

# Solid Waste Programs Built/Unbuilt Committee

# Background

- Solid Waste Management is an Enterprise Utility
- Exclusive rights to collect
  - Garbage
  - Residential recycling
- Competitive market for commercial recyclables
- Utility is funded by rates/fees

# Residential Rates

- 2007 Rates –Charged to garbage cans only
  - 20 gallon cart           \$22.50
  - 30 gallon cart           \$30.05
  - 60 gallon cart           \$42.05
  - 90 gallon cart           \$55.70
- Covers all services
- No extra charges for container rents or other services

# Residential Services

## ■ Includes:

- Curbside Collection of garbage, recycling & yard waste
- 2 Call2Hauls (Bulky waste pickup or disposal)
- Reduced fee dumping for self haul of garbage
- Unlimited yard waste recycling for self haul
- Other related programs such as Household Hazardous Waste and waste reduction programs

# Commercial Services

- Much wider variety of garbage services
  - Barrels
  - 300 gallon barrels
  - Front Load
  - Boxes and compactors
- Alacarte pricing for garbage and recycling compared to residential services
- No “extra” services such as Call2Haul or reduced fee disposal

# Commercial Recycling

- Solid Waste Management is not exclusive provider of recycling service for Tacoma Commercial entities
- Currently serve approximately 40% of our commercial customers with some type of recycling service
- Estimate approximately 3,000 – 4,000 tons are recycled through our commercial recycling efforts (City only recycling)

# Current Commercial Recycling Programs

- Commingled carts & curbside services
- Cardboard front load boxes
- Source separated collection
- Produce

# Waste Disposal

- Currently all landfilled
- Long Hauled to 304<sup>th</sup> landfill in So. Pierce County
- Lined landfill with gas control
- No gas to energy yet
- Significant hauling operation and GHG emissions

# Planned Activities – Commercial Recycling

- Audits of all commercial customers
- Purpose of the audits
  - Identify issues such as service levels, safety and route efficiency opportunities
  - Identify customers that can benefit from recycling
  - Education on recycling and other services that benefit the customer and Solid Waste

# Facts and Figures

- Garbage disposed ~ 200,000 tons/year
- Tons Diverted ~ 54,000 tons tons/year
- Recycling Rates
  - Residential 38-40%
  - Commercial ~ 3%
  - Overall ~ 20%
- Tacoma only data
  - When outside recycling and diversion tonnages are included, rates are much higher

# Recycling

- Tonnages Recycled by category
  - Commingled (paper, glass, etc.) 18,000 tpy
    - Both residential and commercial
  - Yard waste & organics ~30,000 tpy
    - Majority residential
  - Metal ~2,000 tpy
  - Misc. Others
    - Oil, HHW, small volume materials

# More Facts and Figures

- Between 1990-2007
  - Disposal tonnage relatively flat to slightly decreasing
  - Recycling increased by 150%
  - Population increased by ~10%
- Looks good..... But
  - Loss of major commercial tonnages – Nalley's, Kaiser, other industrial plants
  - “Sham” recycling issue
- Residential Waste per capita increasing

# Near Term Upgrades – Commercial Recycling

- Expansion of:
  - Commingled curbside service (target multi-family, schools and medium sized commercial)
  - Commingled cart service (target smaller commercial and small multi family customers)
- Expect expansions to start in 2008

# Near Term Goals – Commercial Recycling

- Difficult to pinpoint how much improvement can be achieved prior to audit data
- By end of 2008
  - Estimate a 50% increase in participation of commercial recycling customers
  - Doubling of tonnage diverted for “traditional” recyclable material

# Long Term Improvements – Commercial Recycling

- Commercial Food Waste
  - 15,000 -30,000 tons in Commercial stream
- Possible use of digesters at Central Treatment Plant
- Challenges
  - Collection logistics
  - Costs for transfer and collection
  - Space at businesses
  - Contamination and business practices
- Possible 7,000-10,000 tons diverted after program is implemented

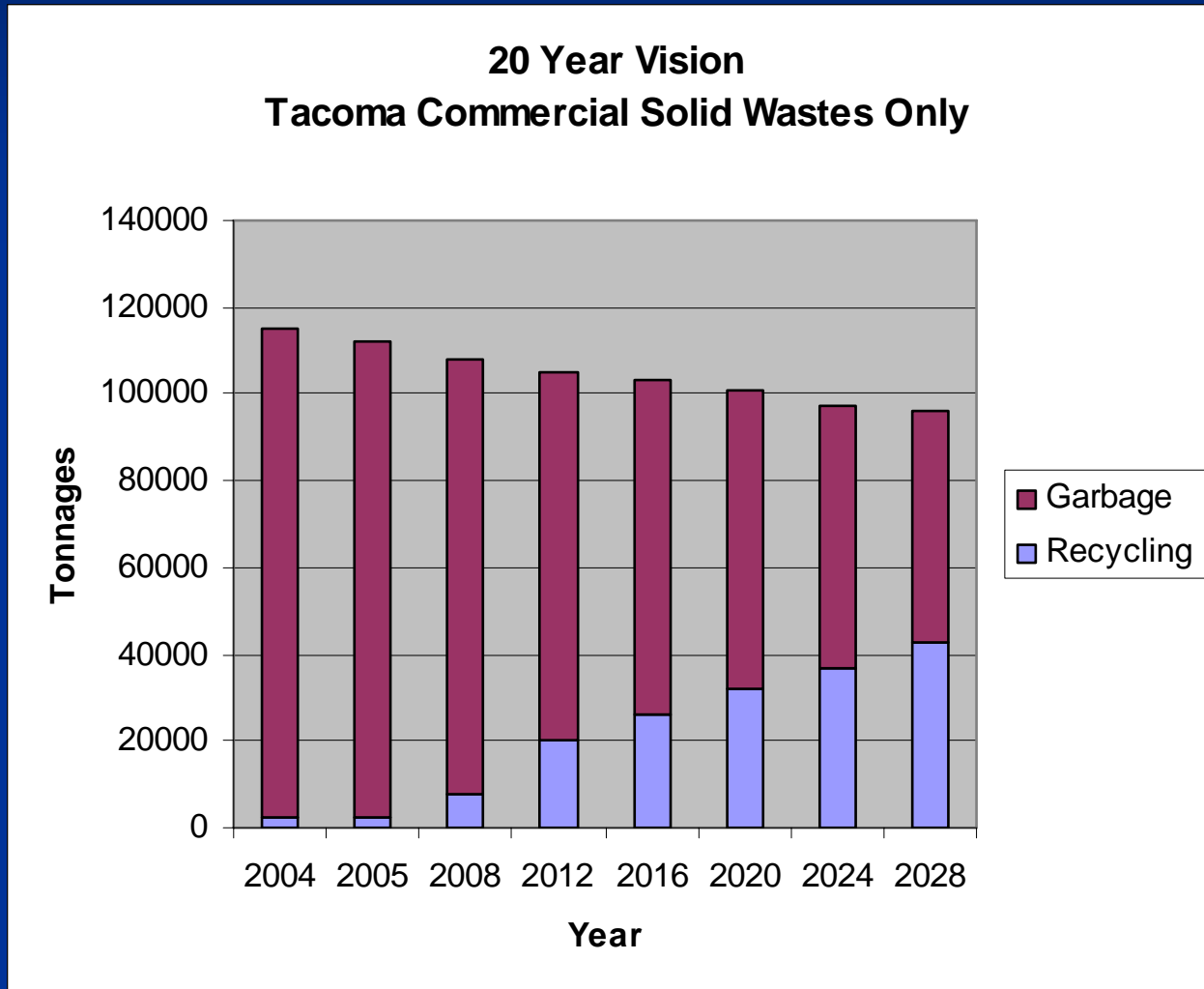
# Residential Recycling Improvements

- Evaluating need for waste audit
- Identify if there are barriers to recycling in low participation areas
- Food Waste
  - Comprehensive evaluation of programs
  - Major changes after a thorough review???
- Material bans??

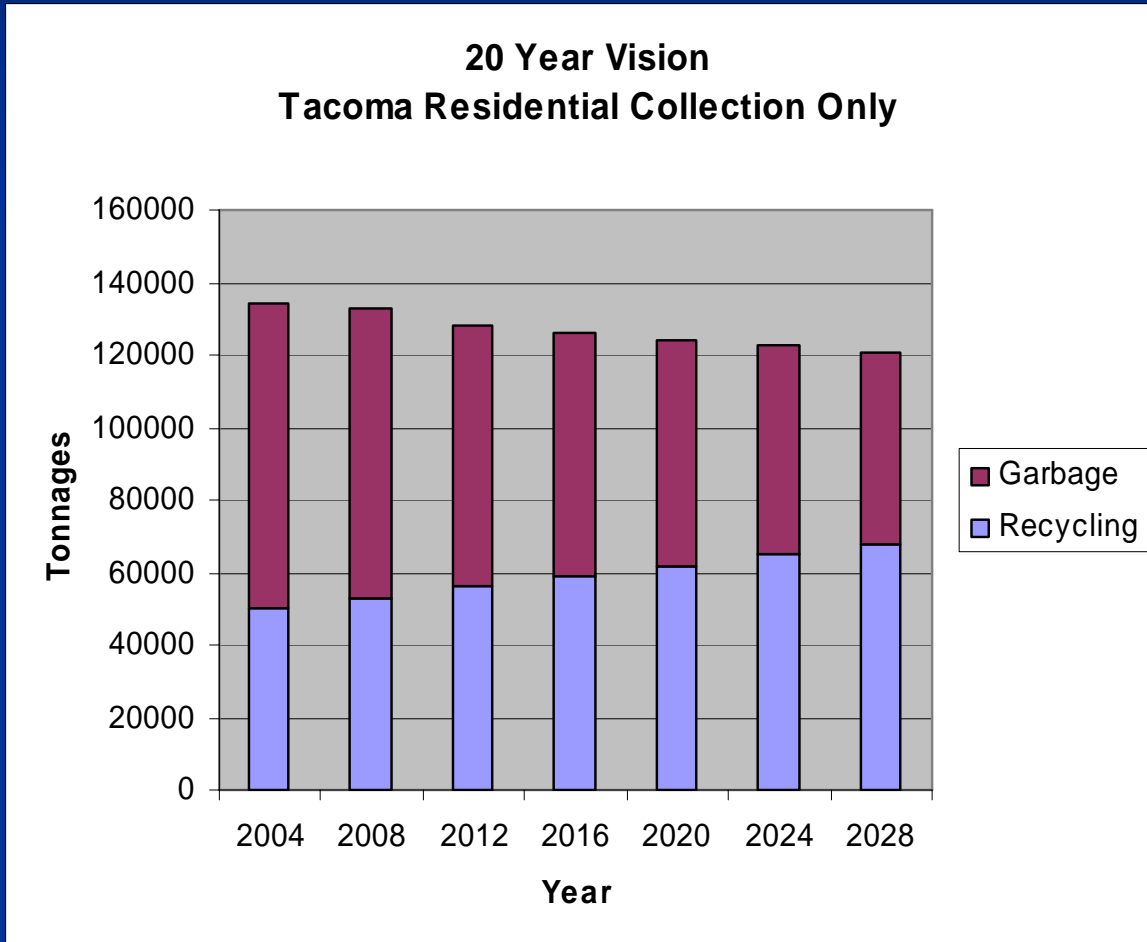
# Performance Efficiency Improvements

- Residential Curbside Recycling Collection methods
  - Switch to automated collection
  - Glass or no glass
- Two side of truck collection
  - Potential route efficiency improvements
- Improvements of new trucks and vehicle emissions

# Long Term Goals



# Vision for the future



# Closing Thoughts

- To achieve vision, we need to
  - Increase recycling
  - REDUCE WASTE
- Waste reduction has been difficult
- Product Stewardship

# Waste Reduction Programs



- Reduced Municipal Building garbage by 25%
- Increased purchase of recycled content products 10%
- Currently in all of the General Government buildings
- Will roll out in Public Utilities by the end of the month
- <http://cityweb/home/>

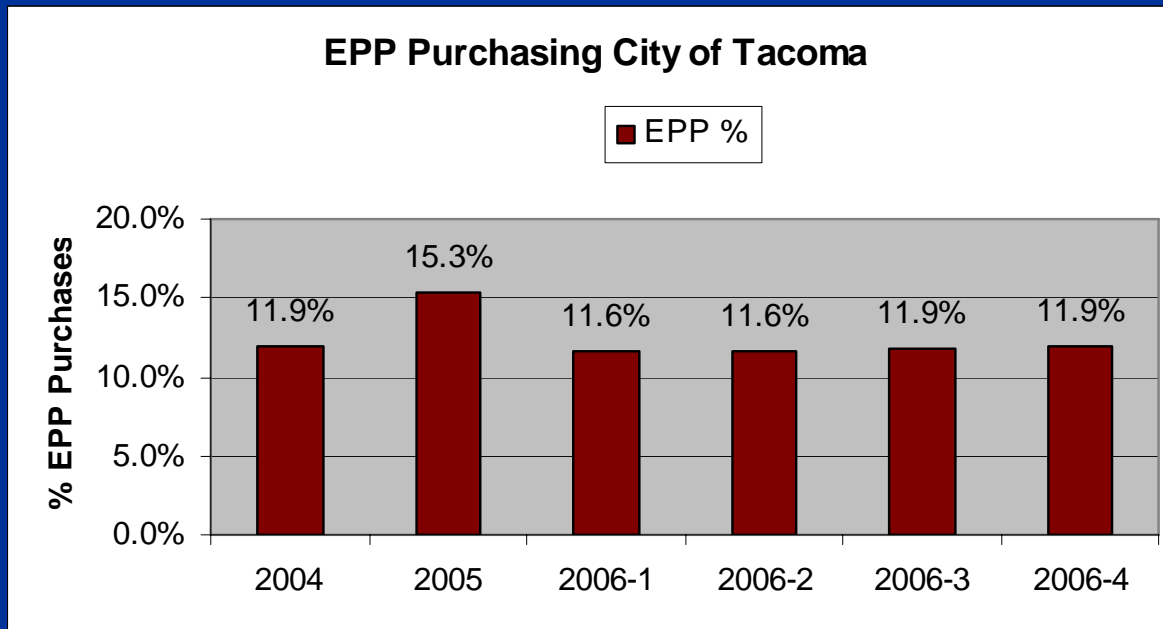
# Waste Reduction Programs



- Free posting of materials \$99 or less
  - Since the beginning in 2003:
    - Diverted 362 tons of material from disposal
    - Over 6,000 successful transactions
    - Saved residents over \$45,000 in disposal costs
    - Average over 1200 site visits per day
- <http://www.2good2toss.com/pierce/?>

# Environmentally Preferable Purchasing

- Draft City Policy
- Part of Tacoma Recycles @ Work



# Organics Diversion

- Northwest Natural Yard Days
- Online compost and mower sale
- Compost Facility Feasibility Study
- Natural Lawn Care
  - Potential partnership with Health, Water, Sewer and Surface Water

# Green Building

- EnviroHouse
- LEED Training
  - 2 LEED Certified staff at the City
- Draft Policy
- Urban Waters
- Solid Waste Building
- MBA Built Green Program
- Cascadia Green Building Council

# Community Outreach

- Resource Conservation Stewards
- Green Schools Program
  - Pilot with Washington-Hoyt elementary 2007-08
- Community Relations Office
  - EnviroTalk
  - Media Contact
  - Graphics and PR Support

# Professional Affiliations

- Northwest Product Stewardship Council (NWPSC)
- US Green Building Council (USGBC)
- Solid Waste Association of North America (SWANA)
- Washington State Recycling Association (WSRA)
- ICLEI-Cities for Sustainability
  - Supports US Mayor's Climate Change Initiative
- National Hazardous Materials Management Association (NAHMA)
- Puget Sound Clean Air Agency Citizen's Advisory Board

# Climate Change and Product Stewardship and Green Building

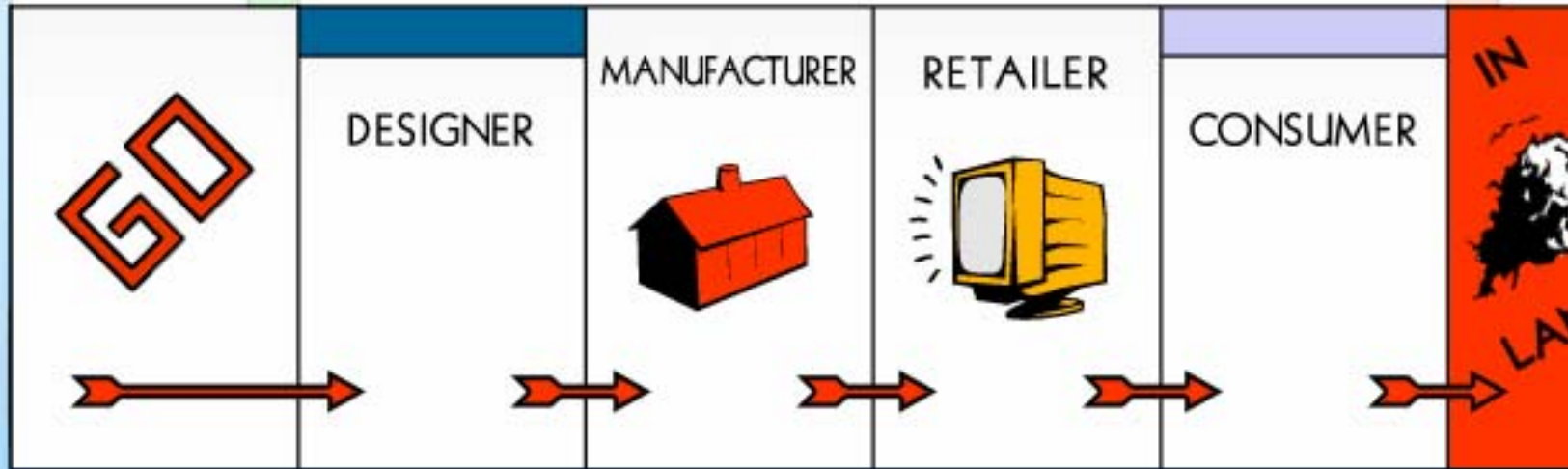
Is there a connection?

# What is Product Stewardship

- Product Stewardship is an environmental management strategy that says whoever designs, produces, sells, or uses a product takes responsibility for minimizing the product's environmental impact
- Northwest Product Stewardship Council
  - Consortium of local governments promoting PS
  - Successful with our E-Waste Bill
  - Beverage Container Stakeholder Group
  - Vancouver BC Tour October 2<sup>nd</sup>
- Draft City Policy

# Product Management – The Old Edition

## The Linear Lifecycle of Consumer Goods

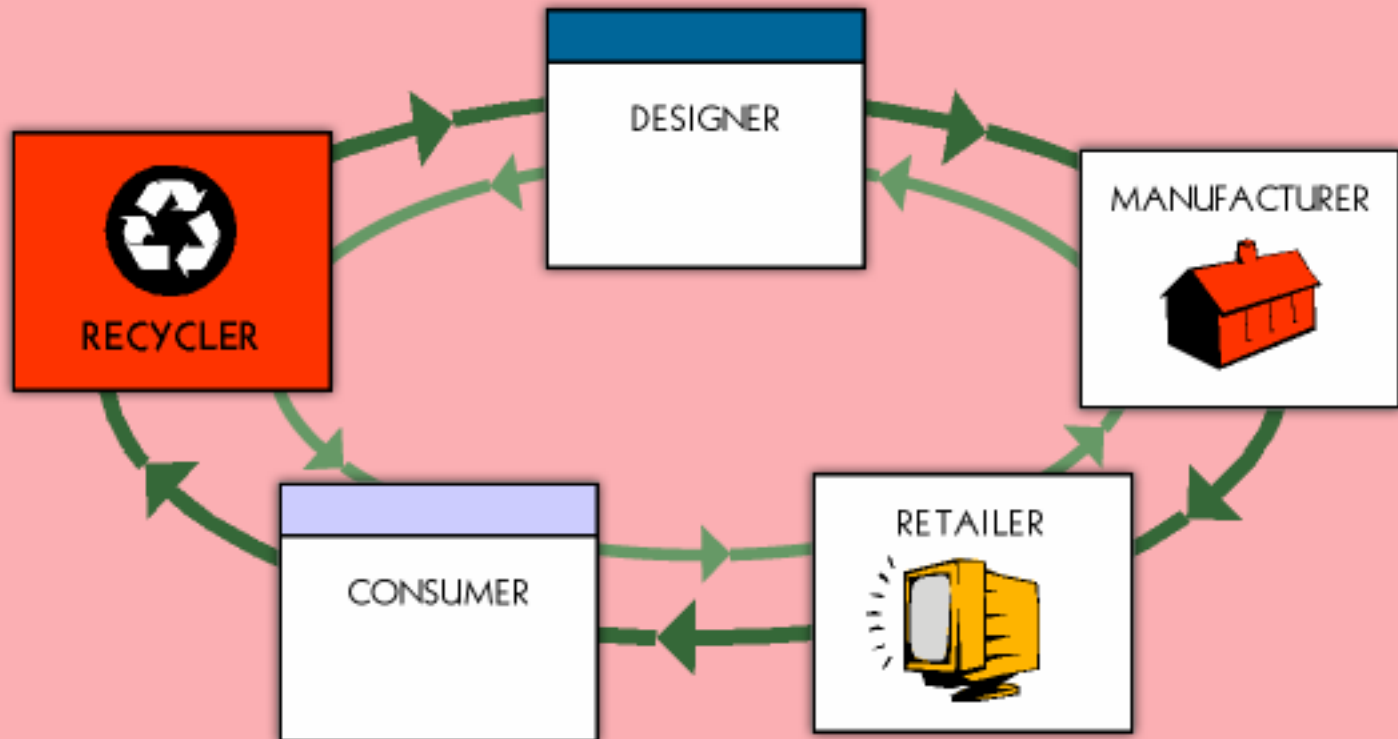




# PRODUCT STEWARDSHIP

THE NEW EDITION

*The Closed Loop Lifecycle of Consumer Goods*





# PRODUCT STEWARDSHIP

## THE OLD EDITION

- *Local governments manage product end-of-life.*
- *Rate payers and local government cover product end-of-life costs.*

## THE NEW EDITION

- *Manufacturers responsible for product take-back.*
- *Costs of product end-of-life are included in price.*

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DESIGNER

MANUFACTURER



RETAILER



CONSUMER



# PRODUCT STEWARDSHIP

## THE OLD EDITION

- *No incentives to alter current design.*
- *Continuing toxic legacy.*

## THE NEW EDITION

- *Incentives to redesign products to make them “greener.”*
- *Upstream thinking.*

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DESIGNER

MANUFACTURER



RETAILER



CONSUMER

# Northwest Product Stewardship Council

- The mission of the Council is to integrate product stewardship principles into the policy and economic structures of the Pacific Northwest
- Currently 13 local, state and federal agencies in Washington and Oregon are supporting members of the Council

# Northwest Product Stewardship Council

- Recent success in establishing the Washington E-Waste legislation
- Manufacturers of TV's and computers will be required to finance a collection, transfer and recycling system by 2009
- Cost will be included in the price of the product

# So, What's the Connection?

- Who pays for the carbon dioxide and sulfur dioxide that leaves our tailpipes and smoke stacks?
- Who pays for the methane that leaves our farms and landfills?
- Who pays for the nitrous oxides that enter our atmosphere from fertilizers?

# So, What's the Connection?

- These pollutants are causing global warming
- As long as these pollutants are “free” there is no incentive to change things
- In our economic system, we rely on prices to tell us everything about a product.
- If prices don't include environmental impacts, they don't tell the “rest of the story.”

# What Is Green Building?

- **Location and Linkages**
- **Minimize Site Disturbances**
- **Water and Energy Conservation**
- **Use of Recycled Content or Used Building Materials**
- **Improved Indoor Air Quality**
- **Household Education**

# Environmental Impact of Buildings\*

- 70 % of total U.S. electricity consumption 1
- 36% of total U.S. primary energy use 2
- 38% of total U.S. greenhouse gas emissions 3
- 136 million tons of construction & demolition waste in the U.S. (approx. 2.8 lbs/person/day) 4
- 12% of potable water in the U.S. 5
- 40% (3 billion tons annually) of raw materials use globally 6

\* Commercial and residential

# Buildings Account for 38% of CO<sub>2</sub> emissions in the United States

- The commercial and residential building sector accounts for 38% of carbon dioxide (CO<sub>2</sub>) emissions in the United States per year, more than any other sector.
- U.S. buildings alone are responsible for more CO<sub>2</sub> emissions annually than those of any other country except China.