FACT SHEETS
Compiled by University of Colorado interns, 2021. Jack DeBell Program Director. Submit improvements to debellP3@gmail.com

Paper Facts

* 1 ton of paper = 400 reams = 200,000 sheets1
* 1 tree makes 16.67 reams of copy paper or 8,333 sheets1
* 1 ream (500 sheets) uses 6% of a tree (and those add up quickly)1

Printing Facts

* Average cost of a wasted page $0.062
* Average employee prints 6 wasted pages per day, that's 1,410 wasted pages per year!3
* The average U.S. office worker prints 10,000 pages per year3
* While 3 out of 4 office workers print from the Internet, 90% of people with a printer at home print Internet content4
* 56% of people ages 45-54 print pages from the Internet for their archives, and only 33% of people ages 18-34 do the same4

Consumption

* In 2004 the United States used 8 million tons of office paper (3.2 billion reams). That's the equivalent of 178 million trees!5
* The U.S. is by far the world's largest producer and consumer of paper. Per capita U.S. paper consumption is over six times greater than the world average.6
* In the United States, we use enough office paper each year to build a 10-foot-high wall that's 6,815 miles long. That's more than the distance from New York to Tokyo!7

Growth

* Global paper products consumption has tripled over the past three decades and is expected to grow by half again before 2010.6

Energy

* The U.S. pulp and paper industry is the second largest consumer of energy and uses more water to produce a ton of product than any other industry.8
* Production of 1 ton of copy paper uses 11,134 kWh (same amount of energy used by an avg household in 10 months)9

Water

* Making one single sheet of copy paper can use over 13oz. of water– more than a typical soda can.10
* Production of 1 ton of copy paper produces 19,075 gallons of waste water9

Waste

* One ton of paper requires the use of 98 tons of various resources.11
* In 2003, paper and paperboard accounted for 35 percent of the total materials discarded in the United States.12
* Production of 1 ton of copy paper produces 2,278 lb of solid waste9

CO2

* CO2 prevented if all Fortune 500 companies use GP= 6,311,610 tons13
* One hot-air balloon of 10m diameter contains about a ton of hot air - imagine seeing 6,311,610 hot-air balloons floating over the US - that's a lot of balloons!13
* Production of 1 ton of copy paper produces 5,690 lb. of greenhouse gases (the equivalent of 6 months of car exhaust).9
* Dumping paper in landfill adds methane to the atmosphere as it decomposes, with 20 times the global warming potential of carbon dioxide.14

Forests

* In the U.S. we have lost 95 percent of our old growth forests.15

* Old growth forests make up 16% of the virgin tree fiber used each year to make paper products. 16
* 4281 acres of rainforest are lost every hour worldwide 17
* It takes 3 tons of wood to produce 1 ton of copy paper.9

Ink

* If you were to fill up the tank of your car with Hewlett-Packard or Lexmark ink, it would cost $100,00018
* If you filled an Olympic-size swimming pool with ink it would cost $5.9 billion.19

Tree Facts

* A single mature tree can release enough oxygen back into the atmosphere to support 2 human beings.20
* Each person in the U.S. generates approximately 2.3 tons of CO2 each year.21
* If every American family planted just one tree, the amount of CO2 in the atmosphere would be reduced by one billion lbs annually. This is almost 5% of the amount that human activity pumps into the atmosphere each year.22
* According to the USDA Forest Service, a tree generates $31,250 worth of oxygen, provides $62,000 worth of air pollution control, recycles $37,500 worth of water, and controls $31,250 worth of soil erosion, over a 50-year life span. 22

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For more detailed information on the environmental impact of paper use and the alternatives check out this cool paper calculator created by Environmental Defense at papercalculator.org

GreenPrint’s Impact

* A Fortune 500 company using GreenPrint would save over $2 million, 4000 trees and prevent 12,623 tons of CO2 emissions each year.
* Over $6 billion a year would be saved if all US households with a computer used GreenPrint.
* CO2 emissions would be reduced by over 117 million tons if all new computers used GreenPrint. That's the equivalent of removing 23 million cars from the road for an entire year.
* 2 million trees would be saved every year if all the Fortune 500 used GreenPrint.
* Over 36 million trees would be saved every year if all new computers sold in 2006 used GreenPrint.

WASTE

In 2006, US residents, businesses, and institutions produced more than 251 million tons of MSW, which is approximately 4.6 pounds of waste per person per day.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

The item most frequently encountered in MSW landfills is plain old paper—on average, it accounts for more than 40 percent of a landfill's contents. This proportion has held steady for decades and in some landfills has actually risen. Newspapers alone can take up as much as 13 percent of the space in US landfills.

EPA http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Solid Waste Hierarchy
EPA has ranked the most environmentally sound strategies for MSW. Source reduction (including reuse) is the most preferred method, followed by recycling and composting, and, lastly, disposal in combustion facilities and landfills.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

Currently, in the United States, 32.5 percent is recovered and recycled or composted, 12.5 percent is burned at combustion facilities, and the remaining 55 percent is disposed of in landfills.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

Landfills
The number of landfills in the United States is steadily decreasing—from 8,000 in 1988 to 1,754 in 2006. The capacity, however, has remained relatively constant. New landfills are much larger than in the past.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm

Organic materials, including paper, do not easily biodegrade once they are disposed of in a landfill. Paper is many times more resistant to deterioration when compacted in a landfill than when it is in open contact with the atmosphere. Research by William Rathje, who runs the Garbage Project , has shown that, when excavated from a landfill, newspapers from the 1960s can be intact and readable.
EPA http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Diversion from Landfills
In 1999, recycling and composting activities prevented about 64 million tons of material from ending up in landfills and incinerators. Today, this country recycles 32.5 percent of its waste, a rate that has almost doubled during the past 15 years.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/recycle.htm

Twenty years ago, only one curbside recycling program existed in the United States, which collected several materials at the curb. By 2006,

about 8,660 curbside programs had sprouted up across the nation. As of 2005, about 500 materials recovery facilities had been established to process the collected materials.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/recycle.htm

Climate Change

What is the link between solid waste and greenhouse gas emissions?

The disposal of solid waste produces greenhouse gas emissions in a number of ways. First, the anaerobic decomposition of waste in landfills produces methane, a greenhouse gas 21 times more potent than carbon dioxide. Second, the incineration of waste produces carbon dioxide as a by-product. In addition, the transportation of waste to disposal sites produces greenhouse gas emissions from the combustion of the fuel used in the equipment. Finally, the disposal of materials indicates that they are being replaced by new products; this production often requires the use of fossil fuels to obtain raw materials and manufacture the items.

Reduce emissions from energy consumption. Recycling saves energy. Manufacturing goods from recycled materials typically requires less energy than producing goods from virgin materials. When people reuse goods or when products are made with less material, less energy is needed to extract, transport, and process raw materials and to manufacture products. When energy demand decreases, fewer fossil fuels are burned and less carbon dioxide is emitted into the atmosphere.

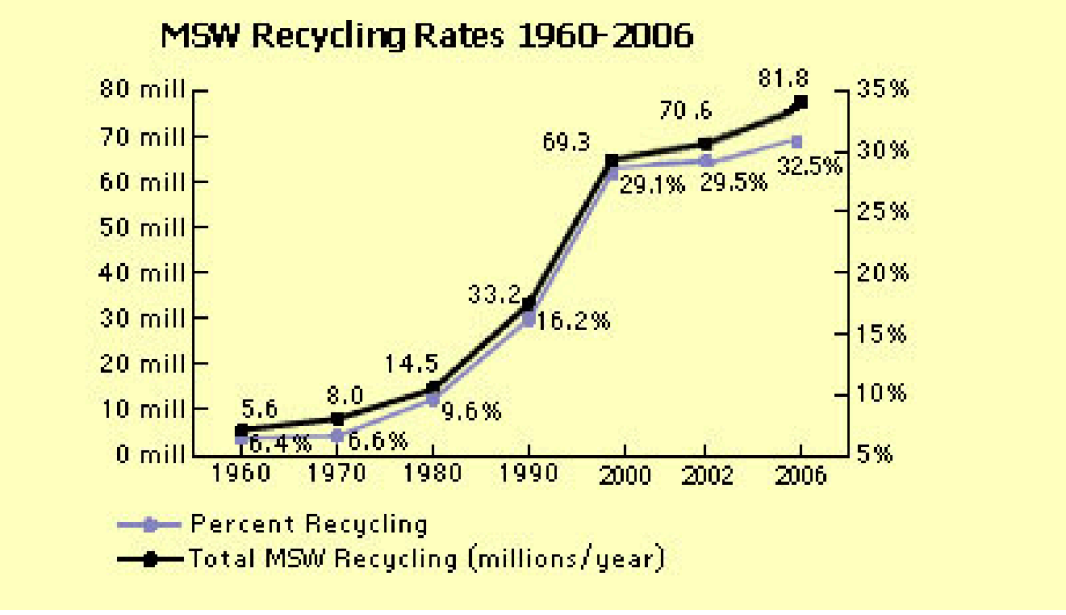
Reduce emissions from incinerators. Recycling and waste prevention divert materials from incinerators and thus reduce greenhouse gas emissions from waste combustion.

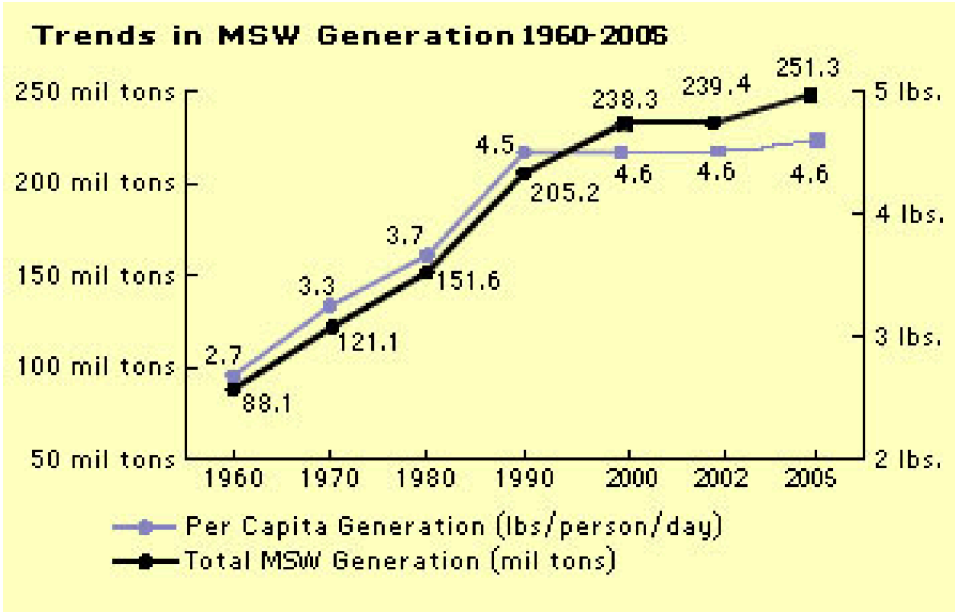
Reduce methane emissions from landfills. Waste prevention and recycling (including composting) divert organic wastes from landfills,

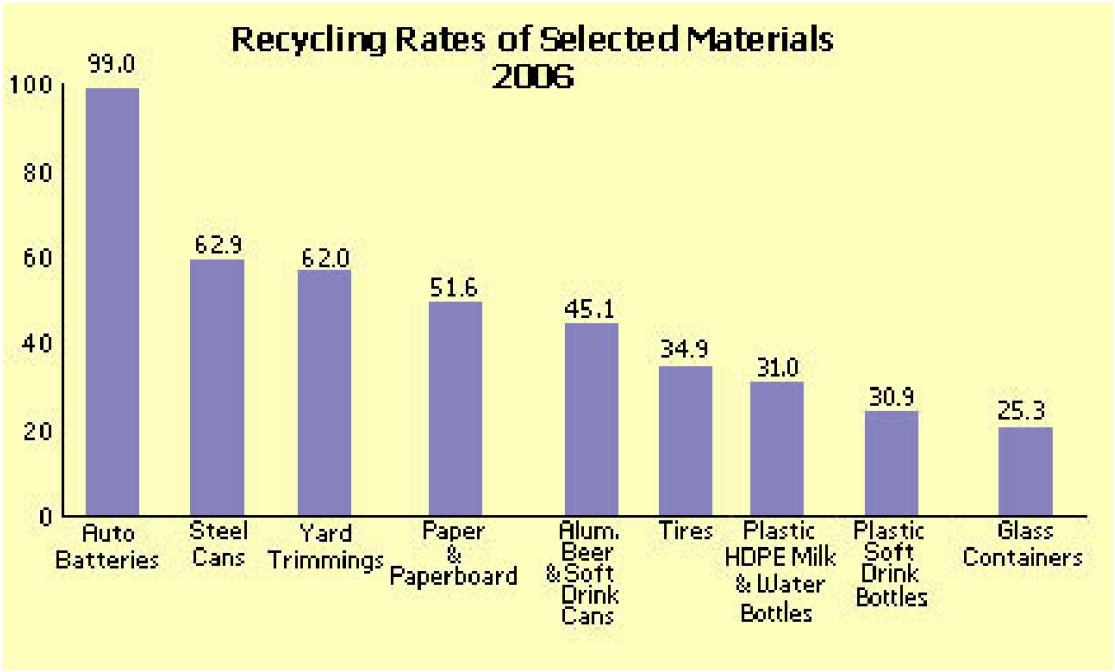
reducing the methane that would be released if these materials decomposed in a landfill.

Increase storage of carbon in forests. Trees absorb carbon dioxide from the atmosphere and store it in wood in a process called "carbon sequestration." Waste prevention and recycling paper products allows more trees to remain standing in the forest, where they can continue to remove carbon dioxide from the atmosphere.

Recycling also helps reduce greenhouse gas emissions that affect global climate. In 2006, the national recycling rate of 32.5 percent (82 million tons recycled) prevented the release of approximately 49.7 million metric tons of carbon into the air--roughly the amount emitted annually by 39 million cars, or 1,300 trillion BTUs, saving energy equivalent to 10 billion gallons of gasoline.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/facts.htm




Trends in MSW Generation 1960-2005
250 mil tons
200 mil tons
150 mil tons
100 mil tons
50 mil tons
5 lbs.
4 lbs.
3 lbs.
2 lbs.
1960
1970
1980
1990
2000
2002
2005
2.7
3.3
3.7
4.5
4.6
4.6
4.6
88.1
121.1
151.6
205.2
238.3
239.4
251.3
Per Capita Generation (lbs/person/day)
Total MSW Generation (mil tons)


Recycling Rates of Selected Materials
2006
100
80
60
40
20
0
99.0
62.9
62.0
51.6
45.1
34.9
31.0
30.9
25.3
Auto Batteries
Steel Cans
Yard Trimmings
Paper & Paperboard
Alum. Beer & Soft Drink Cans
Tires
Plastic HDPE Milk & Water Bottles
Plastic Soft Drink Bottles
Glass Containers

In 2000, recycling resulted in an annual energy savings of at least 660 trillion BTUs, which equals the amount of energy used in 6 million households annually. In 2005, recycling is conservatively projected to save 900 trillion BTUs, equal to the annual energy use of 9 million households.
http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

economic impact of recycling
A report commissioned by the US EPA and released by the National Recycling Coalition at the end of 2001, offers perhaps the most compelling evidence of how and why recycling makes good economic sense. Simply put, recycling creates jobs and generates valuable revenue for the United States. According to The U.S. Recycling Economic Information Study, more than 56,000 recycling and reuse establishments in the United States employ approximately 1.1 million people, generate an annual payroll of $37 billion, and gross $236 billion in annual revenues. According to the report, the number of workers in the recycling industry is comparable to the automobile and truck manufacturing industry and is significantly larger than mining and waste management and disposal industries. In addition, wages for workers in the recycling industry are notably higher than the national average for all industries, according to the report.
EPA's Jobs Through Recycling
http://www.epa.gov/jtr/econ/rei-rw/rei-rw.htm

US recycling rates for commonly recycled consumer goods in 2006 are listed below:

* Newspapers: 87.9%
* Corrugated Cardboard Boxes: 72.0%
* Steel Cans: 62.9%
* Yard Trimmings: 62.0%
* Aluminum Beer and Soft Drink Cans: 45.1%
* Magazines: 40.5%
* Tires: 34.9%
* Plastic HDPE Milk and Water Bottles: 31.0%
* Plastic Soft Drink Bottles: 30.9%
* Glass Containers: 25.3%

EPA http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Aluminum

One of the most highly recycled products, aluminum cans are made into new cans in as little as 90 days after they are collected.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Recycling aluminum cans saves 95 percent of the energy required to make the same amount of aluminum from its virgin source, bauxite.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Steel

Many steel products manufactured in the United States contain a high percentage of recycled steel. Some are even made from 100 percent recycled steel.
EPA, http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm

Plastics

12 PET bottles yield enough fiber to make 1 extra-large t-shirt, 1 square foot of carpeting, or enough fi ll for 1ski jacket.
NAPCOR, http://www.napcor.com/

50% of all polyester carpet manufactured in the U.S. is made from recycled plastic bottles.
NAPCOR, http://www.napcor.com

Paper

Paper can endure the recycling process approximately 7 times before the fibers become too short.

Pacifc Materials Exchange, 2002

Composting

Soil Enrichment:

• Helps suppress plant diseases and pests.
• Increases soil nutrients and improves water retention/movement in sandy and clay soils.
• Reduces the need for fertilizer.

Pollution Remediation:

• Binds some heavy metals, preventing them from migrating to water resources.
• Degrades, and sometimes completely eliminates, some chemicals in contaminated soils.

Pollution Prevention:

• Prevents erosion and silting on embankments along creeks, lakes, and rivers.
• Prevents erosion and turf loss on roadsides, playing fi elds, and golf courses.