

## Facts About Paper and Paper Waste

Approx. 324 L. of water is used to produce 1kg of paper

Source: Environment Canada

The World Commission on Environment and Development defines sustainability as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Source: World Commission on Environment and Development, 1987

Average worldwide annual paper consumption is 48kg per person with North America accounting for over 1/3.

Source: International Institute for Environment and Development (IIED) Discussion Paper (IIED, London, September 1996)

Average per capita paper use in the USA is 333kg.

Average per capita paper use worldwide is 48kg.

Source: Food and Agriculture Organization of the United Nations, 1997

Asia has surpassed Western Europe in paper consumption and will soon surpass the United States.

Source: International Institute for Environment and Development (IIED) Discussion Paper (IIED, London, September 1996)

It is estimated that 95% of business information is still stored on paper.

Source: International Institute for Environment and Development (IIED) Discussion Paper (IIED, London, September 1996)

Although paper is traditionally identified with reading and writing, communications has now been replaced by packaging as the single largest category of paper use at 41% of all paper used.

Source: North American Factbook PPI, 1995. (Figures are for 1993)

The paperless office, once predicted as a result of information technology (IT), has not transpired. Industry analysts estimate that 95% of business information is still stored on paper.

Source: International Institute for Environment and Development (IIED) Discussion Paper (IIED, London, September 1996)

Recycling 54kg of newspaper will save one tree.

Source: Government of Canada, Digital Collections

Paper and paper products accounts for more than 1/3 of Canada's waste.

Source: Environment Canada

Canada uses 6 million tonnes of paper and paperboard annually. Only 1/4 of Canada's waste paper and paperboard is recycled.

Source: Environment Canada

Paper manufacturing is the 3rd largest user of fossil fuels worldwide.

Source: American Forest and Paper Association, (Garner, J.W.. Energy Conservation Practices Offer Environmental and Cost Benefits. Pulp & Paper, October 2002)

Paper manufacturing is the largest industrial user of water per pound of finished product.

Source: American Forest and Paper Association

The US uses 25% of the world's paper products.

Source: American Forest and Paper Association

The average American uses more than 748 pounds of paper per year.

Source: American Forest and Paper Association

It is estimated that paper consumption will rise by 50% by 2010.

Source: Food and Agriculture Organization of the United Nations, 1997:78

The average daily web user prints 28 pages daily.

Source: Gartner group and HP

115 billion sheets of paper are used annually for personal computers

Source: Worldwatch Institute

700 pounds of paper are consumed by the average American each year.

Source: Environmental Defense Fund, Champion Paper Mills

10,000 trees are cut down annually in China to make holiday cards.

Source: Xinhua News Agency

3 cubic yards of landfill space can be saved by one ton of recycled paper.

Source: 50 simple things you can do to Save the Earth, Jodi B., Sudbury

77% of paper is recycled in Netherlands.  
Source: Washington Post

67% of paper is recycled in Germany  
Source: Washington Institute

52% of paper is recycled in Japan.  
Source: Washington Institute

42% of paper is recycled in the US.  
Source: Washington Institute

Every year in the United States, over 2 billion books are published, 359 million magazines are published, 24 billion newspapers are published.  
Source: Purdue Research Foundation and US Environmental Protection Agency, 1996

One year's worth of the New York Times newspaper weighs 520 pounds.  
Source: Purdue Research Foundation and US Environmental Protection Agency, 1996

Every ton of recycled paper saves about 17 trees.  
Source: Purdue Research Foundation and US Environmental Protection Agency, 1996

Recycling paper uses 60% less energy than manufacturing virgin timber paper.  
Source: "1996 Statistics, Data Through 1995." American Forest and Paper Association, November 1996. Pg 2

The post-consumer recycling rate for old newsprint in the US in 1990, 1992, and 1994 was 38%, 47% and 45% respectively.  
Source: Environmental Health and Safety Online (MSW Report)

Nearly 81.3 million tons of paper and paperboard waste was generated in the U.S. in 1994.  
Source: Environmental Health and Safety Online

Paper had an overall recycling rate of 35.3% in 1994. About 55.3% of corrugated boxes, 45.3% of newspapers, 19.3% of books, 30% of magazines, and 42.5% of office papers were recycled in.  
Source: Environmental Health and Safety Online

Recovered paper is used to make a variety of products, including copier paper, paper towels and napkins, corrugated boxes and hydraulic mulch.  
Source: Environmental Health and Safety Online

It takes 75,000 trees to print a Sunday edition of the New York Times.  
Source: North Carolina Office of Waste Reduction and Recycling

Americans consume more paper than the citizens of most other countries. Compared with the 1994 world average of 97 pounds, the United States per capita consumption of paper is more than 700 pounds, about 2 pounds per person per day. Per capita consumption of paper in the United States has grown 43% since 1980.  
Source: "Source Reduction: It's a Bare Necessity." North Carolina Recycling Association and North Carolina Office of Waste Reduction. 1995. Pg 46

In the US, 9,190 million tons of office paper was generated, and 4,220 million tons were recovered in 2002. In 2000, only 4, 545 million tons were recovered.  
Source: Waste Age "Profiles in Garbage." September 2003

Recycled paper requires 64% less energy than making paper from virgin wood pulp.  
Source: Energy Educators of Ontario, 1993

Office paper is the most heavily recovered segment of printing and writing paper (which also includes book and magazine paper, junk mail, brochures etc)  
Source: Waste Age "Profiles in Garbage." November 2001

New York's largest export out of the Port of NY is waste paper.  
Source: What About Waste, Cornell Waste Management Institute, 1990

30-40% of trash is discarded packaging.  
Source: What About Waste, Cornell Waste Management Institute, 1990

Packaging makes up a third or more of our trash.  
Source: The Recycler's Handbook, 1990

The average American used 18 cubic feet of wood and 749 pounds of paper – equal to a 100-foot tree with an 18-inch trunk – each year.  
Source: American Forest & Paper Association, 2004

Americans discard 4 million tons of office paper every year – enough to build a 12-foot high wall of paper from New York to California.

Source: American Forest & Paper Association, 2004

The US exports more waste paper than any other country.

Source: The Recycler's Handbook, 1990

Recycling half the world's paper would free 20 million acres of forestland.

Source: The Recycler's Handbook, 1990

Paper products use about 35% of the world's annual commercial wood harvest.

Source: The Recycler's Handbook, 1990

About 40 million tons of paper that could be recycled is thrown away each year in the US.

Source: What About Waste, Cornell Waste Management Institute, 1990

If everyone in the US sent one less holiday card, we would save of 50,000 cubic yards of paper.

Source: Use Less Stuff, 1998

Recycling one ton of paper saves 682.5 gallons of oil, 7,000 gallons of water, 3.3 cubic yards of landfill space.

Source: Waste Reduction is a Smart Business Decision, Onondaga Resource Recovery Agency, 1998

The average American attorney uses one ton of paper every year.

Source: Waste Reduction is a Smart Business Decision, Onondaga Resource Recovery Agency, 1998

If offices throughout the US increased the rate of two-sided photocopying from the 1991 figure of 20% to 60%, they could save the equivalent of about 15 million trees.

Source: Choose to Reuse by Nikki & David Goldbeck, 1995, Earth 911 2004

Employees at American financial businesses generate about 2lbs. of paper a day...per person!

Source: The Recycler's Handbook, 1990

North Americans consume 323kg per capita of paper products, Europe consumed 125kg, Asia consumed 28kg, Latin America consumed 36kg, Australasia consumed 322kg, Africa consumed 6kg, the world's per capita consumption was 53.8kg in 2000.

Source: The bureau of International Recycling, World Consumption 2000

Today, 90% of paper pulp is made of wood. Paper manufacture is estimated to account for nearly 13% of the total wood use, and represents 1% of the world's economic output.

Source: International Institute for Environment and Development, The Sustainable Paper Cycle, draft report for the Business Council on Sustainable Development, IIED, London 1995; Ayres, E; "Making Paper without Trees", WorldWatch, September/October 1993, pp. 5-8; Durning, A.T and Ayres E; "The Story of a Newspaper", WorldWatch, November / December 1994, pp 30-32; Wright, R; personal communication

When paper rots or is composted it emits methane gas which is 25 times more toxic than CO<sub>2</sub>.

Source: International Institute for Environment and Development (IIED), founded in 1971, was commissioned by the World Business Council for Sustainable Development to do the study. "A Changing Future for Paper: A summary of the study "Towards a Sustainable Paper Cycle".

The pulp and paper industry is the 3<sup>rd</sup> largest industrial buyer of elemental chlorine.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Dioxin is one by-product from the use of elemental chlorine gas in paper bleaching.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Other sources of dioxin include municipal and hazardous waste incinerators, cement kilns, manufacture of certain herbicides and plastics, and several hydrocarbon chemicals.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Dioxin is a proven carcinogen (cancer causing chemical). However a 1991 study of dioxin found that its immunological, developmental, and neurological effects at very low levels may be more threatening to human health than its carcinogenicity. There is still much controversy over the accuracy or credibility of these data, and whether low levels of dioxins really pose a threat.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

The term “dioxin-free paper” is misleading. Paper does not contain dioxins, but they are produced as a by-product of the papermaking process and usually become part of the effluent wastewater of paper mills.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Many North American paper companies are modifying their processes to reduce the formation of dioxins. One way is to switch from pure chlorine gas to chlorine dioxide, which generates less dioxin by-product.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Austria and Sweden substitute oxygen or other non-chlorine processes, or use only non-bleached (slightly brown) paper products. This is known as “total chlorine free” (TCF), and is defend as using no chlorine or chlorine dioxide.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996

Reducing brightness requirements will make it easier for paper companies to eliminate chlorine compounds from their bleaching processes.

Source: Printers National Environmental Assistance Centre, Fact Sheet by Todd MacFaden, and Michael P. Vogel Ed.D June, 1996