



May 2003

Recycling and Waste Management in Central Virginia

2002 Recycling Rate

Each year, the Virginia Department of Environmental Quality (DEQ) collects information about waste and recycling activities within the Commonwealth. While participation in recycling programs is voluntary for residents and businesses in Virginia, state law mandates that each local government implement programs to recycle a minimum of 25 percent of the municipal waste generated each year. Individual localities, or co-ops of localities such as the members of CVWMA, compare the total amount of solid waste generated in the area to the amount recycled to determine the year's recycling rate.

The amount of waste generated is calculated using a figure from the Environmental Protection Agency, which estimates that each American generates approximately 4.5 pounds of trash everyday, or 1,643 pounds annually. This figure represents a 2.5 percent decline in waste generation from 2001 (4.62 pounds per person per day). In an era of seemingly excess consumption it is refreshing to see that Americans produced less waste in 2002 than in previous years.

Between January 2002 and December 2002, Central Virginia recycled 39

percent of the estimated 852,929 tons of municipal waste generated in the region. This success is largely attributed to CVWMA's curbside recycling program, the largest of its kind in the State. Curbside collection is provided to nearly 230,000 households in six jurisdictions, and is continuously expanding coverage. On average, 116 tons of materials are collected at the curb each day.

CVWMA's drop-off recycling program provides 48 additional recycling opportunities for Central Virginia residents. These drop-off sites are conveniently located at schools, fire stations, transfer stations and shopping centers and typically collect 3,500 tons annually.

Calculation of Rate Changed

A review of procedures led DEQ to exclude certain materials from the recycling rate in 2002. Because construction and demolition debris and land clearance waste are not typically part of the municipal solid waste stream in Central Virginia, these items were not incorporated into 2002 calculations. In 2001, CVWMA reported a rate of 44 percent. Calculating 2001 statistics by the same criteria used for the 2002 rate, the 2001 rate would have been 36 percent. Therefore, the 2002 rate of 39 percent demonstrates that local recycling rates are actually improving.

Recycling benefits all Virginians by creating jobs, reducing costs for trash disposal, and protecting the environment from the harvest of raw materials. Recycling also reduces or prevents harmful air and water pollution, saves energy and natural resources, and reduces greenhouse gas emissions from landfills. CVWMA encourages Central Virginians to keep up the good work. Visit www.cvwma.com for a complete list of 2002 recycling statistics.

Tons Recycled in 2002

- ♻ 130,158 Paper
- ♻ 18,556 Metal
- ♻ 1,080 Plastic
- ♻ 99,284 Yard Waste
- ♻ 17,523 Waste Tires
- ♻ 32,889 Used Oil
- ♻ 3,595 Batteries

List does not include all categories collected.

Earth Day 2003: April 19th on Mayo Island



Children with painted faces and their parents enjoyed live music, eco-friendly crafts, a rock climbing wall and even the chance to see a live kangaroo at Richmond's 14th annual GREAT Earth Day Celebration. The GREAT (Greater Richmond Environmental Action Trust) festival has a long tradition of bringing people together to emphasize the importance of healthy living for the environment and our community, and to have a little fun!

Adults and children were entertained with music from the Marshal Tucker Band, Wedgee, Old School Freight Train, Everything and Floating Folk Festival. Community organizations also provided educational exhibits and family activities on a variety of environmental issues. Children visited the CVWMA booth to learn more about recycling and make handmade paper. The gooey, yet educational and fun activity emphasized the value of re-using and recycling household items like plastic containers, paper and fabric. Participants, young and old, were encouraged to celebrate Earth Day every day by participating in

CVWMA recycling programs. Festival spectators showed their support for our environment as over 1,000 pounds of recyclables were gathered from the festival and recycled by CVWMA and Tidewater Fibre Corporation, CVWMA's curbside program contractor.

Earth Day was first proposed in 1969 by John McConnell to celebrate global unity and destiny. Although Earth Day celebrations have changed across the country since the 70's, GREAT continues to support Central Virginia's efforts in protecting our environment. Each year GREAT provides individuals and organizations with the opportunity to apply for grants supporting various environmental projects. These grants are an extension of GREAT's commitment to fostering programs encouraging environmental education, conservation, restoration and preservation of natural resources throughout the Richmond area. For more information on GREAT please visit www.earthdayva.org. Do your part and make Earth Day every Day!

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Barry Matthews answered questions about CVWMA recycling programs during the Earth Day celebration.

CVWMA Outreach and Education

Public outreach and education are a top priority of the CVWMA. Whether it is keeping our community up-to-date on the latest recycling trends, taking Bin on a school visit or exhibiting at environmental fairs, the Authority is committed to educating and informing citizens about recycling and waste reduction.

❖Environmental Education Roundtable

CVWMA recently hosted an Environmental Education Roundtable with community educators from CVWMA jurisdictions. The roundtable was a tremendous opportunity to inform others of upcoming special events, recycling program updates and to explore effective ways to educate students and community members about recycling and waste reduction.

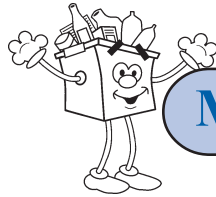
❖Recycling Resource Packs❖

The CVWMA Public Information office is also spearheading outreach efforts by distributing recycling resource packs to local school boards, libraries, Boy Scout troops and Girl Scout troops. The packs include a short video of the MRF (materials recycling facility), a video companion guide supporting Virginia Standards of Learning, activity books, samples of items made of recycled content and many other fun recycling resources.

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Outreach and Education

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More Curbs Served in Henrico

❖Earth Day Radio Campaign❖

Wondering where your recyclables end up? CVWMA provided the answer in a recent "Recycling Minute" radio campaign, which coincided with Earth Day. The campaign focused on frequently asked questions and encouraged re-use and recycling. Topics also included electronics recycling, composting and ways to shop for environmentally friendly products.

❖Talkin' Trash❖

CVWMA, Virginia Recycling Association and The Richmond Times-Dispatch teamed up with teachers to celebrate Earth Day in April. When teachers ordered newspapers to use in the class, they received free copies of "Talkin' Trash" for their students. "Talkin' Trash" is a special 15-page resource designed for students that examines modern waste management and the environment. The paper provides interesting environmental articles and activities and covers SOL objectives 3.5, 3.6, 3.10, 3.11, 4.5, 4.8, 5.7, ES.7, ES.9, BIO.9 and more! Students use math, science, social studies and language arts skills to decide where they stand on environmental issues.

To schedule a school visit, request copies of our publications or checkout a resource pack call our public information office at (804) 359-8413. Don't forget to visit us on the web at www.cvwma.com!

Many Henrico residents are welcoming spring by recycling and doing their part for the environment. Curbside service began the week of April 14th for 3,200 Henrico homes that were recently added to CVWMA's curbside recycling program.

With this addition, the County will have over 70,000 homes in the convenient, single stream, bi-weekly curbside program. In Central Virginia the total number of homes participating in curbside service increased to nearly 230,000.

In addition to protecting the environment, county residents who participate in curbside recycling are helping to control the growth of disposal costs by reducing the amount of waste placed in area landfills. Prior to April's expansion, Henrico had 68,000 homes participating in curbside recycling, pre-

venting over 900 tons (1,800,000 lbs.) of recyclables from entering landfills each month. The addition of 3,200 homes to Henrico's curbside collection could avert an additional 84,000 pounds of recyclable materials from landfills each month.

In addition to the bin provided free of charge, participants may use rigid containers less than 40 gallons in size or paper grocery bags for extra recyclables. Stickers to identify extra containers are also available from the CVWMA.

CVWMA is excited about the increase in participation and encourages member jurisdictions with curbside programs to keep up the good work! For those localities that do not participate in curbside, don't forget about our 48 drop-off sites!

Environmental Tips for Summer



At the beach, pick up litter.



In the back yard, make a compost bin.



On the lawn, recycle grass clippings.



At cookouts, recycle beverage containers.



At the park, recycle water bottles.



On picnics, take reusable utensils.



At home, donate old clothing.

CVWMA thanks you for protecting the environment in Central Virginia.

Curious Consumers: The Results of Your Recycling Efforts

Residents of Central Virginia recycle more than 100 tons of materials each day. Over the course of the year, this adds up to 33,000 tons of soda cans, milk jugs, glass jars, catalogs and newspapers. Consumers often wonder where these materials go after they are left at the curb or taken to area drop-off sites.

Items collected in local curbside and drop-off programs are delivered to area processors who rely on a system of people and machines to separate aluminum cans, plastic bottles, cardboard, newsprint and mixed paper. The sorted materials are then baled and sold to companies that will further prepare the materials to be manufactured into new products and product packaging.

At the paper mill, recyclable paper is mixed with water and made into pulp. The pulp is cleaned, pressed, dried and rolled to make new paper. This recycled paper is made into new products, such as cereal boxes, notebooks, newsprint and tissue paper. Products packaged in recycled paper usually display the recycling symbol with the words "made from post-consumer recycled content" to illustrate their role in the recycling process. Local collection programs are supported when consumers purchase products packaged in, or made from recycled content.



Aluminum and steel cans and plastic bottles are shredded, washed to remove food residues and labels and then melted into new food and beverage containers. An aluminum can recycled in CVWMA collection programs can be returned to the grocery store filled with soda in as little as sixty days. Plastic bottles can also be recycled into a variety of new products, including clothing, carpet and outdoor furniture.

Glass containers may be used to form new food and beverage packaging, however quality control specifications make the production of recycled glass containers challenging. More commonly, crushed glass bottles are ground to the consistency of flour and used in the production of asphalt. Using glass to produce asphalt decreases the need for rock aggregate that would otherwise be mined.

By recycling and disposing of waste properly through CVWMA programs, residents of Central Virginia are not only saving thousands of tons of materials from landfills each year, but they are also protecting natural resources, saving energy and creating safe communities.

For information on CVWMA recycling programs please call the Recycle Hotline at (803) 340-0900.

Putting the "PET" in Carpet

How a PET Plastic Bottle Makes it to Your Living Room Floor

With a growing concern for waste reduction, companies are finding innovative ways to cycle our recyclables. The PET bottle recycling process is one of today's high-tech marvels. PET (or PETE as it is also known) is the type of plastic labeled with the #1 code on or near the bottom of the container and is commonly used to package soft drinks, water, juice, peanut butter, salad dressings, oil, cosmetics and household cleaners. Recycling PET enables communities to take what was once considered waste and turn it into a wide range of products, from new bottles to products like polyester clothing and carpet.

Everyone remembers polyester fashion statements of the '70s, but you may be surprised to learn that PET plastic is the same material. It is a form of polyester that can be made into fiber. What's truly fascinating is how plastic bottles are turned into cozy carpet found in homes across America.

The journey from bottle to carpet begins at the curb and at local drop-off bins. Materials are then taken to the materials recovery facility where they are sorted by type. Workers

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"carPET"

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determine if a bottle is made from PET by the number on the bottom and by the container's appearance.

After the bottles are separated, they are baled into large cubes and sent to PET carpet manufacturers where they are cleaned and ground into flakes. The flake is then washed, heated and rinsed to remove bits of paper and food from the PET. Next, fiber producers melt down the flake until it is the consistency of honey. The honey like substance is then forced through tiny holes the size of a human hair, producing individual filaments or strands. The



fibers are then cooled and cut into shorter strands and baled. The bales have nearly the same appearance as a bale of cotton.

Carpet manufacturers then purchase the fiber bales. The fiber is unbaled and spun into spools of yarn. Needles punch the yarn into a backing material

and form loops, which are cut at a rate of about 1,200 times a minute, forming the carpet's surface. Then the carpet is heated and dyed. After the dye sets the carpet is inspected, rolled and delivered to a store near you.

Like any other carpet, it goes from the store to your floor. But this carpet does more than compliment a living room; it diverts PET plastic from landfills and gives consumers another incentive to recycle. You can complete the cycle by recycling and buying recycled products like carPET!



Electronics Recycling: Exploring Alternatives to Landfilling Your Old Electronics



Can you imagine a day without your cell phone, PC or remote control? Advancements in technology have revolutionized our society and made many of these items staples of our lives. As cheaper, faster and more specialized equipment is developed, how do you transition from the bulky outdated model to the new innovative pocket-sized device? Dealing with the leftovers of our technological advancements have become the hot issue for both the public and private sectors as government and industry struggle to address this growing portion of our waste stream.

Various parts of popular electronic devices may contain dangerous heavy metals, including lead, silver, barium, cadmium, chromium and mercury. Improper disposal of these devices can contaminate soil and water resources leading to harmful effects in humans,

pets and wildlife. Recycling and reuse of these electronic items prevent them from reaching landfills, which help to create less waste, and provide usable items to organizations that may otherwise not be able to afford them. Donations to charitable or nonprofit organizations extend the life-span of usable equipment. Check out CVWMA's online *Choose to Reduce Waste Reduction Directory* at www.cvwma.com/ctr2/ for a variety of organizations that may need your equipment.

Discussions on developing disposal regulations and collection programs for obsolete equipment have begun in many communities. The US Environmental Protection Agency sponsored regional pilot collection programs in 2002, two of which were hosted by CVWMA in the Richmond area. Our local collections on October 19 yielded

22 tons of material. For more information on the pilot program, visit www.epa.gov/reg3wcm/d/eCycling.htm.

The Virginia Department of Environmental Quality offers recommendations for consumers and businesses to properly dispose of excess equipment at www.deq.state.va.us/recycle/computer.html. Manufacturers also appear to be stepping up to the plate to address modern society's excess computer hardware problem. To encourage recycling and reuse, some offer generous economic incentives such as rebates on the purchase of new hardware. Visit www.cvwma.com/information/computers.htm for a list of recycling programs from popular manufacturers such as Dell, Gateway and Hewlett-Packard.

Earth Day

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In addition to participating in the GREAT Earth Day Celebration, CVWMA visited Virginia Commonwealth University on April 25 to participate in *VCU Celebrates Earth Day*. Hosted by the Department of Environmental Conservation, the event provided students, faculty and staff with an opportunity to learn more about environmental issues. Other participants included James River Association, Virginia Recycling

Association, Virginia Department of Environmental Quality, Weyerhaeuser, Ukrops Natural Foods, AERC and the student environmental action group.

During March and April, over 2,000 children's publications were distributed to area teachers in observance of Earth Day. Educators often set aside this time to teach their students about recycling and waste management to meet the required portions of the Virginia Standards of Learning in science.

Kudos: cvwma.com Wins Award



CVWMA is proud to announce its receipt of the *Award of Distinction* in the 2003 *Communicator Awards* competition. CVWMA received the Award of Distinction for its website that communicates the importance of recycling and waste reduction. Congratulations to the CVWMA Public Information office! Keep up the good work.

The Communicator Awards is an international awards competition that recognizes outstanding work in the communications field. Entries are judged by industry professionals who look for companies and individuals whose talent exceeds a high standard of excellence and whose work serves as a benchmark for the industry. There were 3,730 entries from throughout the United States and several foreign countries in *The Communicator Awards* 2003 Print Media competition.

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