

# Growth and Progress

Waste reduction, composting and recycling efforts continue to expand throughout the District. **Approximately 45 percent of what was once considered waste is now being diverted from disposal in landfills.** These results have been accomplished through the collaborative efforts of the public, private and not-for-profit communities. Because of these efforts, less waste is going to our landfills. But in addition, energy and natural resources are conserved. Recycling also reduces, and in many cases eliminates, the pollution associated with virgin material extraction and processing.



## Environmental Benefits of Recycling Study

The Environmental Benefits of Recycling Study was conducted by the East-West Gateway Council of Governments for the St. Louis-Jefferson Solid Waste Management District. This project measured and documented the effect that recycling, reuse and waste reduction in the district has on the environment. Environmental effects considered include: energy conservation; greenhouse gas emissions; air and water pollution; and conservation of natural resources.

District municipal solid waste generation and recycling estimates were developed using District, state and national data. This information was then fed into the National Recycling Coalition's Environmental Benefits Calculator.

For more information: U.S. Environmental Protection Agency - *Puzzled About Recycling's Value? Look Beyond the Bin*, 1998 ([www.epa.gov/epaoswer/non-hw/recycle/benefit.pdf](http://www.epa.gov/epaoswer/non-hw/recycle/benefit.pdf)); U.S. Environmental Protection Agency, Global Warming - [www.epa.gov/globalwarming](http://www.epa.gov/globalwarming); and National Recycling Coalition - Environmental Benefits Calculator - [www.nrc-recycling.org](http://www.nrc-recycling.org).



### St. Louis-Jefferson Solid Waste Management District

The St. Louis-Jefferson Solid Waste Management District provides direct assistance to the public, private and not-for-profit sectors in establishing and expanding waste reduction and recycling. The District serves the City of St. Louis, St. Louis County, Jefferson County and St. Charles County.

A wide variety of programs and services are underway to address and meet the needs of the areas within the District, which range from highly urban to extremely rural. The District supports these efforts with technical assistance for the implementation of waste reduction and recycling programs, grants to support related programs and services and networking of resources and opportunities for individuals, organizations and businesses.

#### More Information

St. Louis-Jefferson SWMD  
7525 Sussex Avenue  
St. Louis, MO 63143  
314-645-6753 phone  
314-645-6504 fax

[www.swmd.net](http://www.swmd.net)

Prepared by



**EAST-WEST GATEWAY**  
Council of Governments

Creating Solutions Across Jurisdictional Boundaries

[www.ewgateway.org](http://www.ewgateway.org)

Printed on Recycled Paper



# Environmental Benefits of Recycling

Preserving Our Environment for the Future

# Recycling



a continuing effort of the

**St. Louis-Jefferson  
Solid Waste Management District**

serving the City of St. Louis, Jefferson County, St. Louis County and St. Charles County



## Recycling Works!

in the St. Louis Metropolitan Area

# Recycling is Preserving Our Environment for the Future

The recycling efforts of the residents and businesses in the St. Louis-Jefferson Solid Waste Management District are improving our environment every day. Through these efforts, the diversion of municipal solid waste from landfills has increased in the District from 10 percent in 1990 to 45 percent in 2003, and the results are clear: cleaner air and water, less pollution, more forested land and open space and reduced greenhouse gases.

Everyone knows recycling means less trash going to our landfills. But the greatest environmental benefits of recycling are related not to landfills, but to the conservation of energy and natural resources. By decreasing the need to extract and process virgin materials from the earth, recycling can also eliminate the pollution associated with the first two stages of a product's development: material extraction and processing. Recycling reduces, and in many cases eliminates, these pollutants.

Why use a valuable material or product once, and then place it in your trash to be buried in a landfill? Instead, divert that material for recycling and capture the energy and resources already used to make that product. Since recycled materials have been refined and processed once, manufacturing the second time around is much cleaner and less energy-intensive.



## RECYCLING— SAVES NATURAL RESOURCES

- By recycling over 116,000 tons of paper in the District last year, over 1.8 million trees did not need to get cut down.
- By recycling 85,000 tons of steel in 2003, District residents saved 106,000 tons of iron ore, 59,000 tons of coal and 5,000 tons of limestone.

By using recycled materials instead of trees, metal ores, minerals, oil and other raw materials taken from the earth, recycling-based manufacturing helps to conserve limited natural resources. Therefore, sound conservation practices help to reduce the need to expand logging and mining operations.

## DID YOU KNOW?

- Recycling aluminum saves 95 percent of the energy used to manufacture virgin aluminum.
- Recycling 1 ton of newspaper saves enough energy to heat a home for 6 weeks.
- Recycling 1 ton of plastics saves the equivalent of 3.85 barrels of oil.
- Recycling 1 glass bottle can save enough energy to light a 100-watt bulb for 4 hours.



## RECYCLING— SAVES ENERGY

- The 953,900 tons of paper, glass, metals, plastics and other materials recycled in 2003 saved enough energy to power 124,000 homes for one year.

Products made using recovered (rather than virgin) materials use significantly less energy. Energy is saved by reducing the need to extract and process raw materials in order to manufacture new products. Less energy used means less burning of fossil fuels such as coal, oil and natural gas. Most of the energy used in industrial processes and related transportation involves burning fossil fuels. When burned, these fuels release pollutants, such as sulfur dioxide, nitrogen oxide and carbon monoxide, into the air.



## RECYCLING— REDUCES AIR AND WATER POLLUTION

- In 2003, recycling reduced overall air emissions by 16,550 tons and reduced waterborne wastes by 2,710 tons. Air emissions exclude carbon dioxide and methane which are greenhouse gases.

By decreasing the need to mine and process virgin materials from the earth, recycling can eliminate the pollution associated with the first two stages of a product's development: material extraction and processing. Mineral mining and processing pollute the air, land and water with toxic materials, such as ammonia, carbon dioxide, carbon monoxide, methane and sulfur dioxide. Recycling reduces, and in many cases eliminates, these pollutants. In addition, recycling keeps materials out of landfills where they can introduce leachate into groundwater and surface waters.



## RECYCLING— REDUCES GREENHOUSE GAS EMISSIONS

- In 2003, recycling in the District reduced greenhouse gas emissions by over 536,000 metric tons of carbon equivalent, which is comparable to the carbon emissions from 405,000 cars.

By reducing air and water pollution and saving energy, recycling offers an additional environmental benefit: it reduces heat trapping greenhouse gases, such as carbon dioxide, methane, nitrous oxide and chlorofluorocarbons, that may contribute to global climate change. Recycling and composting reduce greenhouse gas emissions by 1) decreasing the energy needed to make products from raw material, 2) reducing emissions from incinerators and landfills, which are major sources of methane gas emissions in the U.S. and 3) slowing the harvest of trees, thereby maintaining the carbon dioxide storage benefit provided by forests.

