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## Questions About Your Community: Shopping Bags: Paper or Plastic or . . . ?

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Did you know plastic grocery bags consume 40% less energy to produce and generate 80% less solid waste than paper bags? Did you know plastic bags can take 1,000 years to decompose whereas paper bags take about a month to decompose? The debate over whether plastic or paper bags are better for the environment has a long history and is often rekindled each time we check out at the grocery store when we hear that familiar question: Paper or plastic? Many of us have not been able to resolve this question, but there is an alternative --read on below.

There seem to be pluses and minuses on both sides of the debate. For paper bags, the life cycle stages consist of timber harvesting, pulping, paper and bag making, product use and waste disposal. For plastic (polyethylene) bags, the steps involve petroleum or natural gas extraction, ethylene manufacture, ethylene polymerization, bag processing, product use and waste disposal. In all of these steps, energy is required and wastes are generated.

Some more facts about these two products may help us to answer this age-old question:

- Plastic bags were first introduced in 1977 and now account for four out of every five bags handed out at grocery stores.
- Paper sacks generate 70 percent more air and 50 times more water pollutants than plastic bags.
- Paper bags are made from trees, which are a renewable resource. Most plastic bags are made from polyethylene, which is made from crude oil and natural gas, nonrenewable resources.
- 2000 plastic bags weigh 30 pounds, 2000 paper bags weigh 280 pounds. The latter takes up a lot more landfill space.
- It takes 91 percent less energy to recycle a pound of plastic than it takes to recycle a pound of paper. It takes more than four

times as much energy to manufacture a paper bag as it does to manufacture a plastic bag. Energy to produce the bags (in British thermal units): Safeway plastic bags: 594 BTU; Safeway paper bags: 2511 BTU.

- Paper is accepted in most recycling programs while the recycling rate for plastic bags is very low. Research from 2000 shows 20 percent of paper bags were recycled, while one percent of plastic bags were recycled.
- Current research demonstrates that paper in today's landfills does not degrade or break down at a substantially faster rate than plastic does. In fact, nothing completely degrades in modern landfills due to the lack of water, light, oxygen, and other important elements that are necessary for the degradation process to be completed.
- Incineration can decrease the quantity of plastic and paper bags. However, incineration causes air pollution and creates ash which has to be landfilled.

So, what is the answer, paper or plastic? NEITHER! Look into purchasing reusable bags or reusing your paper or plastic bags at the store. Reusing a bag meant for just one use has a big impact. A sturdy, reusable bag needs only be used 11 times to have a lower environmental impact than using 11 disposable plastic bags.

- In New York City alone, one less grocery bag per person per year would reduce waste by five million pounds and save \$250,000 in disposal costs.
- When one ton of paper bags is reused or recycled, three cubic meters of landfill space is saved and 13 - 17 trees are spared! In 1997, 955,000 tons of paper bags were used in the United States.
- When one ton of plastic bags is reused or recycled, the energy equivalent of 11 barrels of oil are saved.

Many grocery stores now offer for sale sturdy cloth grocery bags. Some of these stores even give you a little discount (e.g., five cents per bag) if you bring your own bag. So, keep a stash of reusable bags in your pantry or if you drive to the store simply keep them in your trunk.

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