Print and Paper Myths and Facts

Print and Paper have a great environmental story to tell

TWO SIDES

www.twosidesna.org

When it comes to the sustainability of print and paper, it's important to separate verifiable facts from opinion and misleading information. This booklet is designed to provide you with relevant and balanced information – we call it informed choice.

Two Sides is an organization which is committed to promoting the sustainability of print and paper and dispelling common environmental misconceptions by providing users with verifiable information on why print and paper is an attractive, practical and sustainable communications medium.

"Paper has been an integral part of our cultural development and is essential for modern life. Paper helps to increase levels of literacy and democracy worldwide and plays an important role in protecting goods and foodstuffs during transit. Paper is made from renewable resources, and responsibly produced and used paper has many advantages over other, nonrenewable alternative materials."

World Wildlife Fund, Guide to Buying Paper

WHAT A GREAT SUSTAINABLE IDEA

For sheer flexibility, style and effectiveness, print and paper can be the natural choice for sustainable and powerful communications.

TWO SIDES IS A GLOBAL ORGANIZATION WITH MEMBERSHIP SPANNING THE ENTIRE GRAPHIC COMMUNICATIONS INDUSTRY, FROM FOREST TO PRINT AND ON TO RECOVERY AND RECYCLING. THE INFORMATION IN THIS BOOKLET IS DRAWN FROM MEMBERS AND MANY OTHER STAKEHOLDERS, WORKING TOGETHER TO SHARE KNOWLEDGE.

Every year, the business community increases its level of awareness of corporate responsibility and assumes its share of responsibility and accountability for maintaining standards of ethical, social and environmental performance.

Two Sides recognizes that the industry has a responsibility to continually improve its environmental credentials and address customer concerns, which are sometimes the result of misleading or inaccurate information.

The Two Sides initiative sets out the facts in a clear and straightforward manner, addressing some of the inaccuracies and issues that surround the industry.

Print and paper has been the preferred communications medium for 2,000 years. In a multimedia world, it continues to be highly effective and it has many unique sustainable features.

Two Sides seeks to ensure that, by fostering a better understanding of our industry's environmental credentials, print and paper, through its myriad of uses from commercial applications to the basis of learning and creativity, remains an essential communication medium of choice.

MEMBERSHIP

Membership in Two Sides shows that your organization regards environmental awareness as an essential part of the business strategy. Benefits of membership include access to materials and information, helping your business to communicate its sustainability story to clients and staff, as well as participating in an initiative which works to dispel many of the myths that surround our industry.

Please go to **www.twosidesna.org** to find out how to participate.

Print and Paper have a great environmental story to tell

TWO SIDES

www.twosidesna.org

02 **The Myth** Going paperless saves forests

04 **The Myth** Paper is bad for the environment

06 **The Myth** Electronic communication is more environmentally friendly than paper-based communication

08 **The Myth** Paper production is a major cause of global greenhouse gas emissions

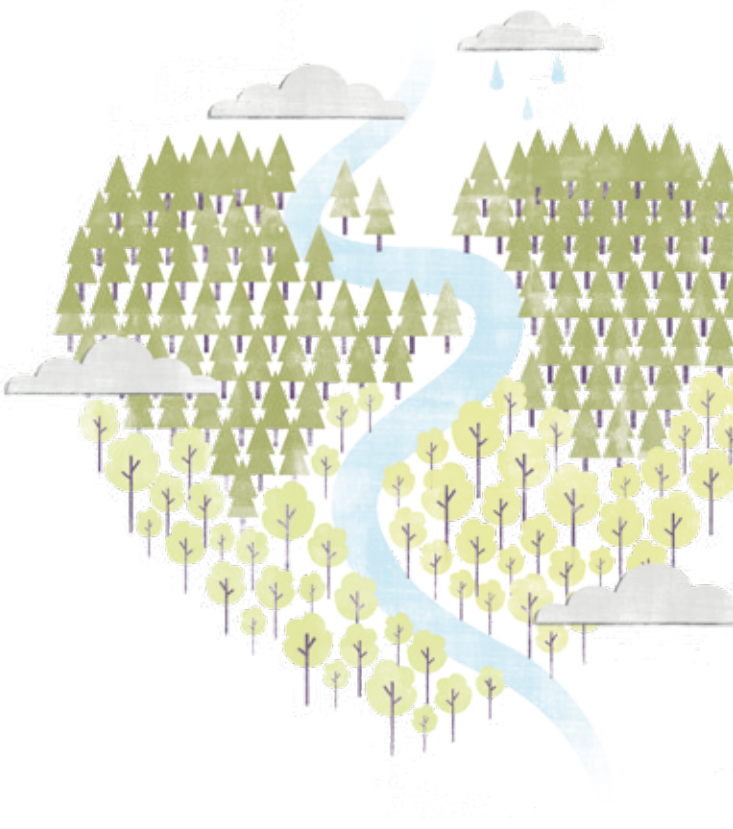
10 **The Myth** Only recycled paper should be used to make new paper

12 **The Myth** Digital is always the preferred means of communication

17 Sources

THE MYTH
GOING PAPERLESS SAVES FORESTS

THE FACT
IN NORTH AMERICA, WE GROW MANY MORE TREES THAN WE HARVEST



"THERE ARE 20% MORE TREES IN THE U.S. TODAY THAN THERE WERE ON THE FIRST EARTH DAY CELEBRATION IN 1970."[1]

"The reality is that the greatest incentive for continued investment and retention of our nation's forests is a stable market for paper and other wood products."

Dovetail Partners [2]

Paper manufacturers encourage forest sustainability through their purchase and use of certified wood fiber and by promoting sustainable forest management policies and practices at home and around the globe. By providing a dependable market for responsibly grown fiber, the paper industry encourages landowners to manage their forestland instead of selling it for development or other non-forest uses.[2, 3]

- Net forest area in the U.S. has been stable since the early 1900's and has increased from 754 to 766 million acres between 2005 and 2015. Net volume of growing stock increased by over 10% between 2005 and 2015.[4] Canada's forest area of 857 million acres has been quite stable over the past 25 years.[5]
- Each year forests in the U.S. and Canada grow significantly more wood than is harvested. In the U.S., average net annual increase in growing-stock trees nationwide is about 26 billion ft^3.[6] In 2015, Canada harvested just over 5.6 billion ft^3 of timber, well below the estimated sustainable wood supply level of 7.98 billion ft^3.[7]
- Claims like "go paperless – save trees" create a false impression that forests are a finite resource, being destroyed. In truth, North American forests are a renewable resource that is continuously replenished using sustainable forest management.[8]
- More than half the forest land in the U.S. is owned and managed by about 11 million private forest owners. Private forest lands provided over 90% of the domestically produced wood and paper products in 2017.
- The income landowners receive for trees grown on their land encourages them to maintain, sustainably manage and renew this valuable resource.[9]
- On privately owned timberlands, overall inventories increased 6.2% between 2008 and 2014 and forest growth exceeded harvest removals.[10]
- Avoiding the use of wood is not the way to protect forests for the long term. It is precisely the areas of the world that consume the least wood that continue to experience the greatest forest loss.[8]

Visit **www.twosidesna.org** for the full fact sheet

THE MYTH
PAPER IS BAD FOR THE ENVIRONMENT

THE FACT
PAPER IS ONE OF THE FEW TRULY SUSTAINABLE PRODUCTS

PAPER IS MADE FROM WOOD, A NATURAL RESOURCE THAT IS RENEWABLE, RECYCLABLE AND CAN BE MANAGED SUSTAINABLY.

"Besides easily recognizable paper products (e.g. writing paper or paper towels), more than 5,000 products can be made from recycled paper."

U.S. Environmental Protection Agency, 2016 [11]

In North America, paper is recycled more than any other commodity and the benefits include: extending the wood fiber supply; reducing greenhouse gas emissions by avoiding methane emissions (released when paper decomposes in landfills or is incinerated); contributing to carbon sequestration; reducing energy needed for paper production; and saving landfill space.[12] These features, combined with the North American paper industry's advocacy of responsible forestry practices, certification, the use of renewable biomass and advances in efficient papermaking technology, make paper one of the most sustainable products we use.

- About 39% of the fiber used in papermaking in the U.S. is obtained through recycling. The rest comes from wood that is typically obtained through: 1) thinning of forest stands being grown to larger diameters to provide raw material for production of lumber and plywood, 2) patch clearcutting of smaller diameter trees managed for pulp production, and/or, 3) collection of chips and sawdust produced as by-products in the production of lumber.[13]
- In Canada, 87% of the wood fiber used to make paper comes from a blend of sawmill residues (59%) and recycled paper (28%).[14]
- The paper industry adheres to respected third-party certification standards, ensuring the paper you use has come from a sustainable forest source. These include the Forest Stewardship Council® (FSC®); the Sustainable Forestry Initiative® (SFI®) program; the American Tree Farm System (ATFS) and systems endorsed by the international Programme for the Endorsement of Forest Certification (PEFC™).[15]
- Globally, only about 10% of the world's forests are certified – the majority of which are in North America. By sourcing certified products from a variety of credible standards, buyers are sending a message that they support sound forestry.[16]
- "Wood fibers can be grown, sourced and reused in a responsible way. Maximizing the use of recycled fibers and sourcing virgin fiber from credibly certified natural forests and plantations can reduce paper's ecological footprint."[3]

Visit **www.twosidesna.org** for the full fact sheet

THE MYTH

ELECTRONIC COMMUNICATION IS MORE ENVIRONMENTALLY FRIENDLY THAN PAPER-BASED COMMUNICATION

THE FACT

ELECTRONIC COMMUNICATION ALSO HAS ENVIRONMENTAL IMPACTS

IT IS NOT BLACK-AND-WHITE TO SAY "DIGITAL COMMUNICATION IS GREEN" AND "PRINT COMMUNICATION IS NOT." BOTH FORMS OF COMMUNICATION HAVE ENVIRONMENTAL IMPACTS.[17]

In 2016, 44.7 million metric tons of e-waste were generated globally. The U.S. collects approximately 22% of its e-waste.

International Telecommunication Union, 2017 [18]

Worldwide, it is estimated that there are 2 billion smartphones, 1 billion computers and 5 to 7 billion other connected devices. The manufacture of a computer requires 240 kg of fossil fuels, 22 kg of chemicals, 1.5 tonnes of water and numerous precious (gold and platinum) or rare earth minerals (tantalum, lanthanum, neodymium, yttrium) as well as those which are dangerous for the environment (lead, bromine, arsenic, chlorine, mercury and cadmium).[19]

- "If unchecked, ICT greenhouse gas emissions relative contribution could grow from roughly 1-1.6% in 2007 to exceed 14% of the 2016-level worldwide greenhouse gas emissions by 2040, accounting for more than half of the current relative contribution of the whole transportation sector."[20] In comparison, the combined pulp, paper & print sector is one of the lowest industrial emitters at 1% of the world's GHG emissions.[32]
- In 2015, there were 2.6 billion email users worldwide and the number of emails sent and received per day totaled over 205 billion.[21] Worldwide, total CO_2 generated by emails is between 22 million and 4 billion metric tons of CO_2 per year or the amount of CO_2 produced annually by 4.68 million to 854 million cars.[22]
- Small network equipment in America's homes consumed more than $1 billion worth of electricity in 2012, equivalent to the output of three large (500 MW) coal fired power plants. This resulted in 5 million metric tons of CO_2 emissions or annual CO_2 emissions of 1.1 million vehicles.[23]
- In 2014, data centers in the U.S. consumed an estimated 70 billion kWh, representing about 1.8% of total U.S. electricity consumption. Data center electricity consumption increased by about 4% from 2010-2014.[24]
- A study by Two Sides found that half the leading Fortune 500 telecommunications companies, banks and utilities were making unsubstantiated claims about the environmental benefits of electronic billing. In response, Two Sides initiated a campaign to educate senior executives on the sustainability of print and paper and to encourage them to abandon misleading environmental claims. To date, 100 North American companies, and over 275 globally, have removed or changed inaccurate anti-paper claims.[25]

Visit **www.twosidesna.org** for the full fact sheet

THE MYTH

PAPER PRODUCTION IS A MAJOR CAUSE OF GLOBAL GREENHOUSE GAS EMISSIONS

THE FACT

MOST OF THE ENERGY USED IS RENEWABLE AND CARBON INTENSITY IS SURPRISINGLY LOW

67% OF U.S. PULP AND PAPER MILLS' ENERGY NEEDS WERE PROVIDED BY RENEWABLE BIOMASS AND FUELS, ON AVERAGE IN 2014.[26]

"In 2016, U.S. forests and wood products captured and stored roughly 10% of all carbon dioxide equivalents emitted by the U.S."

U.S. Environmental Protection Agency, 2018 [27]

A look across the entire life cycle shows that paper's carbon footprint can be divided into three basic elements: greenhouse gas emissions, carbon sequestration and avoided emissions. Each of these elements is influenced by important characteristics that make paper's carbon footprint smaller than might be expected: it's made from a renewable resource that stores carbon, is recyclable and is manufactured using mostly renewable energy including biomass, biogas and hydroelectricity.

- Wood stores carbon indefinitely, even as a finished product, helping to reduce the effects of greenhouse gas emissions over the long term. Growing trees also release oxygen into the atmosphere, thereby supporting life on our planet.[28]
- Greenhouse gas emissions from the pulp and paper industry dropped from 44.2 to 37.7 million metric tons CO_2e (15%) between 2011 and 2016 due to improved energy efficiency and increased use of less carbon-intensive fossil fuels and carbon-neutral biomass-based energy sources.[29]
- The pulp and paper industry in the U.S. was responsible for about 0.5% of the total U.S. CO_2e emissions in 2016.[30]
- In Canada, bioenergy continues to increase its share of the energy mix, accounting for 56% of forest industry energy use in 2014, up from 49% in 2000 and 43% in 1990. Between 2004 and 2014, the Canadian forest industry reduced energy use by 35% and GHG emissions by 49%.[31]
- With 1% of the world's greenhouse gas emissions, the value chain of pulp, paper and print is one of the lowest industrial emitters.[32]

Visit **www.twosidesna.org** for the full fact sheet

THE MYTH

ONLY RECYCLED PAPER SHOULD BE USED TO MAKE NEW PAPER

THE FACT

WOOD FIBER FROM SUSTAINABLY MANAGED FORESTS IS ESSENTIAL TO THE PAPER CYCLE

PAPER CAN BE RECYCLED UP TO 7 TIMES BEFORE THE FIBERS BECOME TOO SHORT AND WEAK AND BREAK DOWN. THAT'S WHY WE NEED A CONTINUOUS SUPPLY OF FRESH FIBER HARVESTED FROM RESPONSIBLY MANAGED FORESTS.

In the U.S. and Canada, the majority of the required fresh wood fiber used in papermaking comes from sawmill chips, which are a by-product of lumber production.

North America benefits from a good supply of recycled fiber which is used locally to manufacture paper products. U.S. paper recovery for recycling reached a record 67.2% in 2016.[33] In Canada, 73% of the paper is recovered.[34]

- Recovered paper accounts for more than 38% of fiber used to make new paper products in the U.S.[13]
- Globally, 82% of recovered paper is used in tissue, container boards, and other packaging or board products. Approximately 6% of the recovered paper supply is used in printing and writing grades.[35]
- Of the paper and paperboard recovered in 2016 in the U.S., 33.7% went to produce containerboard (i.e., the material used for corrugated boxes) and 11.8% went to produce boxboard, which includes basestock for folding boxes and gypsum wallboard facings. Net exports of recovered paper to China and other nations accounted for 40% of the paper collected for recycling.[36]
- Without fresh wood, the production of paper would cease within 6 to 18 months depending on the paper grade.[37]
- At least 15% of paper products are permanently removed from the fiber cycle, such as one-time use products (ex: tissues, sanitary products, medical supplies) and books or files that are stored for long periods of time.[38]

Visit **www.twosidesna.org** for the full fact sheet

THE MYTH
DIGITAL IS ALWAYS THE PREFERRED MEANS OF COMMUNICATION

THE FACT
MANY CONSUMERS VALUE PAPER-BASED COMMUNICATION

SWITCHING TO DIGITAL IS NOT ALWAYS WELCOMED BY CONSUMERS AND MANY WISH TO RETAIN THE FLEXIBILITY AND SECURITY OF PAPER-BASED, POSTAL AND ELECTRONIC COMMUNICATIONS.

90% of U.S. consumers believe they should have the right to choose how they receive communications from financial organizations and service providers.

Two Sides North America and Toluna, 2017 [39]

Even today not everyone is computer savvy or has access to a computer. An integrated marketing strategy that includes both print and on-line components spans preferences and generations and allows all to get the message.[40]

- Almost 70% of surveyed U.S. consumers felt that it was easier to track their expenses and manage their finances when the information was printed on paper and 65% preferred to receive their bills and financial statements through a combination of both online and paper.[39]
- 89% of adult Americans believe that "Shifting customers / clients to online-only documents disadvantages some groups, such as the elderly, disabled, low income, and poorly educated."[41]
- 81% of parents believe it is "very important" that their child read print books, citing the importance of print's unique sensory and tactile experience.[42]
- Even though it is thought that the current generation of students prefer new technology, nearly all students surveyed expressed a preference for paper, usually saying they felt they performed better when reading on paper rather than a screen.[43]
- 68% of 18-24-year-olds agreed that reading news in a printed rather than digital newspaper provided a deeper understanding of the story.[39]
- Trusting the news found on digital media has become increasingly difficult as hoaxes and misleading information pop up on the internet and then are shared on social media.[39]

Visit **www.twosidesna.org** for the full fact sheet

From newspapers to magazines, from photocopies to flyers, we believe print and paper is unique due to its flexibility, effectiveness, and sustainable qualities.

As you have read, there are two sides to paper and you should feel confident about using it. Paper is made from renewable resources, recyclable and produced by an industry whose future depends on planting more trees than it consumes. For many decades, the industry has also been progressively improving standards in the entire supply chain.

To learn more about the production and consumption of paper and its unique sustainable features, go to the Two Sides website and discover the facts about our industry.

www.twosidesna.org

"FORESTRY, PAPER AND PACKAGING ARE AMONG THE MOST SUSTAINABLE INDUSTRIES IN EXISTENCE."

CEO Perspectives, PricewaterhouseCoopers

CLICK. SHARE. BUST SOME MYTHS!

#PaperFacts

Sources

1. American Forest & Paper Association, 2013
2. Dovetail Partners, 2016
3. World Wildlife Fund, 2015
4. United Nations FAO, 2015
5. Natural Resources Canada, 2017
6. Oswalt et al., 2014
7. Natural Resources Canada, 2017
8. Dovetail Partners, 2014
9. USDA, 2017
10. Forest2Market, 2016
11. U.S. Environmental Protection Agency, 2016
12. U.S. Environmental Protection Agency, 2016
13. Dovetail Partners, 2016
14. Forest Products Association of Canada, 2012
15. American Forest & Paper Association, 2014
16. Sustainable Forestry Initiative, 2013
17. Verso Corporation, 2010
18. International Telecommunication Union, 2017
19. L'Agence de l'Environnement et de la Maîtrise de l'Énergie, France, 2017
20. Belkhir, L. and A. Elmeligi, 2018
21. Radicati Group, 2015
22. Two Sides North America, 2017
23. Natural Resources Defense Council, 2013
24. Shehabi et al., 2016
25. Two Sides North America, 2018
26. American Forest & Paper Association, 2017
27. U.S. Environmental Protection Agency, 2018
28. American Forest & Paper Association, 2014
29. American Forest & Paper Association, 2014
30. U.S. Environmental Protection Agency, 2017
31. Natural Resources Canada, 2017
32. Ecofys, 2013
33. American Forest & Paper Association, 2017
34. Forest Products Association of Canada, 2014
35. Sappi Fine Paper North America, 2013
36. American Forest & Paper Association, 2016
37. Metafore, 2006
38. American Forest & Paper Association, 2011
39. Two Sides North America and Toluna, 2017
40. Verso Corporation, 2015
41. InfoTrends, 2013
42. Zickuhr, K., 2013
43. Subrahmanyam, K. et al., 2013

© Two Sides North America, Inc. 2018
The content and imagery contained within the Two Sides Myths and Facts booklet is carefully researched and subject to copyright. The use of any material requires written approval before permission can be granted.
Illustrations © Holly Sims www.hollysims.co.uk

Two Sides North America, Inc.
330 N. Wabash Avenue
Suite 2000
Chicago, IL 60611

T: 855-896-7433
E: info@twosidesna.org

Version 4, 2018