

Why We Won't Recycle Styrofoam

At the County Commissioners meeting on December 13th, a local councilwoman asked about polystyrene recycling and if the County has investigated a program. Here's the answer:



Expanded polystyrene (EPS), also known as Styrofoam, is a lightweight and versatile material that is commonly used in packaging, insulation, and disposable food containers. While it is convenient, inexpensive, and provides good insulation, it is not biodegradable and can take hundreds of years to decompose. As a result, it poses a significant environmental threat to ecosystems, wildlife, and human health.

Despite its harmful effects, recycling EPS is not economically or environmentally sustainable. EPS is difficult to recycle due to its low density, fragility, and inability to hold its shape during the recycling process.



It therefore requires specialized equipment and transportation, which adds to the cost, labor needs, and carbon footprint of the recycling program. Large industrial models of EPS densifiers can cost on average up to \$50,000 or more, and we have seen costs of \$62,500 and \$80,000 for the purchase of the machine and storage needs in communities that have implemented such programs. It is important to note that some densifiers may require additional equipment or modifications to be fully operational, which can also add to the overall cost. There is also a lack of demand for recycled EPS in the market, which makes it less profitable for recycling companies to invest in. This means that the cost of recycling EPS exceeds the value of recycled material, resulting in a net loss for recycling programs.



While an EPS recycling program may seem like a viable solution to reduce waste and protect the environment, it is not economically or environmentally feasible in Burlington County. Instead, efforts should be focused on reducing the use of EPS and finding sustainable alternatives that are biodegradable and easily recyclable. For instance, On January 18th, 2022,

Governor Murphy signed P.L. 2021, c. 391 [N.J.S.A. 13:1E-99.135-157], requiring manufacturers to meet minimum recycled content requirements for regulated containers and packaging products sold or offered for sale in New Jersey beginning on January 18, 2024. The law also prohibits the sale of polystyrene loose fill packaging (commonly known as packing peanuts). The overall goal is to see less EPS in the



waste stream. Providing more avenues for recycling this EPS incentivizes the manufacturers to continue the cycle of producing this environmentally harmful material rather than investing in long term solutions and readily recyclable options.

Below are more reasons why recycling EPS is not a sustainable long-term solution despite seeming like a solution to reduce waste.

1. Recycled EPS has limited demand and use. Most recycled EPS is compressed into dense blocks or pellets, which are used primarily in the production of new Styrofoam products. However, the market for recycled EPS is relatively small compared to other recycled materials such as plastic or paper, which can be used in a wider range of products. This limited demand means that recycling EPS is not a profitable or sustainable solution.
2. The process of recycling EPS is energy intensive and costly. EPS is a petroleum-based product, and it requires a significant amount of energy to melt it down and reform it into new products. This process also produces greenhouse gas emissions, which contribute to climate change. The cost of recycling EPS is often higher than the cost of producing new EPS products, which makes it less desirable to manufacturers.
3. There are environmental concerns associated with EPS in and of itself. EPS is not biodegradable, which means that it can take hundreds of years to decompose in a landfill. It also releases toxic chemicals when burned, which can contribute to air pollution. While recycling EPS can help to reduce waste, it does not address the environmental concerns associated with the production and disposal of EPS products.



In conclusion, while recycling EPS may seem like a positive solution, it is not a sustainable long-term solution due to limited demand, energy costs, and environmental concerns. Instead, we should focus on reducing our use of EPS products and finding alternative solutions that are more sustainable and environmentally friendly.

If you have any questions, please do not hesitate to reach out.

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