

Minority Report in Opposition to Polystyrene Product Ban Proposed by the Green Packaging Working Group Task Force

The members of the Green Packaging Working Group Task Force who represent Maine businesses are strongly opposed to the proposed ordinance to ban polystyrene foam products developed by the Green Packaging Working Group Task Force. The following minority report outlines the basis for this opposition.

I. Executive Summary

The members of the Green Packaging Working Group Task Force who represent Maine businesses are strongly opposed to the proposed ordinance to ban polystyrene foam products developed by the Green Packaging Working Group Task Force for the following reasons:

- The Task Force did not properly account for the financial impact to businesses and consumers that would result from this proposed product ban;
- This proposed product ban will not address what appeared to be the primary concern of the majority of the Task Force – reducing litter;
- The process employed by the Task Force to develop this proposed product ban was flawed, resulting in an indefensible proposal to ban polystyrene products; and
- The Task Force and this draft ordinance misapprehend the nature of polystyrene foam and its impacts.

II. The Task Force Did Not Properly Account for the Financial Impacts of This Proposed Product Ban

Despite repeated requests by members of the Task Force who represent Maine businesses that the Task Force undertake an adequate analysis of the financial impacts of this proposed product ban, these requests were never heeded. The “economic analysis” employed by the Task Force involved telephone conversations with 24 managers at Portland restaurants and stores. There was also heavy reliance on the fact that the Town of Freeport passed a polystyrene product ban and “no business went out of business as a result of that ban.” This is hardly the level of analysis that is needed for a proposed product ban that will have an economic impact on a large number of Portland businesses.

Because the Task Force refused to conduct the proper economic analysis, there is no concrete sense of the number of Portland businesses that would be affected by this proposed product ban. Moreover, there is no understanding of how these businesses would be affected and how these impacts would ultimately be felt by Portland consumers. Further, because the Task Force made very little effort to work with Portland’s business community, business leaders did not have a sufficient avenue for their input into the Task Force process.

In the absence of adequate information, the City of Portland simply cannot act to ban polystyrene foam products and the business minority of the Task Force cannot support this proposed product ban.

III. The Proposed Product Ban Would Not Reduce Litter

Litter is a people problem, not a materials problem.

People litter. Those who would heedlessly toss a polystyrene cup on the ground would be just as likely to do the same with a plastic cup or a paper cup. Changing the form or composition of the container is not likely to change how people dispose of it.

As a result, eliminating polystyrene foodservice products (or any other product or material) would do little more than change the composition of waste that is generated and the litter that is found on our streets and waterways. Banning polystyrene food containers would not reduce the quantity of litter caused by the careless disposal of food containers generally.

In short, there is no environmentally acceptable form of litter. And focusing on one specific packaging type falls short of a comprehensive policy that is needed to address litter.

Unfortunately, too many initiatives to ban or severely limit the use of polystyrene foodservice products represent misguided attempts to deal with solid waste and litter issues, attempts that are usually destined to fail. Bans on specific products simply do not reduce solid waste or litter, for the key to reducing litter is changing human behavior, not changing the color or chemical composition of, say, a coffee cup.

Consider the history of this issue in California:

- In San Francisco, a litter study (subsequently audited) concluded that eliminating all food-related polystyrene would not reduce litter but would simply change the type of litter found. It showed, for example, that paper-cup litter of all kinds (hot, cold and other) increased from 1.82 percent of total litter in 2007 to 2.41 percent in 2008, while polystyrene cups decreased from 1.13 percent to 0.78 percent during the same period.
- The Santa Barbara City Council directed city staff to evaluate the merits of banning polystyrene foodservice products. Staff found that a ban on polystyrene would only be effective and have a net benefit to the environment if the foodservice ware was made from compostable material, and that any benefits could only be realized with a citywide organics collection and composting program – which the city does not have.
- In Carmel, a June 3, 2008 staff report found that since the inception of a 1989 ordinance banning polystyrene foodservice products, “the problem of food packaging waste litter has not improved.”

One noted environmentalist, Jean-Michel Cousteau, the founder of the California-based Oceans Future Society and the son of famed ocean explorer, Jacques Cousteau, wrote in 2005 that:

*California's beaches are a natural treasure and we need the public's help to protect them. But history teaches an important lesson: **bans don't work** [emphasis added.] If a community bans Styrofoam and plastic carry-out containers, coffee cups, picnic ware and similar items, we know what will happen: individuals and businesses will switch to other disposable products, such as glass, aluminum, and wax-covered cardboard. The amount of litter will not change, only its composition. That's why bans are overly simplistic and don't get to the real cause of the problem . . .*

Public education and stricter enforcement of existing litter laws, with appropriate penalties, would help remind both our fellow Californians and the thousands of visitors who come here each year that it is their personal responsibility and civic duty to keep California clean. Unfortunately, there will always be litterbugs among us. Bans have no effect at all on such people. Irresponsible human behavior cannot be addressed by eliminating products in society.

IV. The Process Employed by the Task Force Was Flawed

In July 2012, when the City Council was presented with a proposal to ban the use of polystyrene in food packaging applications, the Council's Transportation, Sustainability & Energy Committee created the Green Packaging Working Group Task Force and charged it with considering the merits of this proposal. At that committee meeting, there was extensive discussion regarding the composition of the Task Force as well as the Task Force's charge.

For months thereafter, the Task Force took no action on this issue; in fact, it did not meet for the first time until March 11, 2013. As soon as the Task Force commenced its work, the result – a polystyrene product ban – was inevitable and the Task Force raced to this result.

The process followed by this Task Force was flawed on numerous counts:

1. **The charge to the Task Force was flawed.** The purpose for creating a Task Force was to weigh evidence and determine whether municipal action was appropriate on this issue. At its first meeting, however, this body was instead charged with drafting an ordinance banning the use of polystyrene foam products, on the flawed assumption that circumstances warranted only this course of action.
2. **No process was created for weighing evidence regarding a proposed polystyrene ban.** The Task Force was so intent on crafting an ordinance to ban polystyrene products that it established no coherent process for discussing and weighing the merits of the proposal itself.
3. **The Task Force never defined its objectives.** In its haste, the Task Force drafted a proposed ordinance without first considering or stating what problem or problems it was attempting to solve. It is prudent to insist that this body first articulate what issue it is trying to address before imposing a solution.

4. **The Task Force did not consider the economic impacts of a product ban on the people and businesses of Portland.** As outlined above, in its rush to push through a polystyrene product ban, the Task Force did not conduct an analysis of the impact that such a ban would have on Portland businesses that use, ship or handle polystyrene products to determine the impacts of any limitations on the use of these products. It also did not hear testimony regarding the costs of such a policy to the many people of Portland who patronize these businesses.
5. **The Task Force Placed Unjustified Reliance on the Town of Freeport’s Polystyrene Ban.** Throughout the Task Force’s meetings, members repeatedly referenced the Town of Freeport’s polystyrene product ban. The Task Force, however, refused to acknowledge that this ban was instituted years ago due to concerns regarding chlorofluorocarbons in polystyrene, an issue that is no longer of concern and irrelevant to the proceedings of the Task Force.

In short, the Green Packaging Working Group Task Force was a vehicle designed to get to one predetermined destination. This was not a deliberative body that examined and weighed all the relevant evidence associated with this issue. Rather, this was a hollow proceeding designed to arrive at an intended result.

V. The Task Force and This Draft Ordinance Misapprehend the Nature of Polystyrene and its Impacts

A. Polystyrene helps reduce food waste

A common misconception is that polystyrene products pose a major problem in municipal landfills. Rather, polystyrene helps solve a major problem in municipal landfills. According to the U.S. EPA and other credible sources, all polystyrene foodservice (foam and non-foam) cups and containers account for less than **1 percent** by weight and volume of the municipal solid waste stream. By contrast, the largest single contributor to total municipal waste is “organics” – i.e., food scraps and yard trimmings – which constitute **20 percent** of the solid waste stream.

Polystyrene food service products have been used safely for more than a half of a century in food contact applications. The reason they have proven so popular for so long **is because they work**. Polystyrene is more effective at preventing food spoilage and contamination than other materials that have been used for this purpose. Another reason to prefer polystyrene over other materials for transporting food and drinks is that, unlike other substances, it does not impart foreign odors or tastes to the food it holds.

In short, polystyrene does not break, does not spill, and does not make food taste funny. In all these ways, it helps limit the amount of food that Americans waste or throw away, thus helping reduce the amount of organic wastes that are currently clogging our landfills.

While some may argue that organic waste breaks down in the environment faster than polystyrene, it is important to note that modern municipal landfills are not composting facilities. In fact, the trend in landfills today, enforced by strict state and federal regulations, is to foster anaerobic environments where nothing breaks down readily, so as to reduce odors, runoff and excessive methane emissions.

B. Polystyrene itself is “greener” than most people realize

Besides helping to reduce food waste, polystyrene has another important advantage over other food-packaging alternatives: it scores well in terms of its environmental footprint as measured over the total life span of the product.

To evaluate sustainability of a foodservice product, the total environmental impact of this product over its entire life span must be analyzed, through a process called Life Cycle Inventory (LCI). LCI measures all the various environmental impacts a product creates, both directly and indirectly, across all phases of the product's life cycle. In this way LCI provides a cradle-to-grave picture of a product's environmental attributes, from raw material extraction and manufacturing to post-use recovery or disposal.

In a peer-reviewed February 2011 study, Franklin Associates, one of the most highly regarded LCI practitioners in North America, found that commonly used cups, plates and sandwich containers made of polystyrene foam use significantly less energy and water than comparable paper-based or corn-based (polylactic: PLA) alternatives, primarily due to polystyrene foam's much lower weight.

That 2011 study compared average-weight polystyrene foam, paperboard and PLA cups used for hot (16 ounce) and cold (32 ounce) drinks, 9-inch dinner plates and "clamshell" sandwich containers. Researchers modeled energy consumption, water use, solid waste (by weight and volume) and greenhouse gas emissions for each product resulting from production, transportation and disposal. Some key findings include:

- Energy use: the manufacturing of polystyrene foam products consumes significantly less energy than the alternatives—half as much as wax-coated paperboard cups and one-third as much as PLA clamshells.
- Water use: the manufacturing of polystyrene foam products likewise uses significantly less water than the alternatives—up to four times less than PLA clamshells.
- Solid waste: Polystyrene foam products create significantly less solid waste by weight than the alternatives—up to five times less than paperboard and PLA products. Comparisons by volume vary widely:
 - Polystyrene foam cups for hot drinks create less waste by volume than the alternatives – significantly less than paperboard cups with corrugated sleeves used for insulation.

- Polystyrene foam cups for cold drinks create similar waste by volume as plastic coated paperboard cups and significantly less than wax coated paperboard and PLA cups.
- Heavy duty polystyrene foam plates produce more solid waste by volume than the alternatives, while lighter duty polystyrene foam plates create similar waste by volume as the paperboard counterparts.
- Polystyrene foam clamshells create slightly more waste by volume than paperboard clamshells and half the waste by volume of PLA clamshells.
- Greenhouse gases: Comparisons of greenhouse gas emissions vary widely depending on assumptions made about the degradation of paperboard products. Specifically, if paperboard products are prevented from degrading after disposal, they store carbon and generate *fewer* greenhouse gas emissions than polystyrene foam products; however, if paperboard products are allowed to degrade to the maximum extent, they instead would generate *more* greenhouse gas emissions than polystyrene foam products.

In general, the study’s authors found that lower-weight products with similar functionality—such as polystyrene foam products composed of more than 90% air—generally produce smaller environmental burdens than heavier-weight alternatives. Because paperboard foodservice packaging products are generally heavier than foam products, in most cases they have environmental burdens that are higher than or comparable to corresponding polystyrene foam products.

For example, an average weight 16 oz. hot-beverage cup made of plastic-coated paper weighs almost three times as much as a comparable 16 oz. polystyrene foam cup. (Air comprises approximately 90 -95% of a foam cup or container, while paper comprises 89-95% of a typical plastic-lined paper cup.) Because of this high air content, polystyrene foam also affords exceptional insulation. This, combined with the fact that polystyrene foam cups are stronger than paper cups, discourages other wasteful practices such as “double-cupping” paper cups or requiring insulating cup sleeves.

Finally, it is sometimes argued that polystyrene is not recyclable – **that is not true**. As a thermoplastic, polystyrene can be completely recycled, and both foam and non-foam polystyrene products are technically very easy to recycle, if collected as apart of an integrated solid waste management strategy. Polystyrene manufacturers have cooperated with hundreds of communities in the U.S. and Canada to collect and recycle polystyrene, through curbside as well as drop-off recycling programs.

What limits polystyrene recycling today are the same factors that curtails food packaging recycling generally: contamination and transportation costs. To be effectively recycled, food containers should first be thoroughly cleaned, a responsibility that many municipalities are not yet ready to adopt. Also, the light weight of polystyrene products, especially foam, can make it uneconomical to ship polystyrene long distances for recycling.

As recycling technology advances, and as polystyrene recycling becomes more widespread, these issues will tend to become less daunting. In the meantime, the fact that most alternatives to polystyrene are made from multiple materials – paper cups, for example, are typically coated with polyethylene plastic or wax – often makes them harder to recycle than polystyrene alternatives.

C. Polystyrene is not toxic

A wave of confusion about the safety of polystyrene foam foodservice products has swept over the U.S., following the recent release of the “12th Report on Carcinogens” by the National Toxicology Program’s (NTP), a division of the U.S. Department of Health and Human Services (HHS).

In that report, dated June 10, 2011, styrene was listed for the first time as “reasonably anticipated to be a human carcinogen.” (Note the use here of the word “anticipated,” rather than “proven.”) No other government agency outside the United States has endorsed this supposition. In fact, agencies from the European Union, Canada, Japan and Hong Kong have all conducted similar studies on styrene and completely disagree with the NTP’s conclusion. Even the NTP itself cautions that the fact that substances are listed in its own report “does not establish that such substances present a risk to persons in their daily lives.”

But more importantly, polystyrene is not styrene (or vice versa).

Styrene is a clear, colorless **liquid** that occurs naturally in foods such as cinnamon, beer, steak, coffee beans, peanuts, strawberries, and wheat. Polystyrene is a **solid plastic** created through a chemical process in which styrene is polymerized. As the NTP itself explains, “Although styrene, a liquid, is used to make polystyrene, ... we do not believe that people are at risk from using polystyrene products.”

Since the release of the NTP study, news reports have made much of the fact that trace amounts of liquid styrene can in some circumstances leach into food contained in rigid polystyrene food containers or foam polystyrene cups. (*All* containers, by the way, have ingredients that leach into food.) One study showed that a foam cup, for example, could release 5 to 10 *parts per billion* of styrene into the food contained therein. But compare this amount with the styrene to be found in various foods themselves:

Food (with no packaging contact)	Range of styrene exposure (ppb)
Beef	5.3 – 6.4
Beer	10 - 200
Cinnamon	170 – 39,000
Coffee beans	1.6 – 6.4
Peanuts	1.2 - 2
Strawberry (one)	.37 – 3.1
Wheat	.4 - 2

In other words, if you ate 15 strawberries out of a polystyrene cup, you could ingest 5 to 10 times as much styrene from the strawberries themselves as from the cup. If you drink beer from the same cup, you could consume **up to 40 times** as much styrene from the beer itself as from the polystyrene cup holding it.

Even so, most of the styrene we ingest on a daily basis comes not from our food, but from the air we breathe. Studies indicate that between 90 and 99 percent of the styrene we take into our bodies comes from breathing polluted air, while only 1 to 10 percent comes from the food we eat.

Finally, to put these trace amounts of styrene into perspective, keep in mind that the U.S. Occupational Safety & Health Administration (OSHA) sets standards for the amount of chemical exposure it deems to be safe in the workplace. In the case of styrene (not polystyrene), OSHA recommends limiting styrene exposure to 50,000 parts per billion in an eight-hour period – the equivalent of eating approximately 30,000 strawberries or drinking 500 beers.

D. There is no emergency that justifies this hastily proposed product ban

The U.S. chemical industry is one of the nation's most pervasively regulated industries. If chemicals are not managed safely, they can have health and environmental consequences. But polystyrene and other plastics have been used safely for more than 50 years in food contact applications with no validated scientific evidence that they pose any human health concerns.

Polystyrene foodservice disposables meet stringent U.S. FDA standards for use in food-contact packaging. The U.S. FDA, which regulates plastics used in food contact applications, and the National Academy of Sciences and other federal authorities rely not on opinions but on the weight of validated scientific evidence when evaluating safety and efficacy. That evidence overwhelmingly supports the safe use of polystyrene in food contact applications.

Polystyrene is safe. Polystyrene is “green.” If there were any scientific evidence to suggest that polystyrene was causing harm to Portland residents, we would support efforts to find a replacement. But there is no need, and no reason, for the City and its residents to suffer the costs and consequences of banning a substance that has no harmful effects.

And there is certainly no need, or cause, to rush this matter through the City Council.

VI. Conclusion

For the foregoing reasons, the members of the Green Packaging Working Group Task Force representing Maine business interests cannot support this ill-conceived polystyrene foam product ban.