SCIENCE FICTION

LESSONS FROM PORTLAND S BAN ON POLYSTYRENE FOAM

by Angela Eckhardt

In the summer of 1988, City Commissioner Bob Koch introduced an ordinance to ban polystyrene foam (PSF, a.k.a. Styrofoam) in the fast food industry, then quickly withdrew it. Koch discovered that the alleged environmental problems with PSF (commonly known by the trade name Styrofoam) did not exist and mandating the use of substitute products could increase pollution and costs.

However, Commissioner Earl Blumenauer, backed by environmentalists, took up the banner. After months of heated debate, the city council prohibited the use of foam containers for take-out food and beverage. The latest data, however, show that Commissioner Koch was correct: instead of solving problems, Portland's law actually hurts the environment, while driving up costs to businesses and consumers.

The ban on PSF responded to concerns that are no longer issues or never were. Proponents argued that chloroflorocarbons (CFCs), the chemicals believed to deplete stratospheric ozone, were released in the production of PSF. However, according to the city's own 1988 Task Force Report, 90 percent of foam cups were not produced with CFCs, and in 1988, less than 2 percent of national CFC use came from PSF production. Outlawing PSF was a highly ineffective way of combating ozone depletion, and is even more so today: no CFCs have been used in PSF production since 1990.

Ban proponents also wanted to address post-consumer waste. They complained that foam products were not being recycled. Yet before the ban was passed, the Portland-based Denton Plastics was collecting foam from 12 school lunch programs and nine McDonalds, processing an estimated 20,000 pounds of PSF a month. Adoption of the ban helped end that program.

While still hindering PSF recyclers, the ban has not stamped them out. AJP Northwest currently recycles foam from nearby community colleges; non-profits are exempt from the ban, as PSF is far less expensive than the alternatives. Meanwhile, the substitute products that businesses were forced to use coated paper or #6 clear plastic are routinely thrown away, being nonrecyclable.

Many feared that PSF was filling up the city dump. In 1988, Portland's Reidell landfill was approaching capacity and the NIMBY (Not In My Back Yard) factor was making it difficult to find a new landfill site. However, William Rathje of the Garbage Project, the most extensive study of landfills to date, showed that fast-food pack-

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Cups made of coated paper are not recyclable.

aging whether paper, foam, or plastic amounted to no more than 0.3 percent, by volume, of an average landfill.

Critics of PSF also worried it would never break down in a landfill, but the vast majority of organic matter never breaks down under landfill conditions. As for the local landfill crisis, that shortage has passed. Even Lee Barrett, a manager in Portland s solid waste program and the city s long-time enforcer of the ban agrees. Private investments since the late 1980s have resulted in a glut of landfill space that is not likely to go away for decades.

Ban proponents also noted that foam litters city streets. Yet littering is a cultural problem, not easily addressed by government mandates. The ban merely changes the type of trash thrown.

Finally, environmentalists asserted that littered foam pieces harm wildlife when ingested. Yet no one has ever substantiated this claim. According to Defenders of Wildlife's Sara Vickerman, who investigated the topic at the time of the debate, the material appears to simply pass through an animal.

The large-scale failure of Portland's polystyrene foam ban is compounded by its several unintended consequences. In 1990, Franklin Associates, an independent environmental research firm, found that the manufacture of paper cups resulted in 42 percent more water pollution, 46 percent more air pollution, and 75 percent more industrial waste than that of foam cups. Made predominantly of air, foam requires 30 percent less energy to produce than paper. Although PSF uses fossil fuels in its structure, paper uses more such nonrenewable resources in its manufacturing so that both use virtually equivalent amounts of fossil fuels.

Because PSF requires less raw material and less energy to produce, it is substantially less expensive than the paper alternatives. The extra expense to businesses and consumers is significant; one downtown sidewalk food stand, for instance, pays over $4,000 a year in excess costs to purchase non-foam products.

With over 2,700 licensed food vendors affected by the ban, it is estimated that the annual cost of compliance is between $3.3 and $3.9 million a year,(*) for no environmental gain. Moreover, there are opportunity costs: the money wasted on the ordinance is money not available for improved food service, wages to workers, or disposable income to consumers.

The waste of money and resources is hastened by the fact that paper is used at a faster rate. Because paper is a poor insulator, double cups, java jackets, and extra napkins are routinely used to protect hands from hot beverages.

Last summer, the city realized that the foam ordinance, though passed, was never codified. The council voted to codify the ban. Re-allowing foam use, officials explained, would undermine their upcoming requirement that certain food-waste generators begin composting. The city had yet to conduct a study of the costs and benefits of mandatory composting.

More significantly, Portland s foam ban represents an emotional topic, making it difficult to challenge. While recognizing that the original logic behind the ban no longer makes sense, city officials applauded the ban, calling it a pioneering effort, a Portland icon, and a symbol of the city s commitment to the environment.

By continuing to allow the city ordinance to go unchallenged, Portland s ban opens the door to similar misguided legal measures statewide. In August of 1999, Oregon City considered passage of a foam ban modeled on Portland s ordinance. Fortunately the proposal did not gain popular support.

Portland s experience provides an important lesson: emotion is no replacement for scientific fact when legislation is concerned. All environmental policy, whether well-intentioned and pioneering or not, should be subject to scientific scrutiny.

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(*) The lower figure was calculated on the assumption that 20 percent of the estimated 2,772 total affected businesses were high-volume users (spending $4,000 a year), while the remaining 80 percent spent an average of $500 a year. The higher figure again assumed 20 percent high-volume users, with 60 percent mid-range ($1,000 a year) and 20 per