them. If they do break, repair them instead of throwing them away. Seek out your local repair shops or learn to fix items yourself! Items that can usually be repaired include:
- ❑ Cars – Instead of swapping out your lease every other year, invest in a car you love and treat it kindly, making repairs whenever necessary.
- ❑ Bicycles – Your local bike shop can tune up your bike in no time or you can learn to do it yourself at a bicycle repair collective. See Solution 2 in the Transportation Chapter for more details about local bicycle repair collectives.
- ❑ Shoes – Most good quality shoes can be re-soled used for many years.
- ❑ Clothing – When your favorite pair of jeans get a rip or your favorite dress gets a tear take them to your neighborhood tailor to be



mended or learn to sew and do it yourself!

☐ Computers and other Electronics – It is tempting to want to upgrade our computer, cell phone and other electronics every time the latest new item comes out and our old one is getting a little slower. But computer and electronic repair specialists can often work magic to refurbish products and make them work like new again.

☐ Furniture – A wobbly table or worn out couch can be brought back to life with a little bit of sanding or some new upholstery.

- * RRR hosts two Repair Cafes per year. For more info visit the City of Santa Monica's Event Calendar at: <http://calendar.smgov.net/city/eventcalendar.asp>

☐ 7. ELIMINATE JUNK MAIL.

One of the easiest ways to eliminate a huge source of paper waste, not to mention clutter around your house, is to reduce the amount of unwanted **junk mail** you receive.

Why eliminate junk mail?

- * 100 million trees are ground up each year for unsolicited mail.³²
- * More than half of unsolicited mail is discarded unread or unopened; the response rate is less than 2%.³³
- * Junk mail creates 5.6 million tons of unnecessary waste.³⁴

Visit catalogchoice.org, optoutprescreen.com, mailstopper.tonic.com, 41pounds.org or check the *Support Tools for the "Eliminate Junk Mail Checklist"* to find out exactly what to do to eliminate unwanted junk mail.



☐ 8. ORGANIZE ZERO WASTE LUNCHES, PARTIES AND EVENTS

Whether you are simply packing your lunch to take to the office or school, throwing a family birthday party, or planning a large event that will be attended by hundreds, you can do a lot to make it a zero waste event!

☐ Zero Waste Lunch – Packing your own lunch is not only a great way to save money but it is also an opportunity to reduce your daily waste. A zero waste lunch does not produce trash. There are no disposables and food waste is compostable. Zero waste lunches require a commitment to waste prevention while packing, recycling and composting after eating! In addition, food products that are not packaged and are compostable are generally healthier!

Your Zero Waste lunch kit should include:

- * A reusable lunch box, bag or basket – something that can be easily washed.
- * Reusable containers for sandwiches, fruit, veggies and snacks. Tupperware or glass Pyrex containers work well.
- * A reusable thermos or leak proof beverage container – stainless steel, glass or BPA free plastic containers with tight fitting lids are best.
- * Reusable tableware – metal, bamboo or sturdy BPA free plastic are good choices.
- * Cloth napkins.

Do NOT include:

- * Single use bags made from plastic, bio-plastic and paper.
- * Juice boxes, disposable plastic or foil drink containers.
- * Styrofoam containers and cups.
- * Plastic baggies, aluminum foil.
- * Individual serving size containers (e.g., applesauce, chips, pudding, yogurt).
- * Paper napkins, plastic table ware and pre-wrapped chopsticks.

Visit the *Support Tools* section for more details on how to create a Zero Waste Lunch.



- ❑ Zero Waste Party – Inviting your friends and family for a food and drink filled celebration can sometimes lead to a lot of waste, but it doesn't have to! By making a little bit of extra effort you can host a zero waste party and use the event to help educate others about the importance of waste reduction.

Tips for throwing a zero waste party:

- * Use electronic instead of paper invitations. Try Evite.com or Sendomatic.com
- * Encourage guests to carpool, bike or take public transportation. You might even want to include bus routes and times in your invitation.
- * Set up several recycling and compost containers around your party area and let your guests know what items go into each. Consider creating signs for each bin to make it even easier.
- * Serve food and drinks that are organic, local and/or seasonal. Try not to make more food than you need so that nothing goes to waste. If there are leftovers, encourage your guests to take some food home with them and make sure all!
- * Avoid bottled water and other bottled beverages and go for large pitchers of drinks instead. Make sure that any single serving beverage containers make it into the recycle bins.
- * Use reusable plates, cups, tableware and cloth napkins instead of disposables. If you don't have enough serving wear for all of your guests consider asking friends and family to bring extra plates, cups, etc. Or invest in some sturdy, 100% recycled plastic serving wear which can be reused again and again – Preserveproducts.com
- * Avoid decorations designed for one-time use such as streamers, balloons, etc. Instead, get creative and make unique centerpieces from what you already have. If you decide to use flowers, buy local, organically-grown flowers whenever possible.
- * When giving gifts or party favors, choose useful, sustainable items instead of throw away trinkets. Use reusable paper or fabric gift bags instead of wrapping paper.

- ❑ Zero Waste Event – Large events have the potential to generate a huge amount of trash if the organizers have not planned ahead to provide the leadership and infrastructure to transform the waste materials into valuable resources.

Some key areas to consider when planning a large Zero Waste Event are:

- * Resource Recovery Containers – You will need containers to collect all of the recyclables, compostables and trash. If your event is in Santa Monica you can rent recycling, compost and trash containers from the city for a small fee. For detailed instructs on renting the containers and planning your event in Santa Monica, see the Support Tools section and download the *Zero Waste Event Guide* at <http://www.smgov.net/Departments/PublicWorks/ContentRecycling.aspx?id=21572>. If your event is in Los Angeles, you can receive recycling containers from the city of LA free of charge. At this time the city does not provide compost or trash containers. For information about receiving free recycling containers contact the City of Los Angeles Special Events Recycling Program at 213-922-8301. You can also contract independent consultants to provide resource recovery services. Athensservices.com and wastelessliving.com are two such providers.

Vendor Involvement – The vendors at your event will create the majority of the waste so it is best to get them involved from the beginning to encourage waste minimization. As the organizer, you can be in control of the products which are used at the event so let the vendors know that they should plan to use only recyclable and compostable paper packaging.

- * Food Service – Let food service providers know about your zero waste goals. Arrange to have excess food donated to shelters and food banks. Serve food buffet style instead of individually packaged or use finger foods. If reusable items are on available, use paper compostable plates. Provide drinks and condiments in bulk instead of individual packages.
- * Site Planning – Use a site map to visually plan out your event space and consider the appropriate locations to place your resource recovery stations (recycling and composting). Make sure they are accessible to all and conveniently located near food and eating areas, entrances and exits and areas where you anticipate the largest crowds to gather.
- * Decorations & Give-Aways – Consider the environmental impost of any raffle prizes, give-aways, centerpieces or decorations. Limit the number of give-away items, make sure items are useful and/or reusable, recyclable or compostable.
- * Education and Signage – There are various methods you can use to educate your attendees of the zero waste goals and facilities at your event. Mention it ahead of time in your marketing materials, press releases and invitations, and use



- * posters, signs, banners and PA announcements at your event itself to help patrons use the recycling and compost bins correctly.
- * Volunteers – Station volunteers by your recycling containers to help educate attendees and supervise what goes into the bins. This will help reduce contamination and increase the amount of waste that is recycled overall. It is also a great way to involve the community!²⁶

9. SET UP A RECYCLING PROGRAM AT YOUR WORK, RELIGIOUS ORGANIZATION OR OTHER GROUP.

For more information on setting up a recycle program, visit: earth911.com/recycling/the-basics/

10. GET ACTIVE

Volunteer

- * Santa Monica Baykeeper
- * Heal the Bay
- * Local Thrift Store
- * For a community clean up to keep trash out of the Bay

Write a letter

- * Ask your school cafeteria to adopt Zero Waste protocols
- * Write a letter to Mail Preference Service, (PO Box 643, Carmel NY 10512) and Telephone Preference Service, (PO Box 1559, Carmel NY 10512) and ask to be removed from mailing lists.
- * Ask your legislator to fund programs designed to keep waste out of our coastal waters

Participate in the following thematic events:

- * Waste Reduction Week – Third week of October
- * National Clean Your Files Day-Month of April
- * Coastal Clean Up Day – Third Saturday of September
- * America Recycles Day-Month of November
- * Buy Nothing Day-the Friday after Thanksgiving

Consider a Green Job, or making your current job more sustainable.



NOTES

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GREEN JOBS – WASTE

RECYCLING

- * Recycling jobs employ millions of people and the job basically requires the collection, organization, and transportation of recyclable items and turning them into new products. Many of these jobs don't require separating products by hand; therefore learning to use mechanical equipment is often necessary. All levels of workers are appreciated and there are specialized positions available as well. Positions range from drivers to landfill managers to environmental compliance coordinators. A bachelor's degree is preferred (doesn't have to be in the environmental field) as well as good communication skills, people skills, judgment, and experience in project management.

Visit recycleamerica.com for jobs in this field that operate in 100 of United States and Canada's recycling plants.

- * Recycling Coordinator – This position is in conjunction with a city's Waste Management Program and is vital to economic and environmental vitality. Ideal candidates have completed at least six months to one year past the high school equivalency through either through a community college or technical, vocational, correspondence or business school. Principally, recycling coordinators are responsible for all coordination, administration, evaluation and supervision of recycling and waste programs. Moreover, coordinators deal with all tiers of a recycling program including drop-off recycling, curbside pickup, multi-family recycling (pertaining to apartment/condominium complexes), commercial recycling, green waste/composting and household hazardous waste programs.



HAZARDOUS WASTE

- * Hazardous Materials Removal Worker – Identifies, removes, transports and disposes of various hazardous materials including asbestos, lead and radioactive and nuclear materials. A minimum of a HS Diploma or GED is required as well as 1-3 months of training and licensure for each material handled. Salaries range from \$20-\$25/hour.
- * Hazardous Waste Management Specialist – Conducts studies on hazardous waste management projects and provides information on treatment and containment of hazardous waste. Provides technical assistance in the event of a hazardous chemical spill and identifies pollutant, determines hazardous impact and recommends corrective action. A degree in Chemistry or other Science is recommended. Areas of recommended college course work include Analytical Chemistry, Organic Chemistry and Physical Chemistry. Two years experience in a comprehensive environmental, health and safety program is required. Salaries range from \$25-\$35/hour.



SOLID WASTE

- * Integrated Solid Waste Management – Encompasses waste prevention, recycling, composting, and disposal, and it considers how to do all of them while protecting human health and the environment. Such a program looks at the needs of the local community and combines the most appropriate waste management combination for that place. There are degree programs in integrated waste management that include courses in sanitary landfill design, recycling, hazardous waste, composting, waste-to-energy incineration, and regulatory issues, but such a degree is not a prerequisite for much of the work in ISWM.

Visit swana.org (The Solid Waste Association of North America) for job listings.

- * Waste Reduction Consultant – Environmental consultant to design, implement and monitor a variety of commercial and municipal programs that include waste prevention, recycling, construction and demolition, household hazardous waste, illegal hauling and used oil programs. A bachelor's degree in Waste Management is required but a Master's Degree or PhD is desired. Areas of recommended college course work include Waste Reduction, Environmental Studies and Recycling. This field is expected to grow exponentially alongside waste reduction management. Salaries range from \$60,00 to \$80,000/year.



SUPPORT TOOLS



Symbols of Confusion

In a master stroke of deceptive communications, the Society of the Plastics Industry in 1988 appropriated the chasing arrow triangle, a universal symbol for recycling, as part of their system for labeling types of plastic resins. Consumers have been confused ever since. The symbol used on plastics suggests recycled content and real world recyclability, yet it means something completely different. The symbol indicates which family of plastic resins a product or component is made of. The suggestion of recycled content is completely false. After two decades of miscommunication, plastics are by far the most likely material to be labeled with a “recycled” symbol, yet they are among the least likely materials to actually be recycled.



#1 PET/PETE Impact: MILD (polyethylene terephthalate) Also known as Polyester.
May contain toxic additives such as antimony trioxide.
Common uses: Beverage bottles, food and nonfood containers, fiber for textiles.
Recyclability: Relatively high. Usually accepted curbside.
Second life: Carpet fiber, textiles, fleece jackets, new containers.



#2 HDPE Impact: RELATIVELY SAFE (high-density polyethylene)
Low toxicity.
Common uses: Bottles for milk, juice, shampoo, liquid laundry detergent, motor oil. Liners for grocery bags and cereal boxes.
Recyclability: Relatively high. Usually accepted curbside.
Second life: Nonfood containers, decking, fencing, flowerpots.



#3 PVC/VINYL Impact: EXTREMELY DANGEROUS (polyvinyl chloride)
Toxic Dioxins present in Manufacture, Use and Disposal, especially when burned.
Common uses: Packaging, construction (pipe, siding, window frames, fencing, flooring), medical tubing, cable insulation.
Recyclability: Low. Not accepted in many communities.
Second life: Pipe, gutters, carpet backing, packaging.



#4 LDPE Impact: RELATIVELY SAFE (low-density polyethylene)
Low toxicity.
Common uses: Container lids, bags for groceries, newspapers, trash, some cling wraps.
Recyclability: Fairly low. Accepted in some communities.
Second life: Shipping envelopes, trash bags, compost bins.



#5 PP Impact: RELATIVELY SAFE (polypropylene)
Low toxicity.
Common uses: Molded automotive parts, rigid food and takeout packaging, medicine bottles, bottle caps. Living Hinge parts.
Recyclability: Accepted in few communities.
Second life: Handles for razors, toothbrushes. Containers, cups, plates, utensils, rakes, storage bins, shipping pallets.



#6 PS Impact: DETRIMENTAL (polystyrene)
Devastating to beach environments, disintegrates into many small floating particles.
Common uses: Styrofoam peanuts, packaging, food containers, cups, plates, bowls. rigid cups, utensils, CD cases.
Recyclability: Low. Not typically accepted curbside. Physically but not financially feasible to recycle, too much air.
Second life: Light-switch plates, desk trays, protective packaging.



#7 OTHER Impact: DETRIMENTAL (all other types or a mix of plastics, may include biodegradable plastics)
Often a combination of plastics, making recyclability difficult.
Common uses: Bottles, oven-baking bags, various packaging, consumer electronic casings.
Recyclability: Very low.
Second life: Can sometimes be made into bottles or plastic lumber.

Stop Junk Mail: A complete guide to getting just the mail you want

1. Stop the catalogs. City of Santa Monica has partnered with Catalog Choice, which will let you halt catalogs and all other junk mail you don't want very easily AND monitor to make sure they actually are keeping you off their lists. You can also contact the catalog companies individually via their customer service lines — but of course that'll take more time. www.catalogchoice.org

2. Get off the Direct Marketing Association's list — for \$1 if you mail in the form (see right sidebar). There also appears to be an online option that requires registration, but I don't recommend this as it's oddly complicated. Note that this step won't stop the Val-Pak or ShopWise or any of the other local coupon packets — just the totally random junk mail that seemed to come outta nowhere. A few months after sending in the form, you'll start to see a junk mail decrease. <https://www.dmchoice.org/dma/member/regist.action>

3. Bye bye credit card offers. These things have gotten a lot of people into financial holes lately — so stop the debt catastrophes from ever tempting you by opting out of credit card offers. You can opt out for 5 years or forever - though if you change your mind, all you have to do is stop by the site again to opt in. www.optoutprescreen.com

4. Ditch the local coupon lists — Val-Pak, ShopWise, Pennysaver (call 800.422.4116), Local Community Values (call 626.472.5377), and Money Mailer. Annoyingly, you'll need to contact each of them separately — but this could be good news for people who want to keep getting one of these but not the rest.

<http://www.coxtarget.com/mailexpression/s/DisplayMailSuppressionForm>

http://www.valassis.com/1024/Contact/contact_home.aspx

<http://moneymailer.com/company-info/contact-us/>

5. Junk the individual stuff. Still getting other types of junk mail? Call the customer service lines, then wait to get hold of an actual person who can take your name off the lists. And now for the paid services! If you really want off the lists but the above seems way too time consuming for you, these companies can help — for a small fee:

>> 41pounds.org. This company promises to reduce your junk mail by 80-95%! \$41 covers you for five years, with \$15 of that money going to a nonprofit of your choice. The fee covers you even if you move, as long as it's within four years of subscribing. www.41pounds.org

>> [GreenDimes](http://greendimes.com). This company promises a 90% reduction in your junk mail. \$20 covers you for a year — even if you move — and will get 5 trees planted for you on your behalf. <http://mailstopper.tonic.com/greendimes/HowItWorks>

>> [PaperKarma](http://paperkarma.com). This smart phone application helps you to reduce your unwanted junk mail. Download on iPhone or Android.

Got all that done? Then pat yourself on your back because you've really shrunk your carbon footprint today. Junk mail's un-eco effect's the equivalent of more than nine million cars (PDF) or the emissions generated by heating nearly 13 million homes for the winter, according to a study by ForestEthics. <http://www.donotmail.org/downloads/ClimateReport.pdf>

Then sign ForestEthics' Do Not Mail Petition, which is pushing lawmakers to create a national Do Not Mail list, similar to the existing Do Not Call list. http://salsa.democracyinaction.org/o/281/t/5980/petition.jsp?petition_KEY=941

Make it a point never to respond to mailed requests for donations — and let the organizations you donate to know that their unsolicited junk mail has you rethinking your generosity.



Each year, the equivalent of FOUR Rocky Mountain National Parks are clearcut to make junk mail.

Adapted from a blog post by greenlagirl July 4, 2009
www.greenlagirl.com

What Santa Monica College is Doing: Vermitech

In December of 2002 Santa Monica College added a new team of recyclers to its waste reduction program. Four hundred pounds of red wiggler worms (also known as *Eisenia fetida*) found a new home at SMC and eagerly began their work of recycling pre-consumer food waste from the school's cafeteria. These worms, whose population is estimated to be about 800,000, eat the food waste that is ground up and mixed with shredded cardboard at a ratio of three to one. The food waste, which was previously sent to the landfill, is transformed by the worms into "castings," a highly active biological mixture of bacteria and enzymes loaded with minerals essential for plant growth. This all-natural organic fertilizer is then used by SMC gardeners on the landscaping around campus. In addition to being a great fertilizer, castings also act as an insect repellent by increasing the enzyme chitinase in plants. Chitinase dissolves chitin, which makes up the exoskeleton of an insect. When we are about to drink milk and we realize it is sour, we do not drink it. That is exactly how an insect reacts to a plant with chitinase; they will not eat it since they are inclined to want to keep their exoskeletons intact. The castings can also be made into a "worm tea" and sprayed on plants that are infested with white flies. The castings smell like a forest after a rainfall.



SMC's vermicomposting project began in 2002 under SMC President Dr. Piedad Robertson with the purchase of the Vermitech machine and shredder developed by Canadian entrepreneur and environmentalist, Al Eggen. Both the college and the City of Santa Monica were looking for ways to reduce waste in an ecologically sound manner. The City of Santa Monica contributed \$25,000 towards its purchase and the Esper A. Peterson Foundation donated \$25,000. SMC invested \$10,000 for electrical work and an awning.

The Vermitech machine is 19' long, 8' wide, and 5' high. It is temperature controlled and the castings are "harvested" with the help of a hydraulically operated mechanism. When the machine is turned on the castings are pushed through a grate and they to the ground underneath the machine where they are collected.



"Vermicomposting will not only help cut our waste and garbage bills, it will ease the strain on our landfills, produce fertilizer, and demonstrate how we can improve our living and working environments," Bill Selby, SMC geography professor and former coordinator of the Center for Environmental and Urban Studies, said at the time of the Vermitech's installation.

For more information check out <http://www.smc.edu/recycling/v-1.htm>

How to Vermicompost

Composting is a natural process where kitchen and yard wastes decompose into a dark, nutrient-rich, earth-smelling soil fertilizer. Perhaps you've considered backyard composting but live in a high rise or don't want to have to trek across your yard to get to your compost bin. Or perhaps you want to compost indoors in your home, school or office. If so, vermicomposting may be just the answer for you.

WHAT IS VERMICOMPOSTING?

Vermicomposting is simply composting with worms. The best kind of earthworm to use is the red worm (a.k.a. red wiggler). These worms are incredible garbage eaters! They eat and expel their own weight every day, so even a small bin of red worms will yield pounds of rich sweet-smelling compost, called "castings". Finished castings can be harvested in as little as two to three months. Red worms are extremely prolific. It takes about three weeks for fertilized eggs to develop in a cocoon from which two or more young worms can hatch. In three months the worms are sexually mature and will start breeding. Within a year you'll be able to give worms away to get a friend started!

WHAT DO I NEED?

1. A Bin

Make Your Own: Buy a plastic storage bin (with a lid) from a hardware or department store and convert it into a bin for worm composting. If you decide to make your own, drill eight to ten holes (approx. 1 cm or 1/4") in the bottom for drainage. Line the bottom with fine nylon mesh to prevent the worms from escaping. Place the bin on blocks with a tray underneath. You can also build one from wood. Search online for different DIY worm bin models and instructions.

Buy a Ready-Made Bin: Worm composting bins can be purchased from your local garden supply store (call first to confirm availability) or from a number of online retailers. The cities of Santa Monica and LA also sell worm bins to residents at a subsidized price. Santa Monica residents go to www.smgov.net/r3 for more info. LA residents visit www.smartgardening.com for details about free composting workshops and compost bin sales.

Remember to choose the correct size bin for your needs. It should be shallow (8 - 12" deep), and provide one square foot of surface area for every pound of food waste per week (i.e. six pounds of food waste requires a bin 2' x 3').

# People	Quantity of Worms	Bin Size
1 to 3	1 lb.	1ft x 2ft x 2ft
4 to 6	2 - 3 lbs.	1ft x 2ft x 3.5ft

2. Worms

You will need to buy worms. Call Chris Wilson at 310. 398. 1214 for worms (and bins) or check with your City's Environmental Programs Department.

3. Bedding

Red worms can survive and breed in many kinds of bedding materials. The important thing to remember is that the red wiggler will eat its own bedding. Materials such as shredded newspaper, composted manure, coconut coir (available at garden supply or online) or leaves can all be used. (Make sure to mix coconut coir with other bedding material as it is too acidic to use alone.) You can also purchase prepared bedding, which may be machine-ground paper either alone or mixed with loam. Dampen the bedding until the moisture level is like a well-wrung sponge. Fill the bin 3/4 full with bedding. Add the worms. Since worms don't like light, they will quickly crawl down into the bedding.



HOW DOES THE WORM BIN WORK?

Worms are placed in a tray along with bedding and food is gradually added. Once that tray starts to fill up with castings add a second tray of bedding on top of the first tray. As the worms finish digesting the food in the first tray, they naturally seek more, and migrate upward into the next tray. If you continue to add trays and feed the worms from the top, most of your worms will leave the bottom bin, which is then emptied into the garden and rotated to the top of your worm bin.

WHAT AND HOW DO I FEED THEM?

Worms will eat just about any type of kitchen waste including vegetables, fruits, coffee grinds, tea bags and finely crushed eggshells. You should avoid putting meats, dairy and fats in the bin.

You can feed your worms every few days, or once a week if you prefer. Simply pull aside some of the bedding, bury the food waste, and cover it with bedding. Each time you feed the worms, choose a different location to bury the food. Note that eggshells will maintain the bedding at a safe

pH level. Without them the bedding may become too acidic. When adding eggshells you should let the shells dry out then crush them finely with a rolling pin. Sprinkle approximately one tablespoon per pound of worms onto your bedding every week.

CAN WORMS LIVE OUTSIDE DURING COLDER MONTHS?

Worms prefer temperatures between 40 and 80 degrees Fahrenheit. If you live in an apartment building they can live quite happily out on the balcony until temperatures drop to 40 degrees. After that they should be taken indoors. If you use an insulated worm bin, however, the bin can remain outdoors year-around.

HOW DO I HARVEST THE FINISHED COMPOST?

After about three months you'll notice that the volume of materials has dropped substantially and the original bedding is no longer recognizable. This means it's time to harvest the finished compost and add fresh bedding. There are several ways to harvest:

- * Move the contents of the bin to one side. Add fresh bedding to the vacant side. Put food scraps into the fresh bedding only, so the worms will move from the finished compost in search of food. After one or two weeks, remove the finished compost.
- * Dump the contents of the bin onto a large plastic sheet, and separate into small cone shaped piles. Place a bright light above the sheet. The worms will move down away from the light. Remove the finished compost from the top of each pile. A small pile of worms will remain at the bottom. Place these into the bin with fresh bedding.
- * Remove the entire contents of the bin. Put in fresh bedding and food. Place a large piece of burlap over the bin ensuring that the burlap overhangs the edges of the bin. Place the contents of the bin that you have removed back on top of the burlap. With the lid off, shine a light directly over the bin; try a fluorescent or halogen light. Gradually the worms will move down through the burlap into the fresh bedding. You can then remove the finished compost from the top; do this gradually - 1 or 2" a day. This process will take about a week altogether. A variation on this method is to put only one inch of material at a time onto the burlap. The worms will burrow down very quickly and you can then remove the finished compost. Repeat this process until you have harvested all the finished compost. Note: For methods 2) and 3), don't feed the worms for one or two weeks prior to harvesting.

HOW SHOULD I USE THE FINISHED COMPOST?

Vermicompost, or 'castings,' will provide nutrients to your plants and will help the soil hold moisture. It can be used in a number of different ways:

- * Sprinkle into a seed row when planting.
- * When transplanting, add a handful of soil to the hole you have dug for the plant.
- * Use as a top dressing, sprinkling the compost around the base of your plants.
- * Mix with potting soil (half and half) for house plants.

WHAT CAN I DO ABOUT FRUIT FLIES IN AND AROUND MY WORM BIN?

- * The best approach is prevention. When you add food scraps, always bury them under the bedding. Be sure they are well covered with about 3" of bedding material. As an extra measure, you can also put a bit of fresh bedding on top.
- * Keep a tight lid on the container you use to store food scraps before adding them to the bin. This will prevent flies from laying eggs in the scraps.
- * If a lot of fruit flies fly out of the bin when you lift the lid, you can suck them up with a vacuum cleaner.
- * Use a trap. Pour a half-cup of beer into a small glass jar. Place a plastic bag over the mouth of the jar with one corner reaching down into the jar. Poke a small hole in the corner of the bag with a pencil. Secure the bag around the rim with a rubber band. Fruit flies will be attracted by the beer, make their way through the hole, and be unable to get out.

WILL A WORM BIN SMELL?

It is unlikely that your worm bin will have an unpleasant odor. If it does, there are a number of possible causes and steps you can take to remedy the problem.

- * Problem: You have overloaded the bin with too many food scraps.
Solution: Give the worms a break and don't add any food scraps for a week
- * Problem: The bedding is too wet and compacted.
Solution: Check the drainage holes to make sure they are not blocked and drill more holes if needed. Gently stir up the entire contents to allow more air in, and add some fresh dry bedding.
- * Problem: The bin is too acid.
Solution: Add very finely crushed eggshells to neutralize the acidity.

For more Vermicomposting tips we recommend: "Worms Eat My Garbage" by Mary Appelhof

Want to start vermicomposting at home? \$46.48 residents; \$92.97 non-residents

Follow These Seven Steps to Easy Worm Composting

1. Purchase a worm bin. Available from the City for residents at the subsidized price.
2. Add bedding material, such as coconut coir or shredded newspaper, and then add about ½ - 1 pound of red worms.
3. Feed the worms regularly with:
4. Keep the worm bin warm, but not hot, and keep it out of direct sunlight.
5. Keep bedding moist, but not wet.
6. Use crushed egg shells or ground limestone to keep the pH neutral (around 7.0).

- | <u>Good Stuff</u> | <u>Avoid These</u> |
|--|---|
| <input type="checkbox"/> Fruit scraps | <input type="checkbox"/> Rotting food |
| <input type="checkbox"/> Vegetable scraps | <input type="checkbox"/> Meat and dairy items |
| <input type="checkbox"/> Coffee grounds and tea bags | <input type="checkbox"/> Citrus rinds |
| <input type="checkbox"/> Leaves | <input type="checkbox"/> Animal by-products |
| <input type="checkbox"/> Crushed egg shells | <input type="checkbox"/> Oil, fats and grease |
| <input type="checkbox"/> Nut shells | <input type="checkbox"/> Pet droppings |
| <input type="checkbox"/> Stale bread | |



Wriggly Ranch Worm Composter

Patented self-harvesting 3 stackable plastic tray system constructed for indoor and outdoor worm composting.

Bottom tray has one screw in tap for liquid collection. Kit includes worm composter, bedding material and instructions

Large capacity- holds up to 17,000 worms (no extra layers needed).

22 ¾" L x 25 ¾" H x 15 ¾" W (fully assembled); 15 pounds



Visit us at www.smgov.net/swm for more information.

Purchase Location:
Solid Waste Management Division
2500 Michigan Ave.
Santa Monica, CA 90404
Phone: (310) 458-2223
E-mail: recycling@smgov.net



Want to start composting at home? \$46.48 residents; \$92.97 non-residents* (*prices subject to change without notice)



Follow These Four Steps to Backyard Composting

1. PURCHASE A COMPOST BIN.
2. Place the bin in a sunny space for faster decomposition.
3. COLLECT KITCHEN SCRAPS AND YARD TRIMMINGS.

Almost any organic material can be added to your compost pile. Keep a small bin in your kitchen to collect melon rinds, carrot peelings, tea bags, coffee grounds, apple cores, banana peels—or anything similar that cycles through your kitchen. Keep the lid on tight to discourage insects. Add these scraps to your compost pile once or twice a week.

For best results, layer or mix 2 parts "green" (nitrogen-rich) to 1 part "brown" (carbon-rich) materials.

Green materials: food waste, grass clippings, horse and cow manure
Brown materials: leaves and foliage, wood, sawdust, bark and paper.

4. ADD AIR AND WATER.

Rotate your pile as often as needed to encourage circulation. Water periodically so materials stay as damp as a well-wrung sponge.

Biostack Composter

Efficient square design, ideal for all backyards. Easy to assemble and maintain. Patented, 2 tier design allows for easy harvesting and turning. Kit and instructions included.

Large Capacity – 13 cubic feet

28"L x 28"W x 34"H (fully assembled); 31 pounds



Visit us at www.smgov.net/swm for more information.

Purchase Location:
Solid Waste Management Division
2500 Michigan Ave.
Santa Monica, CA 90404
Phone: (310) 458-2223
E-mail: recycling@smgov.net



Follow These Four Steps to Backyard Composting

1. SELECT A COMPOST BIN. AVAILABLE FROM THE CITY.
2. Place the bin in a sunny space for faster decomposition.
3. COLLECT KITCHEN SCRAPS AND YARD TRIMMINGS.

Almost any organic material can be added to your compost pile. Keep a small bin in your kitchen to collect melon rinds, carrot peelings, tea bags, coffee grounds, apple cores, banana peels – or anything similar that cycles through your kitchen. Keep the lid on tight to discourage insects. Add these scraps to your compost pile one or twice a week.

For best results, layer or mix 2 parts "green" (nitrogen-rich) to 1 part "brown" (carbon-rich) materials.

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4. ADD AIR AND WATER.

Rotate your pile as often as needed to encourage circulation. Water periodically so materials stay as damp as a well-wrung sponge.

Visit www.smgov.net/r3 and click Home Composting in the side navigation bar to download these flyers.

NOTES

A series of horizontal dotted lines for writing notes.

GLOSSARY OF KEY TERMS

Biodegradable capable of being broken down especially into innocuous products by the action of living things.

Bisphenol A (BPA): A potentially harmful chemical commonly found in plastic containers as well in the lining of canned foods and beverages and some cheaper made aluminum water bottles. It is a known endocrine disruptor. Low doses of bisphenol A can mimic the body's own hormones, potentially causing negative health effects.

Compost a mixture of decaying organic matter, derived from leaves kitchen scraps and manure, used to improve soil structure and provide nutrients. Composting is the controlled biological decomposition of organic matter, such as food and yard wastes, into humus, a soil-like material that is used in vegetable and flower gardens, landscaping, and many other applications. A substance composed mainly of partially decayed organic material that is applied to fertilize the soil and to increase its humus content.

Closed Loop/Cradle to Cradle: A holistic approach that seeks to create systems that are not just efficient but essentially waste free. In these systems, the waste produced by one function or process in the system serves as the resource materials for the next function or process. Most natural systems are closed loops systems because the waste from one species or process is the energy source for another. Cradle to Cradle is a trade marked term (sometimes referred to as C2C) and also the name of a landmark book about this approach to designing products and systems. It is also a play on the expression 'cradle to grave,' which is a more accurate description of our current system.

Downcycling: The process of converting waste materials or products into new materials or lesser quality or reduced functionality. Downcycled materials are usually combinations of multiple materials and the resulting material is less valuable and usually no longer recyclable.

E- Waste is a popular, informal name for electronic products at the end of their useful life. It is loosely applied to consumer and business electronic equipment like computers, printers, cables, televisions, VCRs, copiers, fax machines, stereos, and electronic games that are no longer wanted.

Household Hazardous Waste common household items such as paints, cleaners, oils, batteries, and pesticides contain hazardous components. One way to help determine if your household waste has hazardous components is to read the labels on products. Labels that read danger, warning, caution, toxic, corrosive, flammable, or poison identify products that might contain hazardous materials. Leftover portions of these products are called household hazardous waste (HHW). These products, if mishandled, can be dangerous to your health and the environment.

Junk mail is any unsolicited mail.

Landfill a specifically designed structure built into or on top of the ground in which trash is deposited. Trash is intended to be isolated from the surrounding environment (groundwater, air, rain). This

isolation is attempted with a bottom liner and daily covering of soil.

Leachate: The liquid that leaks from landfills that is created by moisture in the waste itself or rain filtering through the waste. Leachate is a dangerous mix of materials can contain chemicals, heavy metals and other toxins from Household Hazardous Waste like batteries, paint and cleaning products dumped into the landfills.

Municipal Solid Waste (MSW) more commonly known as trash or garbage - consists of everyday items such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries.

Post-Consumer Recycled Content-a product said to have Post-consumer recycled content in it means that the material in the product has been used by consumers or businesses and has been recycled and reused.

Recyclable any item which can be collected, separated, and processed to be used as raw materials in the manufacturing of new products. If a product is labeled as recyclable, but the facilities do not exist in or around your community, is it really recyclable? The following items are generally recycled at the curb in and around Los Angeles:

- * Aluminum cans, steel cans, glass bottles, glass jars, plastic bottles, plastic grocery bags, newspaper, colored paper, cardboard, junk mail, envelopes, phone books, magazines and catalogs. Please check with the Solid Waste Division in your community to be certain.

Recycle

- * To put or pass through a cycle again
- * To extract useful substances found in waste
- * To reprocess
- * Adapt to a new use or function.

Recycled product or material being used for a different purpose than its original design.

Recycled Content-a product said to have "recycled content" in it suggests that the some or all of the materials in the product are made from recycled material as opposed to "virgin/raw" materials.

Vermicompost (Worm Compost) is a method for recycling food waste into a rich, dark, earth-smelling fertilizer. The great advantage of worm composting is that this can be done indoors and outdoors, thus allowing year round composting. It also provides apartment dwellers with a means of composting. In a nutshell, worm compost is made in a container filled with moistened bedding and red worms. Add your food waste for a period of time, and the worms and microorganisms will eventually convert the entire contents into rich compost.

Waste to use, consume, spend, or expend thoughtlessly or carelessly. To cause to lose energy, strength, or vigor; exhaust, tire, or enfeeble: Disease wasted his body. To fail to take advantage of or use for profit; lose: waste an opportunity. Any remaining resources unused or not used to their full advantage or efficiency. Anything or anyone rejected as useless, worthless, or in excess of what is required. For example: Garbage, rubbish, or trash.

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