



**Testimony of Julie Silverman, Lake Champlain Lakekeeper
Conservation Law Foundation Vermont**

Before the Senate Committee on Natural Resources and Energy

February 1, 2024

Good morning Chair Bray and Members of the Committee,

Thank you for the opportunity to testify on our recommendation to include provisions in S.213 to prevent plastic foam from further polluting Vermont waterways in an era of climate change. For the record, my name is Julie Silverman and I appear before this Committee as the Lake Champlain Lakekeeper with the Conservation Law Foundation (CLF). For background, I'm an advocate that engages and inspires people to protect, restore, and preserve Lake Champlain, its tributaries, and the greater watershed while keeping an eye on clean water issues around the state. I've worked on Lake Champlain watershed issues for close to three decades—including working for the Agency of Natural Resources (ANR) Lakes & Ponds Aquatic Invasive Species program (AIS).

- CLF is in full support of S.213. I know you have heard a great deal of testimony about how climate change has increased frequency and severity of storms that has led to devastating flooding causing the destruction of homes, schools, businesses, roads, etc. In addition to this, extreme wind, large waves, dramatic fluctuation of water levels (flooding) and battering rams, like driftwood and ice, are causing additional destruction in their pathways—including damage to shoreland structures like docks, which increases the amount of marine debris in our rivers, lakes, and ponds.
- I've spent a large portion of my life sailing, fishing, kayaking, wind surfing, swimming, and working on Vermont's lakes, rivers, and ponds. I can tell you firsthand the amount of marine debris and plastic pollution has gone up dramatically. During every beach cleanup I've done in Vermont a significant proportion of the plastic pollution is foam—from the tiny foam beads smaller than your pinky nail to 3' blocks—much of it from antiquated docks that are “unencapsulated,” exposed or “loose-bead plastic foam” for floatation.
- Many dock owners elect not to take their docks out seasonally. Depending on the design of the floatation, either the docks freeze into the ice or are lifted up by the ice. This

worked well when we had consistent “normal” cold winters. With climate change and the weekly freeze thaw cycles, docks are being damaged by the ever-changing water levels, the wind breaking up the ice, smashing it into the docks and ripping holes into the floats or breaking up the foam blocks. The old dock systems cannot hold up to the pressure from climate change. We need to use climate resilient dock systems and mitigate against old polluting structures.

- Plastic Foam is polluting Vermont waters: Plastic foam (expanded polystyrene) also known as Styrofoam®, is very brittle. It breaks off outdated and abandoned docks, buoys, and moorings pollutes our rivers, lakes, and ponds harming wildlife, trashing beaches, and degrading water quality with toxic chemicals. Plastic and plastic foam from docks break up into smaller and smaller pieces but never go away or biodegrade.
- Plastic Foam is harming Vermont wildlife: Research studies document plastic—including dock foam—in the digestive tracts of Lake Champlain creatures running up the entire food chain from invertebrates to fish to birds. Microplastics block and injure the GI tracts of animals that eat it, often filling their guts and starving them to death. Chemicals that go into dock foam—such as styrene, benzene, and ethylbenzene—can leach out and act as toxins that harm the health of people and animals.
- Plastic Foam is polluting Vermont shorelands: When these older foam blocks break down, or the tiny loose beads spill out, it is nearly impossible to collect all of the pieces. That means we are stuck with that pollution—and the risks posed to our ponds, lakes, rivers, wildlife, and human health—for decades to come. These blue, pink, and white foam pieces are found polluting Vermont’s waterways from Lake Champlain to the Connecticut River, making dock foam pollution a state-wide problem.
- Plastic Foam is polluting Vermont beaches: Clean beaches are critical climate refuges and sanctuaries where people swim to cool off during increasingly hot summers months—disproportionally affecting Vermonters that have no other way to cool down.
- Dock floatation plastic foam blocks (termed “unencapsulated foam”) and “loose bead plastic foam” (loose micro beads within encapsulated plastic, are almost impossible to repair. If a plastic float filled with loose bead white foam cracks or gets a hole the beads spill out polluting the water. If you manage to get the sinking float out to the water to repair the breach, it is almost impossible to empty all the water out of the float without dumping plastic foam out as well. Replacement with foam-free floats is the best option. To be clear, docks are not the problem. It’s the foam. Docks with unencapsulated foam are likely older or abandoned, as many dock manufacturers no longer sell that product. This is why we recommend that the legislation include language that all repairs must be with encapsulated durable (at least 10 years) alternatives.

- Modern commercially available alternatives to foam blocks and loose bead foam dock floatation have been available for decades. It is astonishing to many dock owners and commercial dock retailers when they discover that there is no law in Vermont that prohibits non-encapsulated foam dock floatation. Indeed, most believe hearsay that there is already a law on the books. The language we are recommending bans the sale of unencapsulated foam dock floats, non-encapsulated foam mooring buoys, non-encapsulated foam navigation marks, and loose bead floats.
- Five states, nine municipalities and four other regulatory agencies have already passed legislation and regulations banning the use and sale of non-encapsulated foam floatation. Canada is currently leading the way in banning foam dock floatation and all polystyrene uses in Canadian waterways. These regulations are spurring Canadian manufacturers to innovate and develop new products and are therefore leading the industry of foam-free docks. Vermont led the way with Act 69 banning the use of foam food service products, but we have fallen behind on banning the use of polluting expanded polystyrene in other areas. This language we are recommending will bring Vermont into the modern age of dock floatation and keep polluting and harmful plastics out of our waters in an era of climate change.
- New York drafted two bills (S.4974 and A.8142) that their Legislature is currently considering. These bills would prohibit unencapsulated, expanded or extruded (different types of plastic foam) polystyrene in floating docks, floating platforms, and buoys on both lakes and rivers statewide. A.8142 contains provisions targeting the sale and distribution of unencapsulated polystyrene. It would be a major win for the health of Lake Champlain if both Vermont and New York passed legislation to reduce plastic dock foam pollution.
- Replacing plastic foam dock floatation makes economic sense. Over a 30-year period, encapsulated floatation will save floatation owners money, and swapping foam filled floats to air filled floats (the preferred alternative) will cost less or roughly \$500–700 more than replacing unencapsulated plastic foam (see Connecticut River Conservancy Dock floatation replacement options table).

To summarize, marine debris pollution is a major climate issue. After the July and December 2023 flooding events, more and more marine debris—including dock foam—washed into Vermont’s waterways and waterbodies.

CLF supports and recommends incorporating language, resembling the template in H.373, into S.213 because it makes sense for Vermonter’s health, for Vermont’s water quality, and for Vermont’s wildlife in a changing climate.



This concludes my testimony. Thank you again for the opportunity to speak before this Committee.



Dock Replacement Options

Plastic foam is often perceived as a cheap and easy-to-install option for dock owners. However, with a closer look at the lifetime costs and benefits of plastic foam in this chart, it becomes clear that alternatives such as encapsulated foam, barrels or compressed air, provide a cheaper option for dock owners and better deal for our environment. Animals in and along the Connecticut River burrow into plastic foam or break it off, creating microplastics in the waterways that never fully break down. This presents a danger to our environment and its inhabitants. It's time to consider the real costs of plastic foam in our waterways and **SWAP YOUR DOCK!**

Visit ctriver.org/swap-your-dock to learn more about how you can help prevent plastic foam pollution!

Floatation Materials	Pros	Cons	Upfront Cost for 4'x10' Dock Floatation	Expected Lifespan	Estimated Cost of Replacement Over 30 Years
Un-encapsulated plastic foam (Polystyrene)	Minimal upfront costs, widely available.	Animals can damage material by boring into the foam, creating hazards for aquatic species and microplastic pollution in rivers and oceans. Illegal in some areas.	\$270	10 years	\$1,080
Encapsulated plastic foam	Eliminates plastic foam pollution and can be made from recycled materials.	Can suffer damage from animals chewing, weep holes and boat contact.	\$400	35 years	\$400
New 55 Gallon Barrels	Float high in the water and are easy to transport. Can withstand harsh weather and ice.	Can be time-consuming to assemble at home. Raises docks to a higher level and can be unstable.	\$215 for new barrels	40 years	\$215
Used 55 Gallon Barrels	Reuse of existing materials, durable and very inexpensive/easy to find used. Can withstand harsh weather and ice	May come in varying condition if obtained used. Could potentially leach chemicals depending on former contents. Raises docks to a higher level and can be unstable.	\$30 - \$50 for reused barrels	30 years	\$40
Pre-assembled Docks					
Air in Molded Polyethylene Cubes	Produced from High Density Polyethylene, which is recyclable and can be produced through a zero waste manufacturing process. Easy to assemble and come with a lifetime warranty from most sellers. Needs no additional dock surface.	Higher upfront costs. Can be unstable without additional dock support.	\$850-\$1,600	Lifetime warranty (50+ years)	\$1,000
Aluminum Floating Dock with Resin Top (encapsulated foam)	Provides a complete kit for assembling docks without other materials.	High upfront costs. Subject to damage from animals and forms of contact.	\$1,500	40 years	\$1,335

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