

How bad are disposable grocery bags?

Tuesday is the deadline for Seattleites to vote by mail on a proposed 20-cent fee on paper and plastic grocery bags. Here's a look at the environmental costs of bags — and the estimated impact of the fee, which the city says will halve use of throw-away bags. Nationally, we use 100 billion plastic bags and 7 billion paper bags a year.



PAPER VERSUS PLASTIC

Paper bags are made from wood, a renewable resource. Plastic bags are made from a byproduct of natural gas or oil refining. Plastic bags don't decompose and contribute more to litter, but have a smaller overall environmental footprint.

- PAPER**, per 1,000 bags
- PLASTIC**, per 1,500 bags*

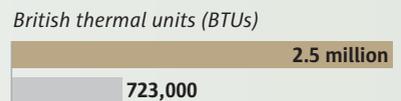
*1,500 plastic bags hold the same amount as 1,000 paper bags.



Water used in production



Energy used in manufacture and transport



Pollution from manufacturing

WATER



AIR



GREENHOUSE-GAS PRODUCTION

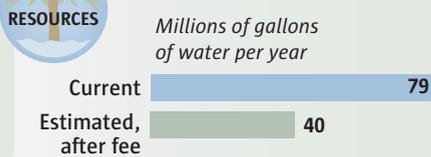


IN SEATTLE...

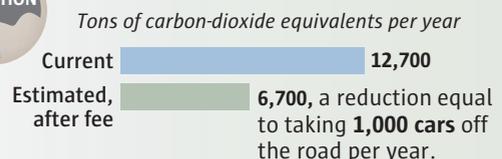
Seattleites use **360 million** disposable bags a year (292 million plastic, 68 million paper). That means, on average, each person in Seattle uses about **600** disposable bags a year.



Water used to produce Seattle's bags



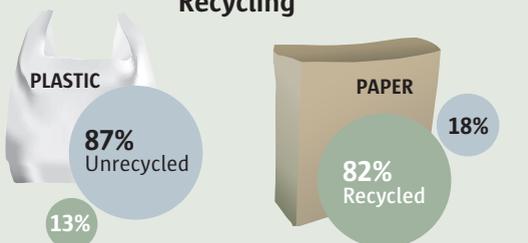
Greenhouse-gas emissions to produce, distribute and dispose Seattle's bags



Litter and garbage facts

- Plastic and paper bags account for **4.6 percent** by weight of roadside waste in Washington.
- Paper and plastic bags represent **1.2 percent** by volume of Seattle waste.
- Seattle spends **2.5 percent** (\$3.85 million) of its garbage and litter budget to handle bags.
- If the fee passes, the city says the 7,800 rail cars of garbage sent to the landfill each year would be reduced by **47**.
- Marine creatures, such as turtles, swallow and get entangled in plastic bags.
- Bits of plastic film are one of the most common types of ocean trash.

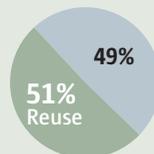
Recycling



- Seattle's plastic bags are shipped to Asia and recycled into decking and pipes.
- Seattle's paper bags are recycled into bags and corrugated cardboard.

Bag reuse

Though most plastic bags go unrecycled in Seattle, many people save them for other uses.



Reusable bags

It takes more energy and materials to produce reusable bags, but they have lower environmental impacts than any type of disposable bag **after just four uses**.

Three times the capacity and strength of a plastic bag.

Made from plastic, cotton or hemp.



Sources: Seattle Public Utilities; American Chemistry Council; "Alternatives to Disposable Shopping Bags and Food Service Items," Herrera Environmental; "Review of Life Cycle Data Relating to Disposable ... Grocery Bags," UseLessStuff Report; "Life Cycle Assessment for Three Types of Grocery Bags," Boustead Consulting; Washington State Litter Study, 2004; "Plastic Shopping Bags - Analysis of Levies and Environmental Impacts," Nolan-ITU; Algalita Marine Research Foundation; www.reusablebags.com

Reporting by SANDI DOUGHTON AND DAVID TURIM, Graphic by ALEX TRIBOU / THE SEATTLE TIMES

LINKS FOR MORE INFORMATION:

[Seattle Public Utilities](#)

[Use Less Stuff bag analysis](#)

[American Chemistry Council](#)

[Life Cycle Assessment for Three Types of Grocery Bags, Boustead Consulting & Associates](#)

[ReusableBags.com fact sheets](#)