

Sustainability Facts and Statistics

Recycling

1. The 1st recycling program was introduced in NYC in the 1890s.
2. Recycling 1 ton of glass saves the equivalent of 10 gallons of oil.
3. The energy saved from recycling one glass bottle will light a 100-watt light bulb for four hours. - Lawrence Berkeley National Laboratory.
4. Americans consume an average of 2,200 standard two-ply napkins per year - or the equivalent of more than six napkins per day.
5. Americans throw away 2.5 million plastic bottles every hour. They take 400 to 1000 years to degrade.
6. Americans throw away 25,000,000,000 Styrofoam coffee cups every year.
7. About 80% of what Americans throw away is recyclable, yet the recycling rate is just 33%.
8. 25,000,000 – number of trees saved a year IF every American recycled just 1/10 of their newspapers.
9. The average American will throw 600 times their weight (90,000 lbs or 47.5 tons) in garbage over their lifetime!
10. It takes 75,000 trees to print a Sunday Edition of the New York Times.
11. About 1% of U.S. landfill space is full of disposable diapers, which take 500 years to decompose.
12. Americans represent only 5% of the world's population, but generate 30% of the world's garbage.
13. Every year, over 100 billion disposable, petroleum-based, plastic bags are consumed and thrown out in the US alone. Being nearly impossible to recycle, they needlessly consume resources; fill landfills; and escape so often that studies have found that plastic bags make up over 25% of our litter.
14. About 75% of water bottles that could be recycled end up in landfills.
15. A bottle of water may travel hundreds or even thousands of miles: from mine, to manufacturer, to distributor, to store, to your home, and finally to a recycling center or landfill.
16. Every individual in the United States produces an average of 4.3 lbs. of garbage every day
17. In 1993, for the first time in history, more paper was recovered for recycling in the United States than was land filled.
18. More than 100 billion pieces of junk mail are delivered in the United States each year, which comes out to 848 pieces per household. The production, distribution and disposal of all that junk mail creates over 51 million metric tons of greenhouse gases annually, the equivalent emissions of more than 9.3 million cars. ForestEthics, 2008
19. A typical family consumes 182 gallons of pop, 29 gallons of juice, 104 gallons of milk, and 26 gallons of bottled water a year
20. You can walk 1 mile along an average highway in the United States and see about 1,457 pieces of litter.
21. Biodegrading in a landfill takes:

- 90 years for an aluminum can
- 700 years for a plastic bottle
- 1 million years for a glass bottle

WATER

22. The world now lacks potable drinking water for 2 billion people and that number is increasing daily. Source: CSIRO
23. Less than 1% of the world's fresh water (or about 0.007% of all water on earth) is readily accessible for direct human use.
24. An average bath requires 37 gallons of water
25. You use about 5 gallons of water if you leave the water running while brushing your teeth.
26. Approximately 1 million miles of pipelines and aqueducts carry water in the U.S. & Canada. That's enough pipe to circle the earth 40 times
27. The average 5-minute shower takes 15-25 gallons of water--around 40 gallons are used in 10 minutes.

Energy

28. Home heating systems emit 1 billion tons of CO₂ per year in the United States. (from Ideal Bite Nov 26, 2007).
29. Turning down your thermostat by one degree can cut 8% off your fuel bill.
30. Insulating your attic reduces the amount of energy loss in most houses by up to 20%.
31. 16% — The average productivity gain companies experienced after moving into a green building, as measured by The Rocky Mountain Institute and USGBC.
32. In 2004, Americans saved about \$10 billion on their energy bills while reducing greenhouse gas emissions at a level equivalent to the output of 20 million cars, with the help of the ENERGY STAR program.
33. Office buildings use approximately 19 percent of all energy consumed in the United States.
34. \$20 billion – Amount of money that would be saved if the energy efficiency of commercial and industrial buildings improved by 10%
35. 1974- The first master's degree program in solar power application is established at ASU. The ASU Center for Environmental Studies was established at ASU during the same year. Source: ASU
36. Every year, more than \$13 billion worth of energy leaks from houses through small holes and cracks. That's more than \$150 per family!
37. According to the Internal Energy Agency, the world will invest some \$20 trillion in new energy research over the next 25 years in an attempt to slow the effects of global warming
38. A laptop is more environment friendly than a desktop. It consumes five times less electricity.
39. Global wind power capacity jumped 24 percent in 2005, to nearly 60,000 megawatts. The growth in wind power capacity was nearly four times the growth in nuclear power capacity.

40. 75% of China's energy production is from burning coal. China is set to overtake the US (at 21%) as the biggest producer of greenhouse gases by 2025 unless current trends are modified. Source: *World Wildlife Found.*
41. The old Romans were among the first people to develop modern drainage systems, roads and to use geothermal energy to heat households.
42. Biomass (wood) provided up to 90 percent of total world's energy requirements some 125 years ago.
43. A professor at Ohio State University invented the first geothermal heating system in 1948.
44. Your home can be a greater source of pollution than your car. In fact, about 17 percent of U.S. green house gas emissions are generated from the energy used in houses nationwide.

Transportation

45. According to the American Public Transportation Association (APTA), nearly 43% of America's energy resources are used for transportation.
46. Without public transport, U.S. gasoline consumption would increase by 1.4 billion gallons each year. Source: *Public Transportation and Petroleum Savings in the U.S.: Reducing Dependence on Oil.*
47. A CNG (Compressed natural gas) vehicle is 95% cleaner than a gasoline-powered vehicle
48. Avoiding just 10 miles of driving every week would eliminate about 500 pounds of carbon dioxide emissions a year!
49. A single quart of motor oil, if disposed of improperly, can contaminate up to 2,000,000 gallons of fresh water
50. Crawling traffic contributes eight times as much air pollution as traffic moving at regular highway speed.
51. If every car carried one more passenger during its daily commute, 32 million gallons of gasoline would be saved each day. Source: Natural Resources Defense Council
52. There are about 500 million cars on the planet, and by 2030, it is expected to double to 1 billion cars ... It is believed that current fuel supplies peaked in 2006.
53. Bio-fuel is becoming more commonly used as vehicle fuel; it does roughly represent 2 percent of total fuel consumption, and is growing fast.
54. Rail has the highest fuel efficiency in terms of petroleum use.
55. In 1998, only 7.5 percent of our nation's energy came from renewable resources, even though the amount of renewable energy available was more than 250 times U.S. energy consumption
56. The first U.S. hydroelectric power plant opened on the Fox River near Appleton, Wisconsin, on September 30, 1882.
57. Hydro power currently provides about 10 percent of the electricity in the United States.
58. More than 10,000 homes in the United States are powered entirely by solar energy.
59. Albert Einstein won the Nobel Prize in 1921 for his experiments with solar power and photovoltaics.
60. The largest wind turbine in the world, located in Hawaii, stands 20 stories tall and has blades the length of a football field.
61. Access to bus and rail lines reduces driving by 4,400 miles per household annually.
62. In 2008, Americans took 10.7 billion trips on public transportation.

63. The average household spends 18 cents of every dollar on transportation, and 94% of this goes to buying, maintaining, and operating cars, the largest expenditure after housing.
64. One person switching to public transit can reduce daily carbon emissions by 20 pounds or more than 4,800 pounds in a year.
65. Every \$10 million in capital investment in public transportation yields \$30 million in increased business sales.
66. Public transportation is a \$48.4 billion industry that employs more than 380,000 people.
67. From 1995 through 2008, public transportation ridership increased by 38%
68. Hybrid cars like the Toyota Prius produce 90% less pollutants than comparable non-hybrid cars.
69. The Prudential Equity Group has said that 80,000 hybrid cars were sold in the US in 2004.
70. J.D. Powers reports that 256,000 hybrid cars were sold in the US in 2006.

Community Development

71. In just 15 years, between 1982 and 1997, the amount of urban and built-up land in the United States grew by almost 40 percent — two and one-half times faster than the population. More than half of that growth took place recently in the five years between 1992 and 1997.
72. Residents of sprawling communities drive three to four times as much as those living in compact, well-planned areas.
73. Each year more than 100,000 acres of wetlands are destroyed, in large part to build sprawling new developments.
74. Sprawl destroys more than one million acres of parks, farms and open space each year.
75. For a planting cost of \$250-600 (includes first 3 years of maintenance), a single street tree returns over \$90,000 of direct benefits (not including aesthetic, social and natural) in the lifetime of the trees,
76. Temperature differentials of 5-15 degrees are felt when walking under tree canopied streets.
77. Trees in street proximity absorb 9 times more pollutants than more distant trees, converting harmful gasses back into oxygen and other useful and natural gasses.
78. A properly shaded neighborhood, mostly from urban street trees, can reduce energy bills for a household from 15-35%.
79. Realtor based estimates of street-tree versus non street-tree comparable streets relate a \$15-25,000 increase in home or business value.
80. Studies report that landscaping speeds the sale of a home by four to six weeks. In Sacramento, a homeowner's mature valley oak may be appraised at \$20,000 or greater.
81. Every 40 trees remove 80 lbs. of air pollutants annually.

Overall Sustainability/Care for the Planet

82. Each day, 50 to 100 species of animals and plants are driven extinct by human influences.
83. The 14 warmest years on record have all occurred since 1980

84. Global oil production is currently about 81 million barrels a day and is predicted to fall to 39 million barrels a day by 2030 due to diminishing resources. Source: Energy Watch Group.
85. The U.S. uses 25% of the world's oil, but only has 3% of the world's oil reserves
86. The human population of the world is expected to be nearly tripled by the year 2100.
87. Already over half of the world's tropical forests have been lost.
88. Universities emit 3 percent of the country's carbon footprint, but they produce 100 percent of the student footprint. That's why ASU will mitigate 100 percent of its carbon dioxide emissions related to energy by 2025, and all transportation emissions by 2035.
89. 1989- ASU's Southwest Center for Environmental Research and Policy is launched. Source: ASU
90. 2009- ASU honors the School of Sustainability's first graduating class. Source: ASU.
91. Scientists expect a 3.5° F increase in average global temperatures by the year 2100, resulting in the warmest temperatures in the past million years. During the Pliocene epoch 1.8 million years ago, when the earth's temperatures were roughly equivalent to today, sea levels were 12-18 feet higher
92. As Arctic ice rapidly disappears, scientists believe the Arctic will experience its first ice-free summer as early as the year 2040
93. Swedish scientist Svante Arrhenius realized as early as 1896 that human industrial activity was already surpassing the earth's ability to reabsorb CO₂
94. Average house size has doubled in the US since the 1970s
95. 75% of global fisheries have been fished beyond capacity
96. The US has less than 4% of its forests left
97. 2000 trees a minute are cut down in the Amazon alone. That is 7 football fields a minute!
98. Every week, about 20 species of plants and animals become extinct
99. Between 1970 and 1995, the U.S. represented about one-third of the world's total material consumption. With less than 5% of the world's population, the U.S. consumes 33% of world paper, 25% of world oil, 15% of world coal, 17% of world aluminum, and 15% of copper. Source: U.S. EPA, 2009.

Other

100. About 900 million rural people live on less than \$1 a day
101. 1 of every 3 cleaning chemicals used in schools can cause environmental or health problems such as asthma.
102. The population grows as much every three days as it did every century, on average, for most of the last one-thousand centuries before the Industrial Revolution.
103. Experiencing the most growth in 2009, organic fruits and vegetables, which represent 38 percent of total organic food sales, reached nearly \$9.5 billion in sales in 2009, up 11.4 percent from 2008 sales.
104. OTA (Organic Trade Association) findings show that by the end of 2009, organic food sales represented approximately 3.7 percent of total U.S. food sales.

105. Organic foods are increasingly found in more mainstream retail establishments. In 2009, 54 percent of total organic food sales were handled through mainstream grocers, club stores and retailers.

106. **35%** -- Increase in the global carbon dioxide emissions from the burning of fossil fuels since the Kyoto Protocol was signed in 1992.

107. **\$427 million** -- Amount spent by the oil and coal industries in the first six months of 2008 in political contributions, lobbying expenditures and advertising to oppose climate action.

108. There are 5,773,000 cubic miles of water in ice caps, glaciers, and permanent snow. According to the National Snow and Ice Data Center, if all glaciers melted today the seas would rise about 230 feet.

Bio-Diversity

109. Pollination - insects pollinate crops worth \$6-12 billion a year in the USA.

110. Fish and other marine animals provide 20% of animal protein consumed, at a value of \$50-\$100 billion annually

111. Madagascar is considered a biodiversity hot spot: 98% of its land mammals, 92% of its reptiles, 68% of its plants, and 41% of its breeding bird species exist nowhere else on Earth

112. Although an estimated 5 to 30 million species live on Earth, only 1.9 million species have been described/documentated.

113. Less than 8% of all grasslands worldwide are protected

114. Habitat change, over-exploitation, invasive alien species, pollution, and climate change are the most important direct drivers of change in ecosystems

115. 42% of all amphibian species and 40% of bird species are declining in population

116. Between 2000 and 2010 the global extent of primary forest declined by more than 400,000 square kilometers, an area larger than Zimbabwe.

117. Coral reefs support between one and three million species including approximately 25% of all marine fish species.

118. The world's fisheries provide about 16% of the protein consumed worldwide. 80% of people in developing countries rely on traditional medicines, the majority of which are derived from plants.

Green Building

119. By 2015, an estimated 40-48% of new nonresidential construction by value will be green, equating to a \$120-145 billion opportunity

120. The green market was 2% of non-residential construction starts in 2005; 12% in 2008; and grew to be 28%-35% in 2010

121. LEED is referenced in project specifications for 71% of projects valued at \$50 million and over

122. Green buildings have 27% higher occupant satisfaction

123. Green buildings have 33% less greenhouse gas emissions

124. People in the U.S. spend about 90% of their time indoors

125. EPA studies indicate indoor levels of pollutants may be up to ten times higher than outdoor levels

126. Students with the most day lighting in their classrooms progressed 20% faster on math tests and 26% faster on reading tests in one year than those with less day lighting.

Peoria Facts

127. Peoria recycles 16,000 tons/year of bottles, cans, plastics, newspapers, cardboard...that's 32 million pounds!

128. Another 50,000 tons/year goes to the landfill...that's 100 million pounds!

129. For every 4 pounds of trash, 3 are landfilled and 1 is recycled.

130. Each person in Peoria generates about 825 pounds of trash each year. Fortunately, 200 pounds are recycled.

131. 75,000 pounds of household hazardous waste are collected at the City's 3 annual drop off events, then properly disposed

