



# This Is Sustainable!

*Packaging Considerations for Transitioning  
from Plastic to Paper and More!*

## INTRODUCTION

With all the emphasis on sustainable packaging, it is surprising how many packaging choices make the claim that their packaging products are renewable and recyclable and yet they are not. The variance between claims and realities frustrate companies making costly decisions about how to safely package and market their product while they claim an “eco-friendly” title.

Carton Service CSI, LLC has been paying attention to the issue of sustainable packaging for 99 years now. Since the founding of this folding carton company in 1926, the topic of paperboard packaging advantages have been top of mind. Within the past twenty years, Carton Service has given special attention to the issue of paper over plastic and tried to provide solutions and data to help companies make their own strategic decisions on what type of packaging to use.

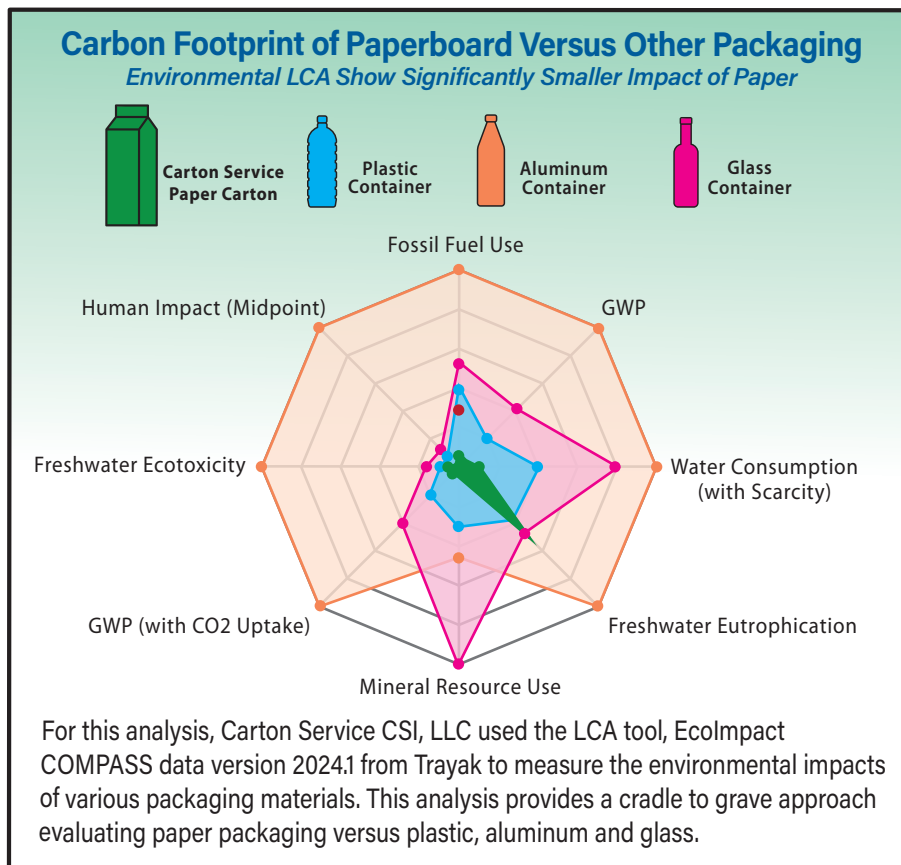
One data point to consider: The equivalent of a garbage truckload of plastic is essentially driven into the ocean every minute. (<https://www.weforum.org/agenda/2016/10/every-minute-one-garbage-truck-of-plastic-is-dumped-into-our-oceans/>). Another data point: In the United States, the Environmental Protection Agency (EPA) reports a recycling rate of just over 29% for plastic containers and packaging, while, on average, 45% of consumers believe their plastic is recycled. (<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/plastics-material-specific-data>).

## CARBON FOOTPRINT COMPARISON

You might intuitively realize that paperboard packaging is renewable, recyclable and made from sustainably sourced materials. It might make sense to tackle the increasing problem of plastic waste with another packaging type. But when you truly measure the difference, you can make a more impactful decision. The carbon footprint of paperboard packaging is based on indicators like fossil fuel usage, GHG emissions, water usage, freshwater eutrophication, mineral resource usage, human impact and freshwater ecotoxicity. Based on those factors, Carton Service has issued a Life Cycle Analysis using a tool from Trayak.

For the purposes of this analysis, a 32-ounce self-dispensing gable-top paperboard carton container of soap was compared to other container types. This particular container has its own opening and does not use a plastic cap dispenser. Carton Service CSI, LLC has patents and unique processes to create leak-proof, shower friendly containers which can contain viscous liquids like soap, shampoo and body wash as well as lubricants like motor oil. Plant-based milks, water, beverages and juices can also go in these containers.

The gable-top paperboard container was compared to a PET plastic container, an aluminum container and a glass container. In a 2021 AF&PA Access to Recycling Study done by the American Forest & Paper Association, it was determined that 64% of the US population had access to paperboard collection of liquid packaging cartons. For the purpose of this study, because EPA data sets are incomplete on the topic of household recycling, we used a 0% recycling rate. Even considering no recycling, the tiny environmental footprint of paperboard packaging speaks for itself.





**WE ARE THE  
SOAP IN  
A CARTON  
PEOPLE**

*PATENTED PROVEN SOLUTIONS*

### **LIQUID PACKAGING PATENTS**

Carton Service has expanded their current liquid packaging production facility in Shelby, Ohio with more equipment, process and people investment. “We’ve invested more than \$10 million in new offset and flexo printing, new skiving and sealing equipment and a new packaging laboratory which includes liquid filling equipment for speed-to-market test purposes (testing of traditional and non-traditional uses of liquid-filled cartons). This makes us one of North America’s few accredited printers and producers of liquid-filled direct contact gable cartons. It also makes us one of the most innovative companies because we create cartons for liquid contents no other company has attempted in North America such as soaps, shampoos, cleansers, lubricants and alcoholic beverages. We also have the patents for these unique containers” said company president Reid Lederer.

The latest patents obtained by Carton Service relate to more eco-friendly packaging choices which can contain many different contents such as soapy, viscous liquids like body wash and shampoo. These paperboard containers perform in wet environments without leaking or leaching. Shower friendly and leak resistant, these patented containers are made of unique substrates and contain extra sealing. Patented designs are available immediately. We also have ideas for test runs for gable tops and we can probably get your project from start to finish faster than most packaging companies. Unique contents are going to be found more and more often in paperboard containers and this will give consumer packaging companies a retail advantage while being environmentally sound.





Reid Lederer continues, “Carton Service associates embrace innovation, we would like to be the ‘supplier of choice’ for any liquids, whether traditional like milk, other dairy products and juices or non-traditional like soap/cleansers, drinking water and alcoholic beverages. With developing restrictions on single-use plastic, we believe more companies are considering paper over plastic and Carton Service intends to grow our Cartons4REarth style as the brand of choice. As we approach our 100th year in business, we continue to innovate, especially in the area of sustainable liquid direct contact containers.”





Issues surrounding circularity also come into play for CPG, Food, Health and Beauty as well as Pharmaceutical companies. Carton Service's US location can make a big difference. Lederer also comments, "We know that based on the school milk carton shortage at late 2023, there is a limited supply of North American printers and converters for liquid-filled cartons. We can confidently claim that even for high volume runs, we can provide needed solutions." In addition, Carton Service provides FSC® (FSC®C182277) certified products and also has a bronze Ecovadis sustainability rating. They also participate in industry wide thought leadership on the topic of sustainability with groups like the Sustainable Packaging Coalition.

Lederer continues "This is more than a mission to be a pollution solution, we intend to be sustainable packaging leaders and innovators into our next generation of Carton Service." Reid is currently the third generation of Lederer leadership of Carton Service. More about Carton Services' sustainability efforts can be found on its website: <https://www.cartonservice.com/blog/sustainabilityreport2024/>.

As the company's 2024 Sustainability Report says, "At Carton Service CSI, LLC, we care deeply about the future of our planet. It is why we've integrated sustainability into our corporate strategy. It is almost a luxury in today's chaotic business environment that includes supply chain challenges, workforce shortages, and a new pandemic paradigm that we can look squarely at the future and plan for reducing our environmental impact. And yet, this 'luxury' is, at the moment, one of the most important pieces of business planning we can do. We take seriously the statement, 'Be the solution, not the pollution' and our efforts lend themselves to this goal."

