Safe Alternatives to Plastic Bags

Providing environmentally safe and eco-friendly alternatives to plastic bags in order to improve water quality.

Tag Words: plastic pollution, water quality, reusable bags, safe alternatives.

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Summary

Our issue involves the negatives effects of plastic pollution on the quality of water in New Jersey. Our service project is a letter to Senator Lautenberg proposing a bill to ban the use of plastic bags at supermarkets and other retail establishments.
The Issue: PlasticBags

History (MB)
The importance of clean water is a relatively recent development. After WWII, industries began manufacturing and using synthetic materials such as plastic which are toxic and accumulate in the environment because they are not biodegradable. Many of these plastic byproducts find their way into our water systems either through direct dumping by companies or through groundwater runoff. For example, experts estimate that 500 billion to 1 trillion plastic bags are consumed and discarded annually worldwide. Unfortunately, there is no real standard as to how clean is clean but in 1972 the Clean Water Act was passed to prohibit polluting in navigable waterways and has improved water quality in the United States significantly.

Causes and Effects (AG)
The major chemicals that go into making plastic are highly toxic and pose serious threat to all living things. Some of the elements of plastic such as benzene and vinyl chloride are known to cause cancer while others are gases and liquid hydrocarbons. Plastic bags pollute soil and water and kill thousands of marine mammals yearly. They are not biodegradable. They clog waterways, spoil the landscape, and end up in landfills where they may take up to 1,000 years to breakdown, and in the process they separate into smaller and smaller toxic particles that contaminate soil and water. Furthermore, the production of plastic bags consume millions of gallons of oil that could be used for fuel and heating. Lastly, plastic bags also pose a serious threat to many birds, whales, dolphins, sea turtles and other marine mammals. Thousands die each year after eating discarded plastic bags they mistake for food. In addition to massive wildlife die offs, plastics are blamed for increased rates of cancers, physical birth defects, and mental retardation in humans living near polluted waterways.

Safe Alternatives (KH)
There is an immense need to improve environmental quality worldwide; government agencies and local businesses must take full advantage of the opportunities at hand. There is no way you can safely dispose of plastic waste. Plastic cases serious problems to the environment both during production and disposal. The only way to reduce the hazard is to reduce the use. Reusable shopping bags made from renewable materials conserve resources by replacing paper and plastic bags. They are convenient and come in a variety of sizes, styles and materials. Each high quality reusable bag that is used has the potential to eliminate an average of 1,000 plastic bags over its lifetime.
Service Project: Letter & Act

As our service project we wrote a letter to Senator Frank Lautenberg.

April 14, 2010

The Honorable Frank Lautenberg
324 Hart Senate Office Building
United States Senate
Washington, DC 20510

Dear Senator Lautenberg:

We as students at Rutgers University taking the class “Ethics in Science” with Dr. Julie Fagan (Fagan@rci.rutgers.edu) believe that there should be more strict policies banning the use of plastic bags and providing a more eco-friendly alternative in the state of New Jersey.

The Issue is as Follows:

The production of plastic carryout bags in the United States have significant and detrimental effects on the environment including water pollution and killing thousands of marine animals. It is estimated that at least 267 species of wildlife have been threatened by marine debris through ingestion or entanglement including sea turtles, fish, marine mammals, and various species of sea birds. Each year, an estimated 14 billion plastic carryout bags are used in the United States, of which only one percent are returned for recycling. Many plastic byproducts find their way into our water systems either through direct dumping by companies or through groundwater runoff. For example, experts estimate that 500 billion to 1 trillion plastic bags are consumed and discarded annually worldwide.

The major chemicals that go into making plastic are highly toxic and pose serious threat to all living things. Some of the elements of plastic such as benzene and vinyl chloride are known to cause cancer while others are gases and liquid hydrocarbons. Plastic bags pollute soil and water and kill thousands of marine mammals yearly. They are not biodegradable. They clog waterways, spoil the landscape, and end up in landfills where they may take up to 1,000 years to breakdown, and in the process they separate into smaller and smaller toxic particles that contaminate soil and water. Furthermore, the production of plastic bags consume millions of gallons of oil that could be used for fuel and heating. Plastics are blamed for increased rates of cancers, physical birth defects, and mental retardation in humans living near polluted waterways.

There is an immense need to improve environmental quality worldwide; government agencies and local businesses must take full advantage of the opportunities at hand. There is no way you can safely dispose of plastic waste. Plastic cases serious problems to the environment both during production and disposal.
As part of our bill we propose that supermarkets and other retail establishments reduce the volume of plastic carryout bags distributed to the customer. The establishments should not provide a paper carryout bag unless the store charges a green bag fee of no less than $.25. The establishment must provide an opportunity for these bags to be purchase conveniently. The department shall be responsible for the implementation and enforcement of these regulations. Any operator who violates the provisions of this shall be subject to a penalty of no less then $5,000 and no more then $10,000 for each offense.

The passing of a bill with this criterion would benefit many areas of the environment. Water quality, the lives marine animals, and the health of the human population would all see improvement with your help. We can not only preserve our environment, but preserve it for future generations.

Sincerely,

Katie Heffernan (katieh25@eden.rutgers.edu)
Melissa Benner (mbenner@eden.rutgers.edu)
Amy Gesser (agesser@eden.rutgers.edu)

AN ACT concerning plastic bags, and supplementing Title 13 of the Revised Statutes.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

This act shall be known and may be cited as the “Banning of Plastic Bag Usage Act.”

The Legislature finds and declares that:
a. The production of plastic carryout bags in the United States have significant and detrimental environmental impacts each year; using over 12 million barrels of oil, cutting down over 14 million trees, and killing thousands of marine animals through ingestion and entanglement;
b. Each year, an estimated 14 billion plastic carryout bags are used in the United States alone, of which only one percent of the plastic carryout bags are returned for recycling; and
c. Most plastic carryout bags when biodegrading become toxic, contaminating soil and waterways. Plastic and paper carryout bags take up a large volume of the waste in landfills;

The Legislature therefore determines that the State should require:
a. The operators of supermarkets and retail establishments to reduce the volume of plastic carryout bags distributed to the customer.
b. The operators to impose a $0.15 fee to discourage the use of plastic carryout bags.
c. The operators to provide an opportunity for a customer of the store to purchase a reusable bag.
As used in this act:
“Carryout bag” means a bag provided by a store at the point of sale for customers to carry their goods out of the store.
“Compostable plastic bag” means a plastic carryout bag that meets the current American Society for Testing and Materials International Standard (ASTM) D6400 for compostable plastic, as the standard may be amended from time to time.
“Department” means the Department of Environmental Protection.
“Manufacturer” means the producer of a plastic and/or paper carryout bag sold to a store.
“Operator” means a person in control of, or having daily responsibility for, the daily operation of a store, which may include, but is not limited to, the owner of the store.
“Plastic carryout bag” means a plastic carryout bag provided by a store to a customer at the point of a sale.

Editorials

To the Editor (AG):

Plastic bags have a negative effect on the environment, especially the quality of water. Most people use plastic bags almost every time they shop. A new revelation about “going green” has come about within the last few years and the introduction of reusable bags has been made within certain communities, but has yet to become mandatory. This negative effect on the rivers in local towns and larger bodies of water is 100% preventable. The solution is banning plastic bags from grocery and retail stores and replacing them with alternative, reusable cloth bags that do not hurt the environment.

A letter to the legislation is in the process of being composed. This letter will express our deep concern on the effect of plastic pollution on the environment that we love, water, and the health of the population. We will state our negative feelings towards the overabundant use of plastic bags. It will clearly propose how alternative materials or supplies for bagging should be mandatory and plastic bags, which hurt the environment, should become extinct.

The letter we will send will propose that we pass a bill to completely ban all use of plastic bags in New Jersey. We will provide a brief plan of action, which will mirror another state that has already become involved with the banning of plastic to prevent massive plastic pollution. If this bill to ban plastic bags gets passed, we are positive that we will see a change for the better in the quality of water, the environment, and many people’s lives.
To the Editor (KH):

Plastic pollution is a problem all over the globe; particularly it has a negative effect on water quality. Plastic pollution can cause serious health problems to both humans and animals. Plastic bags are used in a number of different grocery stores as the primary means of transporting purchased good from the store to the consumer’s home, where they are then discarded. If not properly recycled these plastic bags can add significantly to the pollution problem. They clog waterways, spoil the landscape, and end up in landfills where they may take up to 1,000 years to breakdown, and in the process they separate into smaller and smaller toxic particles that contaminate soil and water.

Our goal is to offer an alternative to plastic that can be used at grocery stores in an effort to significantly reduce plastic pollution thus improving water quality. We feel that making people more aware of the negative effects plastic has on the environment will encourage them to seek out alternatives. For our service project we plan to propose the idea of plastic alternative to our local legislation in an effort to improve the water quality and reduce plastic pollution in our surrounding areas. We plan to base our bill off a similar bill passed in Oregon. The letter will propose banning the use of plastic bags in grocery stores in New Jersey. Each high quality reusable bag that is used has the potential to eliminate an average of 1,000 plastic bags over its lifetime.

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To the Editor (MB):

Many plastic byproducts find their way into our water systems either through direct dumping by companies or through groundwater runoff. For example, experts estimate that 500 billion to 1 trillion plastic bags are consumed and discarded annually worldwide. The major chemicals that go into making plastic are highly toxic and pose serious threat to all living things. Some of the elements of plastic such as benzene and vinyl chloride are known to cause cancer while others are gases and liquid hydrocarbons. Plastic bags pollute soil and water and kill thousands of marine mammals yearly. They are not biodegradable. They clog waterways, spoil the landscape, and end up in landfills where they may take up to 1,000 years to breakdown, and in the process they separate into smaller and smaller toxic particles that contaminate soil and water. Furthermore, the production of plastic bags consume millions of gallons of oil that could be used for fuel and heating. Lastly, plastic bags also pose a serious threat to many birds, whales, dolphins, sea turtles and other marine mammals. Thousands die each year after eating discarded plastic bags they mistake for food. In addition to massive wildlife die offs; plastics are blamed for increased rates of cancers, physical birth defects, and mental retardation in humans living near polluted waterways.

There is an immense need to improve environmental quality worldwide; government agencies and local businesses must take full advantage of the opportunities at hand. There is no way you can safely dispose of plastic waste. Plastic cases serious problems to the environment both during production and disposal. As a service project I plan to propose a bill to New Jersey
legislators that will ban the use of plastic shopping bags. There is a similar bill that was passed in Oregon, which I plan to use as starting point for my project. Another alternative is use reusable shopping bags made from renewable materials conserve resources by replacing paper and plastic bags. They are convenient and come in a variety of sizes, styles and materials. Each high quality reusable bag that is used has the potential to eliminate an average of 1,000 plastic bags over its lifetime.