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Plastic Packaging vs. Alternatives: Comparing Environmental Impacts

by Plastic Packaging Perspectives | Feb 4, 2019 | Blog

Lower energy use and reduced greenhouse gas emissions are commonly recognized benefits of plastics. But a new report further expands the industry's understanding of how plastics play a role in other critical environmental factors, such as water consumption, solid waste, acidification, eutrophication, and ozone depletion.



PRODUCTION & FABRICATION
DISTRIBUTION & TRANSPORTATION
PRODUCT USE & DISPOSAL
RECYCLING & RECOVERY

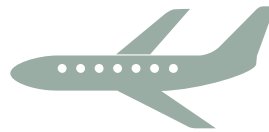
The study, [*Life Cycle Impacts of Plastic Packaging Compared to Substitutes In the United States and Canada: Theoretical Substitution Analysis*](#), concluded that replacing plastic with alternative materials in packaging throughout the United States would actually increase adverse environmental impacts in several key areas.



SAVES ENOUGH
ENERGY TO FUEL
18M
PASSENGER VEHICLES

1 Energy use

Using plastics in packaging applications requires less energy from both renewable and non-renewable energy sources than substitute materials.



SAVES THE WEIGHT OF
290K
JUMBO JETS WORTH
OF WASTE

2 Solid waste

The life cycle of durable, lightweight plastic packaging, including post-

consumer disposal, results in less solid waste.



SAVES ENOUGH
WATER TO FILL
461K
OLYMPIC-SIZE
SWIMMING POOLS

3 Water consumption

Production of plastic packaging consumes significantly less water than alternatives, including in the waste stream.



SAVES ENOUGH
GREENHOUSE GAS
EMISSIONS AS TAKING
8.5M
PASSENGER VEHICLES
OFF THE ROAD.

4 Greenhouse gas (GHG) emissions

The production and use of plastic packaging doesn't emit as much GHG as other materials.

5 Acidification

Emissions of acidifying substances contribute to the formation and deposit of acid rain on soil and water, which can cause serious harm to plant and animal life, including ocean acidification that damages coral reefs.



HELPS PREVENT THE ACIDIFICATION POTENTIAL
OF AS MUCH AS **292K** RAILCARS OF COAL

The unique nature of plastics, with its light weight, durability, flexibility, cushioning, and barrier properties allows plastic packaging to serve humankind more efficiently while helping to reduce a variety of environmental impacts. Despite these important benefits, America's Plastics Makers[®] recognize that plastic waste in the environment is unacceptable. We're working to build a more circular economy by using our plastics resources more efficiently, capturing and repurposing more post-use packaging, advancing recycling and recovery, and developing new transformative business models.