



WASTE WISE COMMUNITIES

Climate & Waste
Connection

David Flora
EPA Region 7





Waste Wise: An Evolving Program



Impacts of Climate Change



- Intense, more frequent storms
- Flooding of coastal areas including beaches and bay marshes
- Increased rains in some regions; decreased rains in other regions.
- Increased distribution of infectious diseases

Product Life Cycle —> Cyclical



Climate & Waste Connection

Climate-Waste Connection

Waste increases:

- Production costs
- Use of natural resources
- Volume of waste in landfills

WasteWise Partners reduce GHGs... equivalent to taking 5.8 million cars off the road.



Waste Reduction Model (WARM)

Assess GHG and energy impacts of waste reduction activities



○ Accepts user-specific inputs and provides individualized results

EPA : Global Warming : Actions : Waste : Waste Reduction Model (WARM) : WARM Online - Microsoft Internet Explorer provided by I

U.S. Environmental Protection Agency

Global Warming - Waste

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EPA Home > Global Warming > Actions > Waste > Tools > WARM Online

WARM Online

EPA created WARM to help solid waste planners and organizations track and voluntarily report greenhouse gas emissions reductions and energy savings from several different waste management practices.

Use this worksheet to describe the baseline and alternative MSW management scenarios that you want to compare. Please follow the steps below to enter your material tonnage information in the input boxes in the tables, and select appropriate landfill and waste transport characteristics.

Tips:

- If the listed material is not generated in your community/organization or you do not want to analyze it, leave it blank or enter 0.
- Make sure that the total quantity generated equals the total quantity managed.
- If you have any questions, consult the [WARM User's Guide](#).

Step 1. Baseline Scenario

Please describe your current (or baseline) waste management scenario by entering the tons of each material type that is generated and disposed.

Material	Tons Generated	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted
Aluminum Cans	200	100	50	50	N/A
Steel Cans	100	0	100	0	N/A
Glass					N/A
HDPE					N/A
LDPE					N/A

www.epa.gov/climatechange/wycd/waste/tools.html

Climate Profile

Company X Making a Difference

2003 Waste Reduction Achievements

Waste Management Activity	GHG Emission Reductions (MTCO2E)	GHG Emission Reductions (MTCO2E)
Waste Prevention	11,884	9,437
Recycling	1,952	489
TOTAL	13,836	9,926

These achievements are equivalent to:

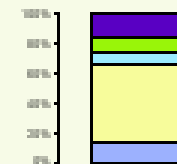


This profile describes the GHG emission reductions achieved as a result of recycling and waste prevention activities reported to WasteWise in 2003. These calculations use the emissions generated by landfilling waste as a baseline. Emission reductions represent the difference between this baseline and the GHG emissions resulting from alternative waste management practices, such as waste prevention and recycling.

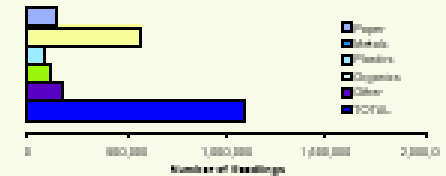
2003 GHG Reductions by Commodity

Commodity	Volume of Waste Prevented and Recycled (pounds)	GHG Reductions (MTCO2E)	GHG Reductions (MTCO2E)
Paper	5,742,880	1,736	3,786
Metals	5,492,880	4,231	22,420
Plastics	5,742,880	1,830	3,667
Organics	42,644,644	1,567	4,938
Other	764,644	1,389	4,620
TOTAL	57,682,880	12,853	42,621

GHG reduction by commodity



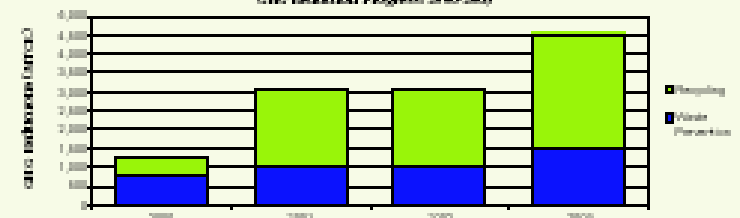
GHG reduction equivalent to recycling this many tons of waste



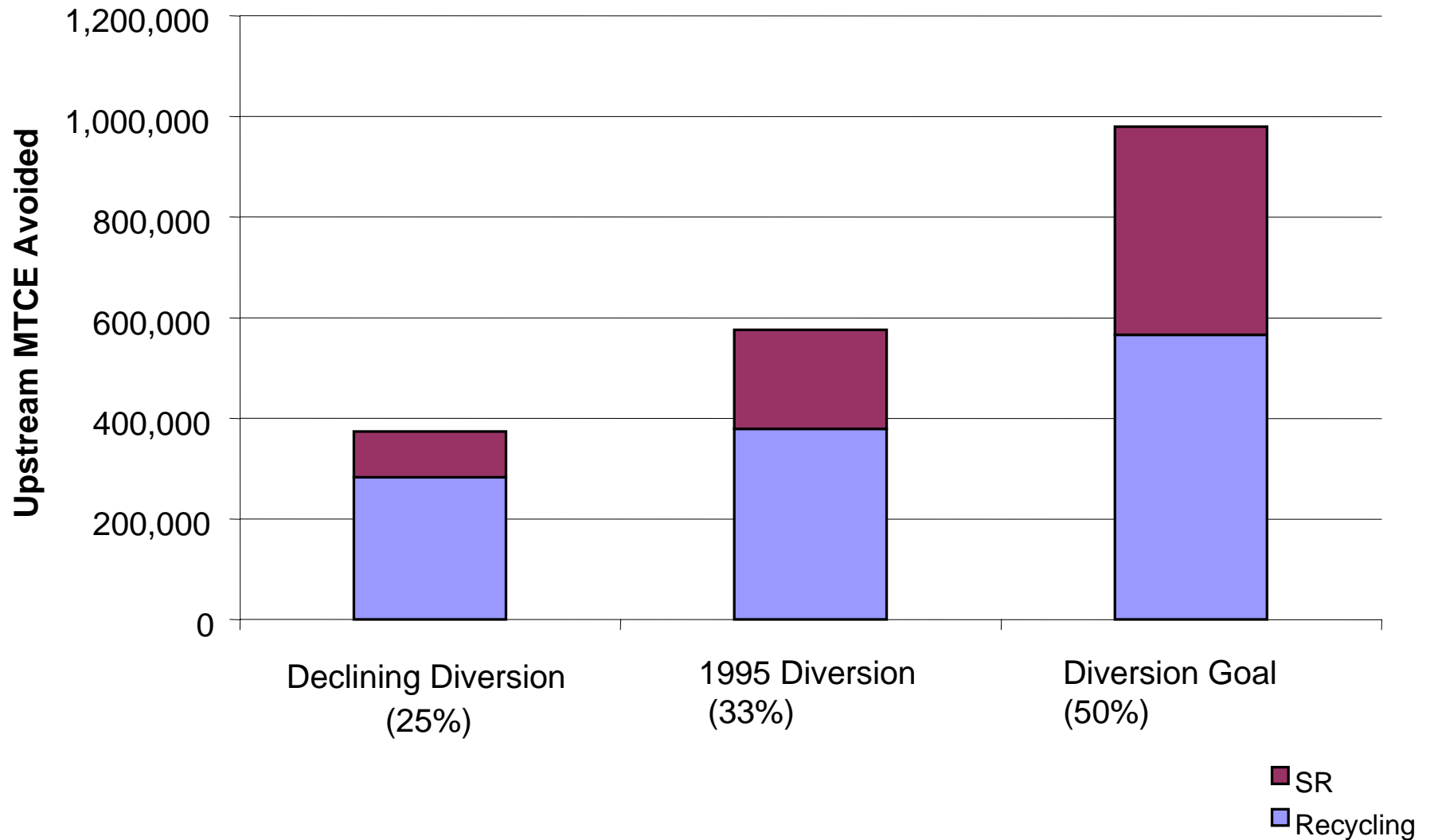
2000-2003 GHG Reductions Progress

Waste Management Activity	2000	2001	2002	2003
Waste Prevention	78	1,029	1,373	1,800
Recycling	588	4,088	896	5,076
TOTAL	1,208	5,117	2,269	6,876

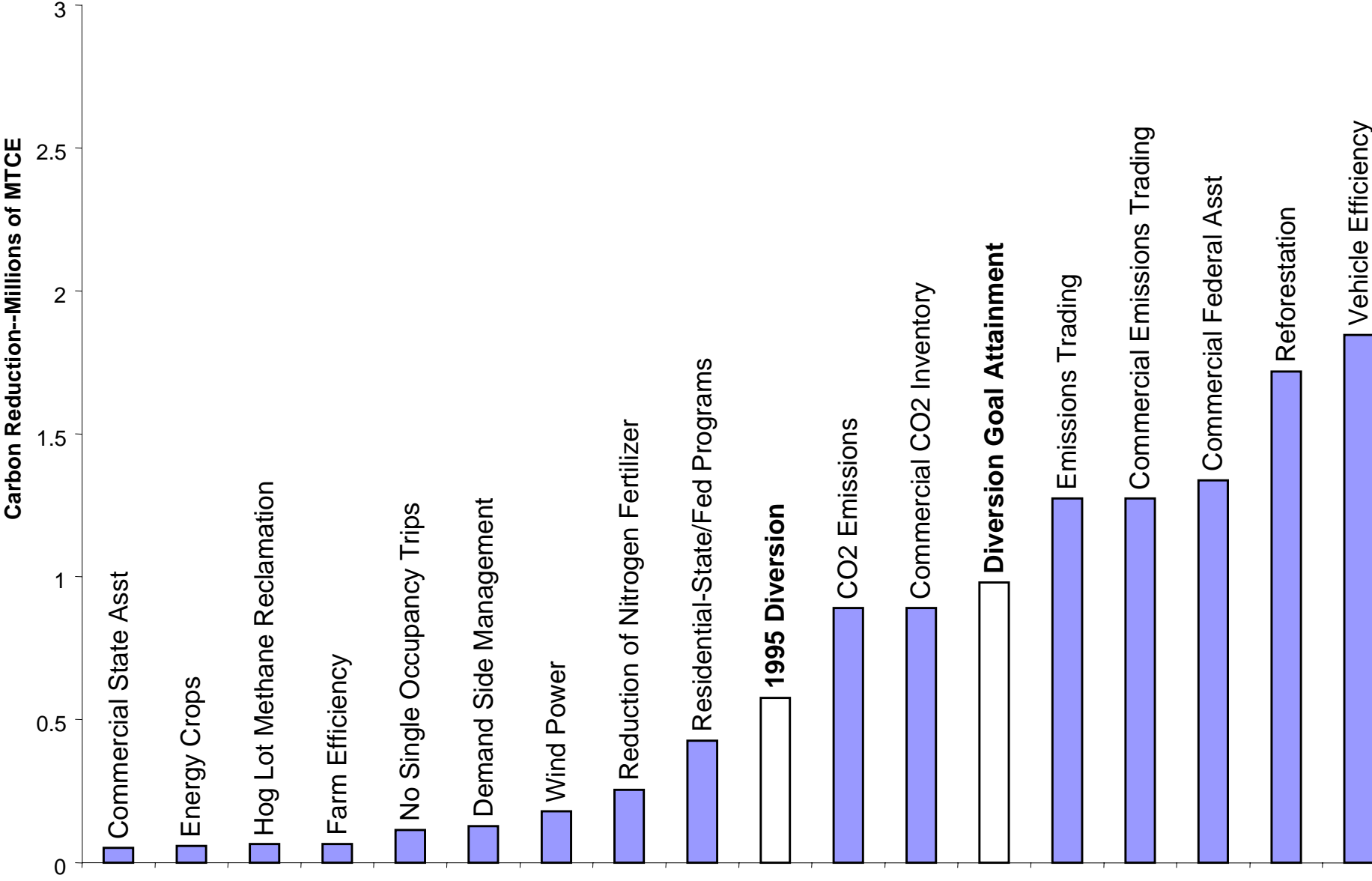
GHG reduction program (2000-2003)



Avoided GHG Emissions from Iowa's SR and Recycling Programs



Waste Diversion Compared To Other Iowa GHG Options



Cities Contribute to the Problem and Can Create the Solutions

Local governments influence all major
sources of global warming pollution



Energy



Transportation



Solid Waste

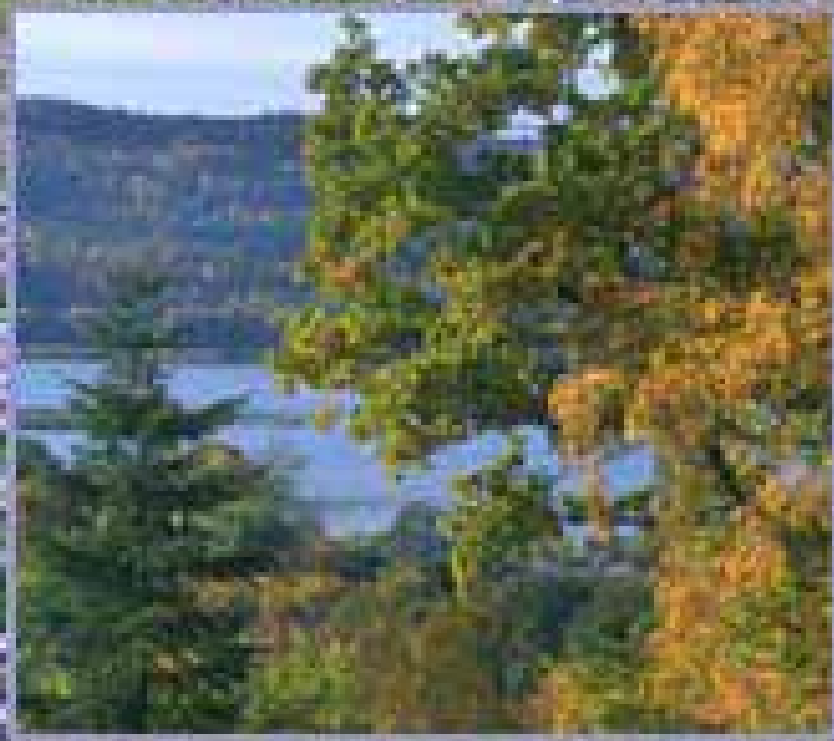
KCMO Climate Protection Plan Workgroup

GREENHOUSE GAS REDUCTIONS	MUNICIPAL	COMMUNITY
ENERGY		
5% renewable energy for city facilities	13,450	13,450
Reduce municipal energy use by 10%	26,900	26,900
Collaborate with utilities on energy consv.		46,200
Expand Home Weatherization Program		2,900
Expand Million Lights Campaign		40,400
WASTE MANAGEMENT		
Internal Recycling	4,500	4,500
Increase residential recycling		66,000
Construction waste recycling		41,725
TRANSPORTATION		
Reduce City employee commutes by 10%	1,785	1,785
Reduce business commute 10 Million miles		5,290
Increase biodiesel, by 10 Million gallons		7,600

Agreement Passed Unanimously by the U.S. Conference of Mayors



US Mayors Climate Protection Agreement



As of May 23, 2007 **522 mayors** representing over **65 million Americans** have accepted the challenge

Climate Initiatives

- **Local Actions:**

- Burlington, VT – CAP - MSW reductions from city buildings = ~ 2000 MTCE
- Fort Collins, CO – City Council set a 50% diversion goal by 2010
- Portland, OR – CC Local Action Plan requires businesses to recycle 50% of wastes
- San Francisco, CA – CAP – Waste Diversion rate of 63% - w/ 1st curbside food scrap composting



Missouri Recycling Information Campaign

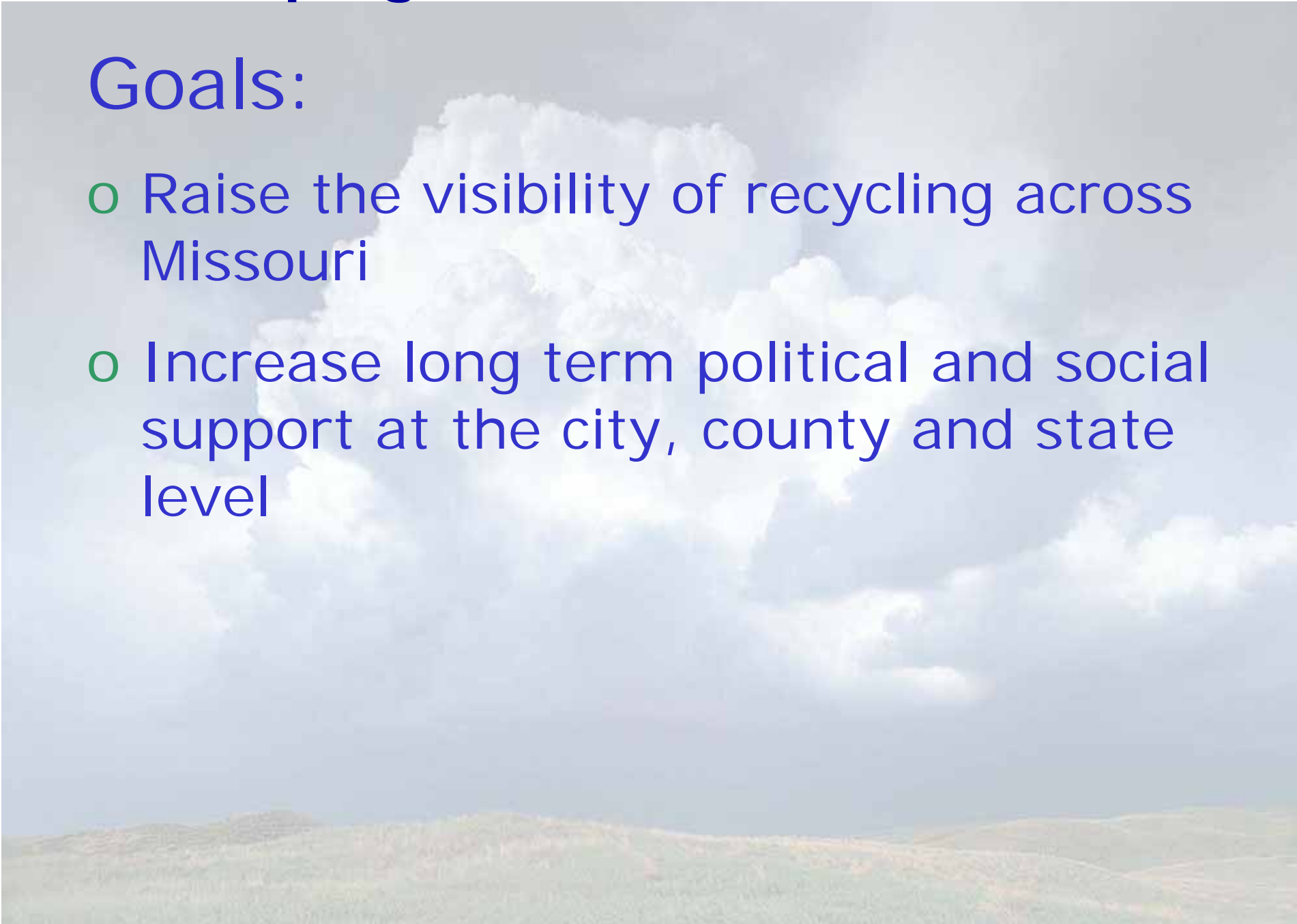
Key Messages:

- Recycling strengthens the environment through natural resource conservation, energy savings and greenhouse gas reduction
- Recycling strengthens the economy by creating jobs, using vendors and manufacturing products
- Recycling strengthens communities



Missouri Recycling Information Campaign

Goals:

- Raise the visibility of recycling across Missouri
 - Increase long term political and social support at the city, county and state level
- 



WasteWise Communities

GOALS

- Achieve the national 35% Recycling Goal
 - Promote Climate and Waste Connection
 - Build Partnerships
 - Enroll New Endorsers and Partners
- 



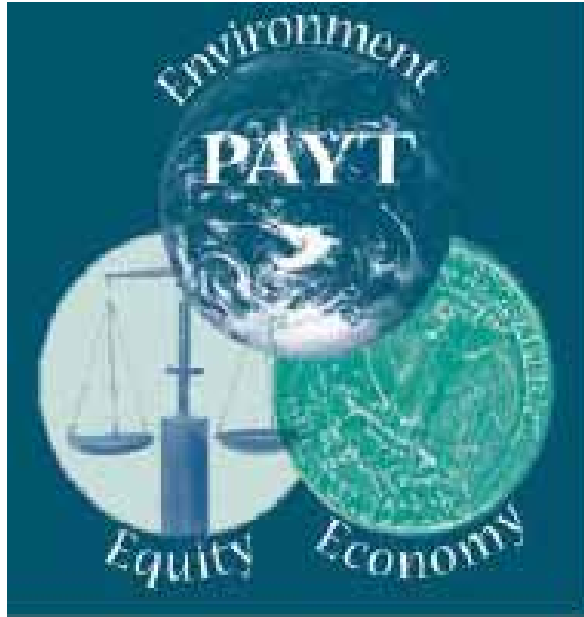
WasteWise Communities Umbrella

- o **RCC Goal:** Increase national recycling rate of MSW to **35%**.
- o To meet this goal, EPA is working with Partners & Stakeholders through existing and new projects.

PAYT



Pay-As-You-Throw (PAYT)



In PAYT cities...residents are charged for the collection of municipal solid waste—ordinary household trash—based on the amount they throw away.

This creates a direct economic incentive to recycle more and to generate less waste.



Duke University National Study

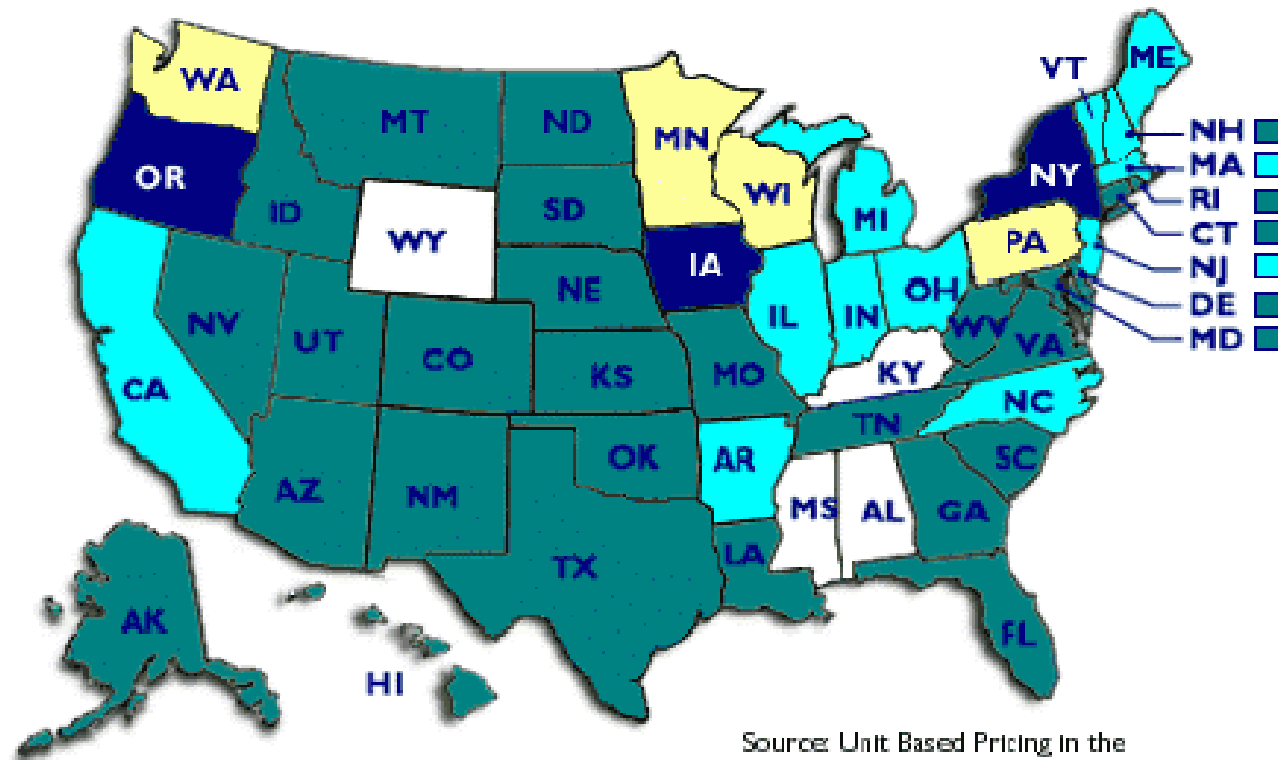


- 32 to 59% increase in Recycling
- 19% found slight increase in illegal dumping

This report is available online at
www.epa.gov/epaoswer/non-hw/payt/pdf/swlitrep.pdf

Successes—PAYT

More than 7,000 communities in the United States implemented PAYT programs



Source: Unit Based Pricing in the United States: A Tally of Communities, M.L. Miranda, Duke University, 1999.

Number of Communities with Pay-As-You-Throw



0



1-25



26-100




101-200



200+



PAYT Web Site

- www.EPA.Gov/PAYT
 - Studies, reports, and articles
 - *PAYTBulletin*
 - *Video*
 - *Toolkit*
 - *Presentation*
 - *Fact sheets, success stories, lessons learned*
- 



WasteWise Endorser Program

What Is the WasteWise Endorser Program?

- WasteWise endorsers help spread the WasteWise message

Why Should You Become An Endorser?

- Demonstrate environmental leadership
- EPA Recognizes endorsers in publications and press releases, and the Endorser of the Year Awards Program.

What Does A WasteWise Endorser Do?

- Recruit organizations to become WasteWise partners.
- Provide members, constituents, and customers with ongoing promotional or technical information.
- Endorsers design and implement efforts that work best for them.



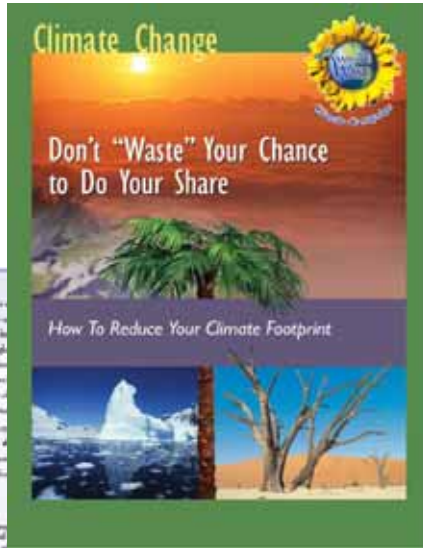
WasteWise Endorser Register On line

My organization commits to:

- Initiate a campaign to recruit my organization's member companies to become WasteWise partners. Within the next six months.
- Provide my organization's members with ongoing promotion of the WasteWise program.
- WWW.EPA.GOV/WasteWise

Tools & Resources

www.EPA.GOV/WasteWise



2005 CLIMATE PROFILE

Every year, WasteWise partners work to reduce their... through waste prevention and recycling initiatives... for the environment and for their companies'... In... these activities provide, including producer gas (PGR) and... U.S. Environmental Protection Agency's WasteWise Program... allows companies about the important link between climate... One of the Climate Campaign's main goals is to... Climate... ORCs are assessed at nearly every stage of a product's life... ing waste management. These companies choose to manage it... cost implications for ORC creation. Alternative waste man... such as waste prevention and recycling, can result in signific... ORC creation, as noted in the Climate Profile.

HOW TO USE THIS CLIMATE PROFILE
Individualized Climate Profiles are distributed annually to our partners to provide them with the means to study them, and allow them to compare their individual ORC reduction reduction... agency data provided in the Climate Profile can be used by the company in various ways, including:

- Learning Support**
 - Regulations
 - Project Status Reports
 - Market Targets
 - Substance/Recyclability Reports
- Accounting**
 - Employee Handbooks
 - Educational Presentations
 - Public Relations
- Accounting the Climate Profile**
 - Company Event Displays
 - SB Reports
 - High-Profile Communications
 - Press Releases
 - Management/Annual Reports
 - Statements

www.epa.gov/wastewise/climate



EPA Full Cost Accounting for Municipal Solid Waste Management: A Handbook

United States Environmental Protection Agency
Solid Waste and Emergency Response
550091
EPA 553-B-95-001
September 1997
166 (over 1000 pp)

U.S. Environmental Protection Agency
Global Warming - Waste
WARM Online
EPA created WARM to help solid waste planners and operators track and ultimately limit greenhouse gas emitting activities and energy usage from waste-related waste management practices.

Use this worksheet to describe the location and alternative MSW management scenarios that you used to compare. Please follow the steps below to enter your material storage information in the input boxes in the table, and select appropriate landfill site waste treatment characteristics.

Step 1. Describe Scenario
Please describe your current or forecasted waste management scenario by entering the tons of each material type that is generated and disposed.

Material	Tons Generated	Tons Recycled	Tons Landfilled	Tons Composted	Tons Incinerated
Household Garbage	100	0	90	0	10
Street Cans	100	0	90	0	10
Other	100	0	90	0	10
LDPE	100	0	90	0	10
LDPE	100	0	90	0	10

Amortization
Cost
Depreciation
Overhead

WasteWise Update
RESOURCE MANAGEMENT: STRATEGIC PARTNERSHIPS FOR RESOURCE EFFICIENCY



Climate Change and Waste

www.EPA.GOV/mswclimate/folder.htm

- Cover Up with Compost
- Cutting-Edge Software to Cut Emissions
- Getting on the Books with Waste Reduction
- Moving Targets Pay-As-You-Throw: A Cooling Effect on Climate Change
- Recycling the Hard Stuff
- Turning Garbage into Gold
- WasteWise: Climate Benefits from Reducing Waste

A Collection of Resources on CD-ROM

www.EPA.GOV/epaoswer/osw/cdoswpub.htm

- Buy Recycled, Composting, Climate Change & Waste,
- Characterization of Solid Waste,
- Full Cost Accounting, Pay-As-You-Throw
- Home Health Care; Household Hazardous Waste
- School Education K-12,
- Product Stewardship/ Life Cycle Management
- Resource Conservation Challenge
- Reuse and Recycling
- Source Reduction/ Pollution Prevention/Waste Minimization
- 1-800-490-9198

(Pub.No. EPA 530-C-05-001)

Join us...Act Now!



WASTE WISE COMMUNITIES

(800) EPA-WISE (372-9473)

**David Flora
EPA Region 7
Flora.David@EPA.gov
913-551-7523**

