



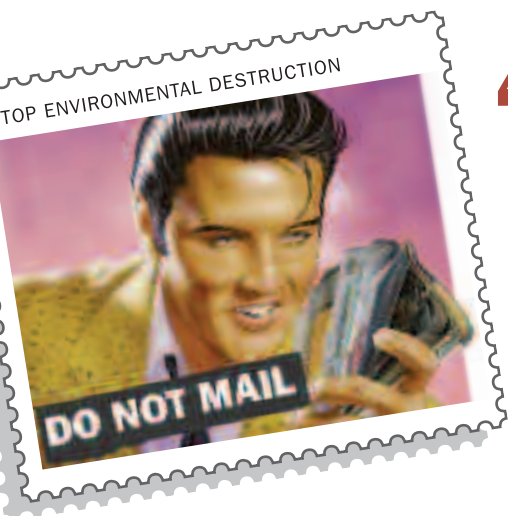
CLIMATE CHANGE ENCLOSED!

Junk Mail's Impact on Global Warming



FOREST ETHICS

Prepared by Jim Ford of Borealis Centre and Climate for Ideas



“ 20 years after I first testified before Congress on the threats posed by climate change, we have reached a point at which we must remove unnecessary carbon emissions from our lives, or face catastrophic consequences. It is hard to imagine waste more unnecessary than the 100 billion pieces of junk mail Americans receive each year, and these new findings, revealing that the emissions of junk mail are equal to that of over 9 million cars, underscore the prudent necessity of a Do Not Mail Registry. ”

– Dr. James Hansen, NASA's leading climate scientist and one of Time Magazine's 100 Most Influential People of 2006.

Introduction

Climate change is one of the greatest challenges facing the world today. Five of the seven hottest years on record occurred in the past decade, and we continue to see indications that our planet is warming at an unsustainable rate.

Taking on climate change is going to require some hard choices. But there's one choice we can make that won't be hard at all: getting rid of junk mail that we never wanted in the first place.

This report reveals one of the most appalling and little-known truths about junk mail: it is making climate change significantly worse. Our research has determined that every year, 51 million tons of greenhouse gases (carbon dioxide equivalent) are produced by junk mail. That's equal to the emissions of almost 10 million cars. It's more than the combined emissions of seven U.S. states. Most of all, it's utterly absurd.

Fortunately, the solution is absurdly easy. A national Do Not Mail Registry—similar to the hugely popular Do Not Call list—would give millions of us an easy way to start turning the tide of climate change, while freeing ourselves from an outdated, annoying and time-consuming burden.

That's an offer we can't pass up.

The Junk Mail Effect

More than 100 billion pieces of junk mail are delivered in the United States each year, which comes out to 848 pieces per household.¹ Our research (see Appendix A) has determined that the production, distribution and disposal of all that junk mail contributes to climate change by creating what could be called the Junk Mail Effect: the emission of over 51 million metric tons of greenhouse gases. To give you an idea of just how much that is, we've enclosed a free gift at no extra cost: **the following comparison chart.**

The 51,548,000 metric tons of greenhouse gases created each year by junk mail are the annual equivalent of:

9,372,000 average passenger cars.²

The average car travels 12,000 miles per year—as opposed to junk mail, which gets us nowhere.

11 coal-fired power plants.³

Of course, if power plants could run on deceptive claims about low interest rates, we'd be all set.

The COMBINED emissions of the following states:

Mississippi, Connecticut, New Hampshire, Oregon and Idaho. Or, if you prefer: Maine, Vermont, Alaska, South Dakota, Hawaii, Montana and Rhode Island.⁴

Mowing more than 20 billion lawns.

If the image of 100 billion pieces of junk mail isn't enough to scare you, picture an army of lawn mowers that's three times greater than the population of the planet.⁵

4.8 million school buses.

Let's see...we can either transport more than 251,000,000 school children annually⁶—or we can get coupons for porcelain figurines commemorating the Broadway musical Cats!

Heating 12.9 million homes.⁷

And no: burning all your junk mail is not an effective way to heat your home.

Nearly 85,000 international flights of a 747-400.⁸

But hey, at least you're getting a trip to Europe instead of a suspicious envelope offering you a FREE TRIP TO EUROPE.

2.4 million cars, idling 24 hours a day, seven days a week.⁹

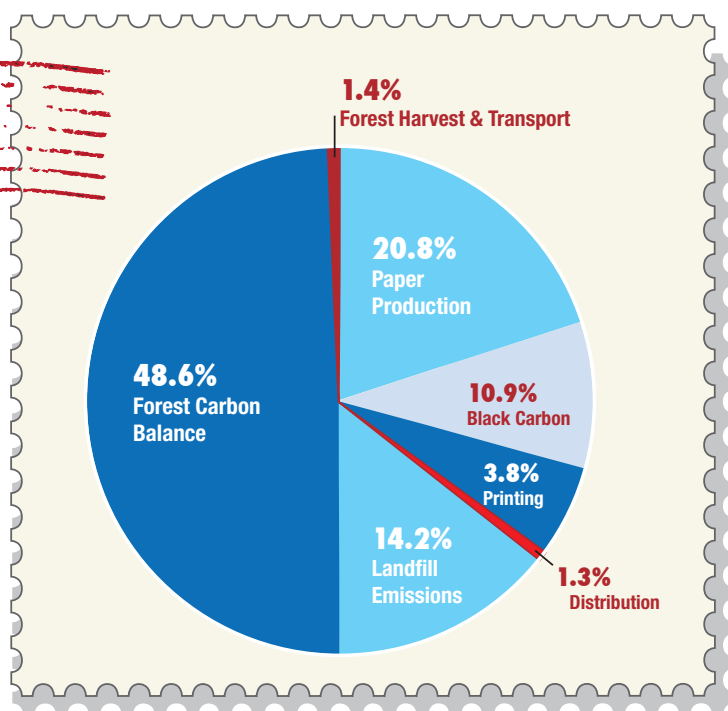
For our grand finale: a comparison to something that's just as useless as junk mail.

Insufficient

What's in Your Junk Mail?

If you thought there was nothing inside your junk mail other than an annoying offer that puts you at risk of identity theft, think again. Junk mail has implications for climate change that start in the forest, continue through paper production, printing and distribution and end with recycling, landfilling or incineration. (For a detailed description of each of the categories below, please see Appendix A.)

THE CARBON FOOTPRINT OF JUNK MAIL



NOTE: Energy that is fed back into the grid by the incineration of paper recovers 1.0%.

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FRAGILE

A Bundle of Misinformation

Not unlike a 1950s tobacco company extolling the benefits of smoking, junk mailers and the Direct Marketing Association would have you believe that junk mail actually helps prevent climate change. While we'd expect nothing less from an industry that makes such dubious claims as "Urgent!" "Exclusive offer!" and "Important Information Enclosed!" on a daily basis, it's best to dispose of their lies properly.

MYTH:

By eliminating the need to drive to stores, catalogs prevent global warming emissions!

FACT:

Catalogs cause much more global warming pollution than they prevent. According to our analysis (see Appendix B for details), greenhouse gas emissions from the production, distribution and disposal of catalogs are 5 to 10 times greater than the emissions that catalogs prevent by eliminating trips to stores.

MYTH:

People want their junk mail.

FACT:

Since 1991, national polls have consistently shown that between 80 and 90% of respondents dislike junk mail and would take some action to reduce it if they could. In a 2007 Zogby International poll, 89% of respondents supported a Do Not Mail Registry to make it easier to opt out of unsolicited ad mail.¹⁰ The Direct Marketing Association's own numbers confirm the overwhelming lack of interest in junk mail: the DMA's 2005 survey found that response rates to direct mail solicitations average less than 3%, and a response rate of only 0.25% is considered acceptable for the 500 million credit card solicitations that are mailed every month.

MYTH:

Recycled paper contributes more to global warming than virgin paper.

FACT:

Producing recycled paper requires much less total energy than producing virgin paper. For example, every ton of 100% recycled fiber copy paper saves 17 million BTU's (British Thermal Units) over virgin paper, enough to power the average home for more than two months.¹¹ And, of course, using recycled content reduces the need to cut down the forests that are our first line of defense against global warming.



MYTH:

The paper industry is replanting trees, so what's the problem?

FACT:

Replanting trees is not the same as preserving forests. The paper industry is creating tree plantations—row after row of largely non-native (and sometimes genetically-engineered) trees. Plantations don't store nearly as much carbon as intact forests. And in 25-40 years, what little carbon is stored will be released again when the trees are cut down to make more junk mail.

MYTH:

Everyone's recycling their junk mail anyway.

FACT:

34% of all Americans—about 100 million people—don't even have access to curbside recycling.¹² So it's no surprise that approximately 44% of junk mail goes to landfills unopened.¹³

MYTH:

"Direct mail is not trees, it is printed communication."
(from the *Mail Moves America* website)

FACT:

This one comes straight from the junk mail industry's coalition, *Mail Moves America*, and frankly, we're not sure what it means. But since it takes more than 100 million trees to produce U.S. junk mail, we're pretty sure it's a lie.

Every
year, more than
100 million trees are cut
down to make junk mail—
the equivalent of clearcutting
all of Rocky Mountain
National Park every 4
months.

Act Now and Save Forests

In addition to preventing massive greenhouse gas emissions, eliminating junk mail also comes with a special bonus: the protection of critical forests. Every year, more than 100 million trees are cut down to make junk mail—the equivalent of clearcutting all of Rocky Mountain National Park every 4 months.¹⁴ Those trees come from Endangered Forests like Canada's Boreal, the forests of the Southeastern United States, Indonesia and northern Europe, as well as smaller areas of rare or disappearing forest ecosystems in the Western United States, Brazil, Chile, and Russia.

In the Boreal alone, the equivalent of over 220,000 acres of forest are destroyed every year to make junk mail in the United States. U.S. junk mail makes up almost 10% of all the timber harvested in the Canadian Boreal, by volume as well as by harvest area.

Time is running out—but it's not too late to act.

For years, we've tolerated the daily annoyance of junk mail. We've dealt with the invasion of our privacy and the risk of identity theft. We've allowed countless acres of forest to be destroyed. Any one of these factors would be reason enough for a Do Not Mail registry—but now that we know the full extent of the havoc that junk mail is wreaking on our climate, we have reached the tipping point.

The absurdity of destroying our climate for the sake of an unwanted nuisance would be comical if the stakes weren't so high. Enough is enough: go to **DoNotMail.org** and sign ForestEthics' petition to create a national Do Not Mail registry. Because this time, we really do need to "act now."

www.ForestEthics.org • www.DoNotMail.org



Appendix A: The carbon footprint of junk mail

The following is a description of the stages of junk mail production, distribution and disposal, along with the emissions totals and percentages for each stage:

STAGE	DESCRIPTION	METRIC TONS OF CO ₂	PERCENT OF EMISSION / STORAGE
Forest Carbon Balance	Wood use for paper and energy minus carbon stored in paper products.	24,948,125	48.6%
Forest Harvest and Transport	Fuel emissions for vehicles and other equipment during harvest and transport to the mill.	711,331	1.4%
Paper Production	Emissions during the paper production process, largely from fossil fuel use.	10,706,440	20.8%
Black Carbon	Particulates released from the burning of biomass and other energy during paper production. Each ton of black carbon emitted causes radioactive forcing equivalent to approximately 133.5 tons of carbon dioxide equivalent.	5,577,876	10.9%
Printing	Estimated printing emissions, excluding the conversion of paper products.	1,957,498	3.8%
Distribution	Distribution by the U.S. Postal Service.	677,541	1.3%
Energy Recovery	Energy fed into the grid by the incineration of paper at Municipal Solid Waste facilities.	510,699	-1.0%
Landfill Emissions	Methane released from paper in landfills.	7,295,700	14.2%

Notes on methodology for determining the carbon footprint for junk mail:

- Greenhouse gas emissions for production, fiber transport and harvest, landfill emissions, incineration, waste disposal and recycling collection are taken from Environmental Defense Fund's Paper Calculator.
- 5% recycled content average is assumed for printing and writing papers, based on an estimate as stated in the State of the Paper Industry report by the Environmental Paper Network.
- Paper grades for catalogs were estimated from industry data. Other junk mail is assumed to be uncoated freesheet.
- Forest emissions are based on wood use as determined by the Paper Calculator, minus the average carbon storage of paper as indicated by the U.S. Forest Service Forest Products Lab on a per-ton production basis.
- This estimate constitutes a low estimate for emissions by junk mail, since it does not include several emissions that should be attributed to junk mail: embedded emissions from fossil fuel use and chemical production, some segments of distribution (e.g., the transport of pulp to paper mills), and permanent losses to forest carbon that occur in some, but not all, forests due to degradation (in particular losses of peatland forests such as in Indonesia, permanent storage loss in old-growth forests in Canada and elsewhere, permanent losses due to the establishment of plantations in natural forest areas, and soil carbon losses from ditching and draining in forest plantations).

Appendix B: Climate Change and Catalogs

The emissions of greenhouse gases for the production and distribution of catalogs is greater than 20 million metric tons of carbon dioxide equivalent. To determine the emissions prevented by at-home catalog shopping, we must estimate the emissions of consumers driving to retail stores to purchase their products using several figures. Total sales of products for all catalogs is approximately 170 billion dollars, and 90 billion dollars for consumer products alone, according to the US Direct Marketing firm. The Direct Marketing Association estimates each catalog sale at 149 dollars. We estimate the average shopping trip to be 5 miles, or 10 miles for a sensitivity analysis. Using these parameters and the average fuel economy and average fuel emissions per gallon of gasoline, the range of emissions from consumers traveling to and from retail stores is between 2.1 and 4.2 million metric tons CO₂ equivalent. This is 10.5% to 21% of the emissions from the total greenhouse gas emissions from the production, distribution and disposal of catalogs.

It is important to note that these emissions rates assume that each shopping trip is a specific event and no portion of that trip was for other purposes (e.g., stopping to make a purchase during another trip). If some portion of the shopping trips was combined with other activities such as

stopping off to shop after work, then emissions for non-catalog, traditional shopping would decrease and the comparative emissions for catalogs would be worse. The shipping of the products to consumers is not included in this analysis, which would again increase the emissions from catalog sales. Further data would be required to break out business-to-business sales versus consumer catalogs only.

It must be also be noted that direct mail catalogs are now used to a greater and greater degree to drive customers to their stores, as a pure advertising technique, rather than as a means of direct sales by phone. The DMA reports that "19% of multichannel shoppers browsed catalogs but purchased at retail." Therefore, in some cases, catalogs may be driving consumers to specific retail outlets rather than shopping in more local stores, or are driving consumers to specific stores rather than shopping in stores where they normally shop. Therefore, for this 19% of 'multichannel shoppers,' catalog production emissions must be increased by the driving emissions.



Notes

1. United States Postal Service (USPS). "The Household Diary Study: Mail Use & Attitudes in FY 2006." March 2007, pp.1.
2. The Environmental Protection Agency (EPA) estimates average carbon dioxide equivalent emissions as 8.8 kilograms per gallon of gas, and average fuel economy of passenger cars and light trucks as 20.3 miles per gallon.
3. The statistic is based on average emissions from coal-fired power plants as reported in the report "Stop Trashing the Climate" by Brenda Platt, David Ciplet, Kate M. Bailey, and Eric Lombardi, June 2008. Emissions from coal power plants in the U.S. are around 2 million metric tons per year for the 417 coal plants producing energy today. On average, each plant emits 4.6 million metric tons of carbon.
4. *The New York Times*, "Carbon Emissions Across the United States," May 30, 2008. www.nytimes.com/interactive/2008/05/30/business/20080601_ENERGY_GRAPHIC.html
5. Lawn mowers use 800,000,000 gallons of gas per year. Each weekend, 54 million Americans mow their lawns, resulting in 2.8 billion mowing events per year.

The math goes like this:

$$\frac{800 \text{ million gallons}}{\text{year}} \times \frac{\text{year}}{2.8 \text{ billion mowing events (me)}} \times \frac{8.8 \text{ kilograms CO}_2\text{e}}{\text{gallon}} = \frac{2.5 \text{ kilograms CO}_2\text{e}}{\text{me}}$$

$$\text{junk mail} = 52 \text{ million m tons CO}_2\text{e} \times \frac{\text{me}}{2.5 \text{ kilograms CO}_2\text{e}} \times \frac{1,000 \text{ kilograms}}{\text{metric ton}} = 20,560,000 \text{ mowing events}$$

6. In the U.S., 23,500,000 children take the bus each school day on 450,000 buses, traveling 4.3 billion miles annually (almost 10,000 miles per bus). The average mpg for these diesel buses (90% of them are diesel) is 9 mpg, and diesel emits 10.1 kilograms per gallon. These buses therefore consume 477.8 million gallons (more than 11 million barrels of oil) and emit 4.8 million tons of CO₂e. This is less than 1/10th the emissions of junk mail production, distribution and waste disposal.
7. The average home emits 8,829 lbs. of CO₂e, or a little over 4 metric tons per year for home heating, according to the Rocky Mountain Institute.
8. Junk mail is the equivalent of very nearly 85,000 average long-haul (international) flights of a 747-400. Each passenger on a long-haul flight emits 0.32 kilograms per kilometer, or 121.3 total kilograms per kilometer. An average flight is around 5,000 kilometers, emitting 606,500 kilograms, or 606.5 tons CO₂e per flight. This equals 84,992 flights. This also equals one jet flying 425 million kilometers for the same emissions as one year of junk mail; or 10,624 times around the planet at the Equator.
9. Idling cars use 3.5 liters, or 0.92 gallons, of fuel per hour. That means they emit 8.13 kilograms of CO₂e per hour. It would take almost 2.5 million cars idling 24/7 for one year to emit as much as the emissions associated with the junk mail production, distribution and waste disposal system. (One car would emit .06 tons in one day, 20.76 tons in one year.)
10. National Poll Commissioned by the Center for a New American Dream and conducted from September 13-16, 2007, by Zogby International. The survey was administered by phone to 1011 likely voters nationwide. Findings from the survey have a margin of error of +/- 3.1%.

11. www.environmentalpaper.org/recycledfiberfactsheet/index.htm

12. The Direct Marketing Association's MailMatters Toolkit, www.the-dma.org/environment

13. www.41pounds.org/impact/default.asp

14. Center for a New American Dream calculation from Conservatree and U.S. Forest Service statistics.

