

County of Santa Cruz

CURBSIDER

DECEMBER 2012

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What's With Greenhouse Gases?

Keep organic matter out
of the landfill to reduce
greenhouse gases



What's With Greenhouse Gases?



Methane produced during a landfill's lifecycle can never be fully captured, making landfills the 4th largest contributor to climate change in the U.S.

Californians have been more aware of global warming since Governor Schwarzenegger signed the Global Warming Solutions Act of 2006 (AB 32), the bill that requires the state to address manmade production of greenhouse gases (GHG). The most prevalent GHG is carbon dioxide (CO₂). Compared to nitrogen at 78% and oxygen at 21%, CO₂ is less than 0.04% of our atmosphere (395 parts per million by volume or ppmv). Life on Earth depends on these gases to trap some heat from the Sun to keep our planet at a comfortable temperature and insulate us from the near absolute-zero temperature of deep space (-454° F). Over the past half million years as the Earth has experienced ice ages and droughts, CO₂ in the atmosphere has ranged from 200 to 300 ppmv, changing slowly as Earth's ecosystem sought equilibrium.

As forests and crops grow, they absorb CO₂ from the atmosphere and give off oxygen. When plants are burned, consumed or composted, the decay process uses oxygen and produces CO₂. These transformations on annual or decades-long cycles do not have lasting effects on the concentration of atmospheric CO₂.

During the last 200 years of the industrial revolution, tremendous quantities of carbon that were sequestered in fossil fuels (coal, oil, and natural gas) for millennia have been burned for fuel, releasing CO₂ through combustion to push concentration to its highest level in 20 million years. Now the greenhouse effect is working too well, and unpredictable weather patterns are accompanying the overall warming of the Earth.

Methane gas (CH₄) exists in the atmosphere at a mere 1/1000 of the concentration of CO₂. However, methane is 33 times as effective as CO₂ in capturing solar radiation, thus exacerbating global warming. After cattle production, the largest source of methane from manmade sources is landfills, where organic matter decaying in the absence of oxygen produces methane gas. Our local landfills have methane capture systems that burn landfill gas, creating the less potent CO₂ and generating electricity in the process. However, a significant portion of methane produced during a landfill's lifecycle can never be captured, making landfills the 4th largest contributor to climate change in the U.S., right after electricity generation, transportation and factories. The only sure way to avoid methane release from a landfill is to ban the burial of organic matter. See the sidebar for tips on how to keep the organics out.

How to Manage Organics

10% of what we throw in the garbage is yardwaste or wood waste, and another 23% is compostable food waste. Let's keep organic waste out of the landfill to avoid the production of methane, a potent greenhouse gas.

No Yardwaste in the Garbage

Yardwaste includes leaves, grass, brush, untreated and unpainted lumber, and raw fruits and vegetables. It is picked up curbside in GreenWaste Recovery's green carts and can be dropped off at disposal sites. Yardwaste service is included for residential collection customers at no extra charge. Yardwaste fees for bin service customers and drop-off at the landfill or transfer station are significantly less than garbage disposal fees. Please do not bag any yardwaste.

Home Composting

Convert food scraps into rich nutrient-laden humus for the garden. The County's composting website offers how-to advice on setting up and maintaining a backyard compost bin or worm composter. Visit www.compostsantacruzcounty.org or call County Public Works at 831-454-2160.

Commercial Food Waste Reduction

4-10% of food purchased by a typical food service operation is wasted before it is served or sold, through spoilage and trim waste. LeanPath offers free tools to help businesses conduct waste audits to measure and manage food waste. Reducing food waste lowers purchase costs and trash bills. See www.leanpath.com.

New Ordinances Protect Health and Environment

Santa Cruz County is among a growing number of local jurisdictions throughout California tackling public health and environmental concerns through local laws. View full text of the new ordinances described below and answers to frequently asked questions on the County's website www.santacruzcountyrecycles.org. Contact the Department of Public Works for more information at 831-454-2160 or dpwweb@co.santa-cruz.ca.us.

County Bans Sale of Polystyrene Foam



Polystyrene foam, known by the trade name Styrofoam, has been banned for use in food service in the county and all four local cities since 2008. But polystyrene foam remains abundant in litter found during beach cleanups. It pollutes the Monterey Bay Marine Sanctuary and is mistaken for food by marine wildlife.

To address this problem, the Board of Supervisors of the County of Santa Cruz has banned the sale of most polystyrene foam products in the county's unincorporated areas, including cups, plates, bowls, coolers, packing peanuts and beach toys. Durable products incorporating foam such as surfboards are exempt. The ordinance took effect October 17, 2012. The cities of Capitola and Santa Cruz have adopted the same ordinance.

Plastic Bags Further Reduced

In March 2012, a County ordinance took effect prohibiting the use of plastic carryout bags and requiring a 10-cent charge for paper carryout bags at all businesses in the unincorporated county, exempting restaurants. Response has been very positive. More than 80% of shoppers are bringing their own bags or not using a bag, for an estimated reduction of 40 million single-use carryout bags in the county in the first year.

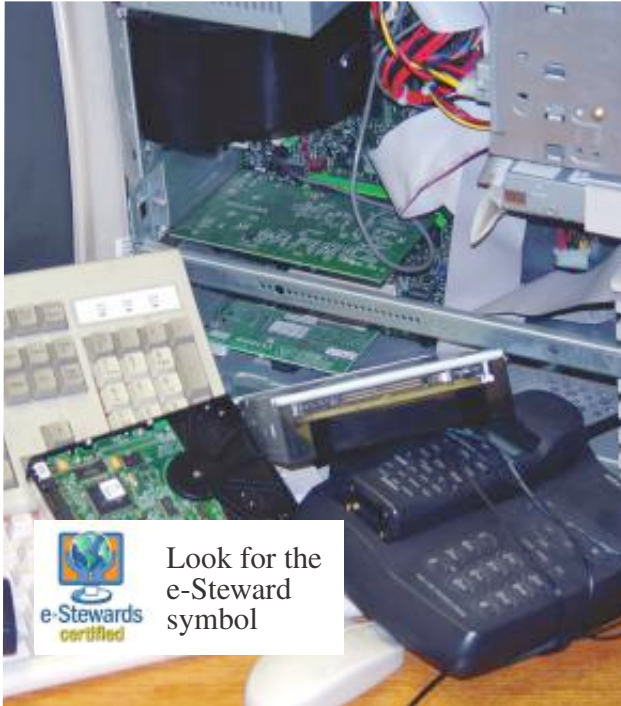
However, plastic bags continue to be a problem, especially along our coastline. Save Our Shores reports that during recent cleanup events, large numbers of plastic bags and plastic pieces were found along county beaches, many from local food service establishments. Meanwhile, several trend-setting local restaurants voluntarily eliminated plastic take-out bags with few complaints from customers.

To address the problem, the Santa Cruz County Board of Supervisors voted to extend the plastic bag ban to include restaurants. Beginning on Earth Day, April 22, 2013, restaurants in the unincorporated areas of the county may no longer provide plastic carryout bags to their customers. Unlike other businesses, restaurants may still provide paper bags for to-go orders without charge.

For other businesses in the unincorporated county, the charge for paper bags (retained by the merchant) will increase to 25-cents on March 20, 2013.



Law Sparks Better E-waste Processing



The U.S. Environmental Protection Agency estimates that less than 14% of electronics in the U.S. are properly recycled. The rest go into landfills, are broken up in scrap yards, or are sent overseas to be recycled in primitive and often unhealthy conditions. California law addresses recycling of TVs and computer monitors, but other electronic products are largely unregulated. Improperly processed, e-waste can pollute the air, soil, and water, and expose handlers to harmful working conditions.

A new ordinance requires that all e-waste collected in the unincorporated county go only to e-Stewards certified recyclers. e-Stewards is a non-profit organization established to set standards for the electronic recycling industry, ensuring that e-waste is properly handled, all health and safety procedures are followed, and no materials are exported to countries without such standards.

The ordinance, which took effect on October 10, 2012, applies to businesses and events, and sets requirements for information to be included in all e-waste collection event postings. The cities of Capitola, Watsonville, Scotts Valley and Santa Cruz have either already passed or are considering similar ordinances. For more information about e-Stewards, go to www.e-stewards.org.



On July 1, 2012, Assembly Bill 341 became law, requiring all businesses and public entities generating four or more cubic yards of commercial solid waste per week, or multi-family residential dwellings of five units or more, to arrange for recycling services. The law was designed to help California achieve its 75% recycling and diversion goal by the year 2020, and reduce greenhouse gases. Unlimited recycling service is provided at no extra charge for all GreenWaste commercial service accounts. Customers that increase their recycling and reduce their garbage may experience cost savings. Contact GreenWaste Recovery for a free evaluation of your recycling needs and start recycling today.

How Are We Doing?

Residents of Santa Cruz County kept these items out of the landfill in the past year:

- 40,000 fluorescent light bulbs
- 11,000 pounds of medicines
- 8,000 pounds of sharps
- 60,000 gallons of used motor oil
- 200,000 tons of recyclable materials
- 4,000 tons of construction and demolition waste
- 40,000 tons of yard and wood waste
- 828 tons of food waste
- 40 million fewer plastic bags used in unincorporated County in first year of new bag-ban ordinance

Keep up the good work!

Rainwater Harvesting Season

by LeAnne Ravinale

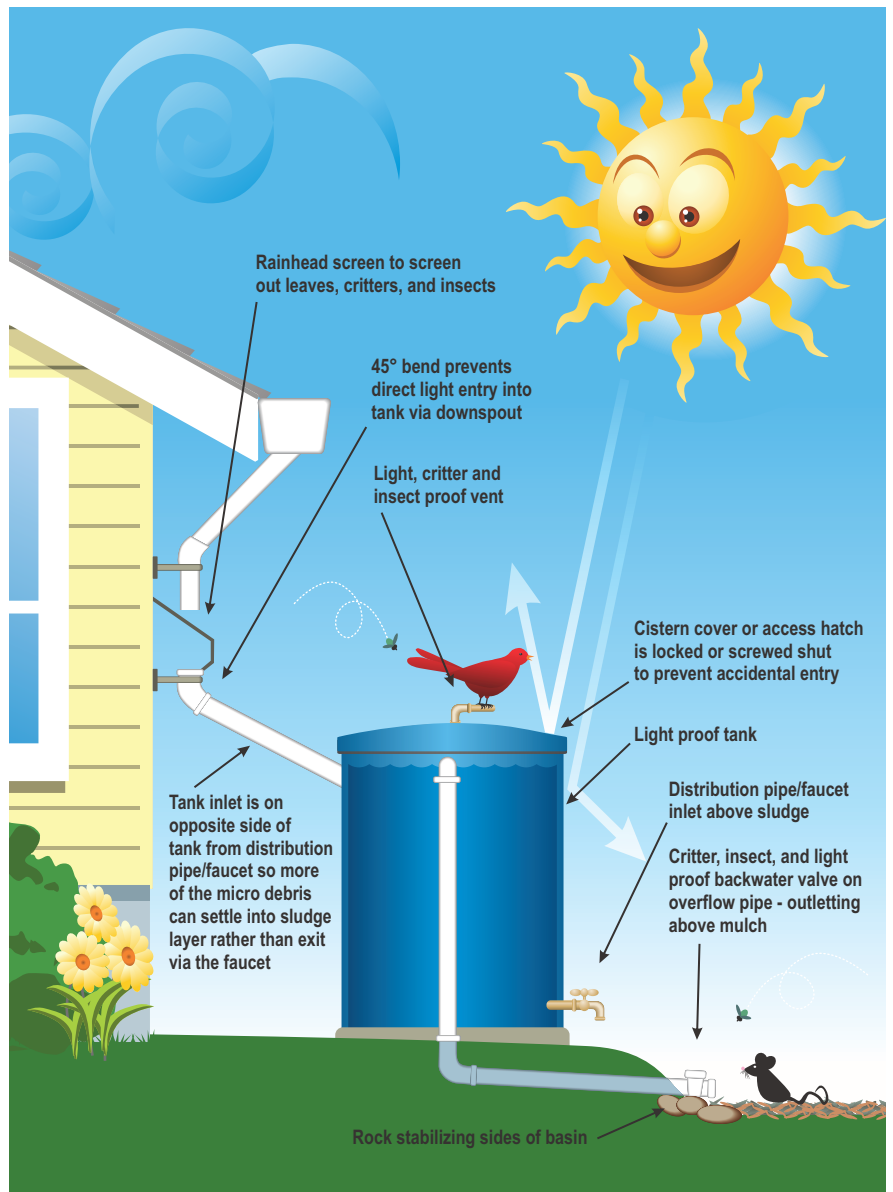
For centuries, people around the world have collected water in the wet season for use in the dry, and this practice remains an important part of water conservation in our modern world. In Santa Cruz County, we don't have a water shortage problem; we have a water storage problem. The more water we store, the easier to meet our summer irrigation demands.

Rainwater is a free source of water that can reduce our water bills and harmful water runoff that carries toxic chemicals throughout our watersheds and to the ocean. It helps with fire protection and, if properly filtered, can provide emergency drinking water. Rainwater is without many pollutants and processing chemicals such as chlorine, and plants tend to grow better with this type of irrigation.

Capturing, storing and distributing rainwater for your landscape can be relatively easy. There are ways to start small, with options to expand to your entire landscape.

Answer these questions while planning and designing a rainwater catchment system:

- 1. How much water is available to collect and what surface will I collect it from?** At 0.6 gallons per inch of rainfall for each square foot of roof, you will almost always have much more water than you can store.
- 2. How will I get the water from that surface to my collection container?** The most common system is a simple rain gutter and downspout from the roof.
- 3. What type of container will I use?** It can be above ground or underground. A fine mesh screen installed at all inlets and outlets will keep the tanks mosquito-free.
- 4. How will I distribute the water into the landscape?** Common methods are scooping water out of a barrel with a bucket, or installing a spigot to fill a watering can or attach a garden hose.
- 5. Where will the overflow go when the tank is full?** Whether you divert it to sewer, swale or somewhere else, you must always design your system for the inevitable overflow.



6. How much do I want to spend? Costs for a simple barrel can be under \$100 and go up from there.

7. Will I install and maintain the system myself? Help with design and installation is available from local contractors, and guidance for do-it-yourselfers is available from the local Resource Conservation District (www.rcdsantacruz.org). Check with your local utility for the rebates, credits or subsidies they offer for rainwater catchment.

Harvesting rainwater is a great way to have first-hand experience with your water supply and educate your children about the hydrologic cycle. Once you install your rainwater system, you'll join a long lineage of people all over the world who have utilized this ancient, simple, life-giving practice.

LeAnne Ravinale is the Water Conservation Coordinator at the Scotts Valley Water District. She can be reached at lravinale@svwd.org.

County of Santa Cruz Public Works

701 Ocean Street, Room 410

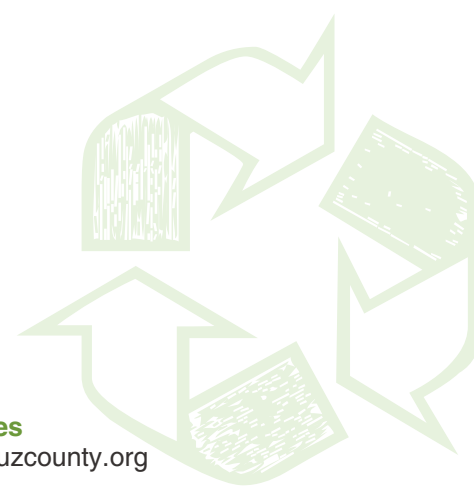
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Recycling Resources

Recycle Information Line 831-454-2333

- What and where to recycle (recorded messages)

Curbside Refuse, Recycling and Yard Waste Collection 800-665-2209

(Operated by GreenWaste Recovery)

- Begin new service
 - Report missed recycling or trash service
 - Request delivery or removal of carts
 - Obtain oil recycling jugs
- www.greenwaste.com

County Public Works Dept. 831-454-2160

www.santacruzcountyrecycles.org

- Apartments and business recycling inquiries
- Complaints, compliments or suggestions

Household Hazardous Waste 831-454-2606

(recorded messages)

- Schedule for free disposal
- Non-hazardous alternatives
- Free surplus paint

Composting Resources

www.compostsantacruzcounty.org

Buena Vista Landfill & Recycling Center 831-454-5153

- Recorded information 831-454-2430

Ben Lomond Transfer Station & Recycling Center. 831-336-3951

- Recorded information 831-454-2430

City of Santa Cruz Resource Recovery Facility & Recycling Center. 831-420-6270

- Open to unincorporated county residents in Davenport and Bonny Doon only

California Grey Bears Recycling Centers. 831-479-1055

- Chanticleer Avenue
- Buena Vista Landfill

SLV Redemption/Recycling Centers 831-335-1728

(Operated by the Valley Women's Club)

- Felton
- Boulder Creek
- Ben Lomond Transfer Station

Para información en español sobre el reciclaje en las áreas no incorporadas del condado de Santa Cruz, favor de llamar al (800) 665-2209.