



CREATING SUSTAINABLE COMMUNITIES A GUIDE FOR DEVELOPERS AND COMMUNITIES

THE IMPACT OF SOURCE REDUCTION, RECYCLING AND COMPOSTING ON GREENHOUSE GAS GENERATION

While there may still be some disagreement about global warming and its potential adverse environmental effects, there is no disagreement about the important role that source reduction (i.e., waste prevention), recycling and composting play in reducing the amount of greenhouse gases (primarily carbon dioxide (CO₂), methane and nitrous oxide) emitted into the atmosphere.

Waste prevention greatly reduces the emission of GHGs by conserving raw materials and, consequently, the energy used to retrieve, process and manufacture them to create products. Recycling reduces greenhouse gas emissions by keeping valuable materials out of landfills that release methane as products decompose. In addition, recycling paper saves trees, which remove large amounts of CO₂ from the atmosphere. Composting creates healthy soils, which are essential in a time of climate change, thereby minimizing the need for fertilizers and pesticides that are energy intensive and greenhouse gas-producing during production.

The United States Environmental Protection Agency calculated that on average, approximately 1.67 metric tons of CO₂ equivalents are avoided for every ton of municipal solid waste (MSW) recycled. In New Jersey, the recycling of paper, plastic, glass, aluminum cans and steel cans reduced GHG emissions by 2.9 million metric tons of carbon equivalents in 2004. If New Jersey's MSW recycling rate increased from its current level of 34% to 50%, a total of 7.7 million metric tons of CO₂ equivalent in avoided GHG emissions would be realized.

APPLICABLE NEW JERSEY GOALS AND TARGETS

Stabilize GHG emissions at 1990 levels by 2020/ Reduce emissions to 80% below 2006 levels by 2050 (E.O. 54; NJ Global Warming Response Act, P.L.2007, c.112).

SUGGESTED ACTIONS AND STRATEGIES

- The implementation of enhanced source reduction, recycling and composting program, as described elsewhere in this report, will lead to significant reductions in GHG generation.
- WasteWise - The United States Environmental Protection Agency's WasteWise program not only recognizes the important role that waste prevention, recycling and composting play in reducing GHG generation, but also quantifies the greenhouse gas emissions reductions associated with these practices in an annual Climate Profile that is developed for those members who report on their activity in these areas. The WasteWise Climate Profile also graphically illustrates what these achievements are equivalent to in regard to the number of automobiles removed from the road and the number of trees saved and planted, among other things. Municipal governments that become WasteWise members can take advantage of this benefit, as well as other benefits from the program. There is no cost associated with WasteWise membership. For details about this program, visit www.epa.gov/wastewise/climate.
- Another initiative highlighting waste prevention as a strategy to mitigate climate change is the U.S. Mayors' Climate Protection Agreement. Through this initiative, mayors sign a pledge to take actions to significantly reduce GHG emissions in their municipalities. Over 600 municipalities have signed the Agreement as of July, 2007. For additional information, visit <http://usmayors.org/climateprotection/>.



STATE TECHNICAL/FINANCIAL ASSISTANCE

NJDEP, Bureau of Recycling and Planning - www.state.nj.us/recyclenj

The NJDEP, Bureau of Recycling and Planning is part of the Department of Environmental Protection's Solid and Hazardous Waste Program. It is comprised of three units – the Recycling and Market Development unit, the Grants, Loans and Data unit and the Planning unit.

FURTHER INFORMATION

Association of New Jersey Recyclers – www.anjr.com

National Recycling Coalition – www.nrc-recycle.org

New Jersey WasteWise Business Network – www.nj.gov/dep/dshw/recycling/brbn03.htm

Northeast Recycling Council – www.nerc.org

United States Environmental Protection Agency, WasteWise Program – www.epa.gov/wastewise

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