

January 12, 2021

Dear Mr. Elvin, Mr. Turner and the Commissioners of the MVC,

We feel it is our duty to discuss just one of the potential negative and irreversible environmental consequences of the 2.7-acre synthetic field being proposed by the MVRHS and Huntress Associates. We want you to know that microplastic contamination of the shellfish beds of the Vineyard could change the fabric of our community. I believe in:

*Preserving and enhancing the shellfish resources of Martha's Vineyard, including the habitat and good water quality they require, for the social, economic and ecological wellbeing of the Island community.*

We believe that we must advocate for projects, programs and initiatives which will improve the habitat and water quality parameters that shellfish need so that Islanders may continue to benefit from their services. This mission is not dissimilar from that of the Martha's Vineyard Commission which is, in part, "To ... Protect and enhance the islands' environment, economy, character, and social fabric." Shellfish, both wild and farmed, are vital to the Vineyard. They provide:

1. *Ecosystem services* (water filtration, trophic transfer of nutrients, habitat creation)
2. *Income and economic activity* all year round
3. *Nutritious sustenance*, harvested in a sustainable manner
4. *A gathering place* for friends and families to connect with their food, the environment, while building memories and traditions

Microplastic pollution could impact the viability of the shellfishing industry by:

1. Reducing the survival of juvenile shellfish in the two MVSG hatcheries on Lagoon Pond
2. Reducing the health and reproduction of wild shellfish populations
3. Reducing the demand for Vineyard shellfish in light of microplastic-related health risks

Microplastic pollution is well documented throughout the world and comes from many, many sources. Microplastics, by definition, are so small that they cannot be removed from the water once they have been released, so prevention is the key. Once in the environment, they are mistaken as food by animals. Uptake of microplastics has been found in more than 100 marine species, from zooplankton to shellfish to whales. These microplastics will be shed from the shock-absorbing pad, the woven backing and the plastic "grass" blades themselves, as the plastic field system naturally wears over time. Tiny shreds of plastic will be carried away from the athletic field by wind and rain, through the soil and through the air, possibly contaminating the soil, the aquifer and eventually the ponds. Once in the water, they may circulate around the globe until they are consumed by a sea creature.

All plastics concentrate toxins from the environment which, especially in the case of tiny microplastics, gives those toxins a pathway into the food chain. Once in the food chain, the toxins

are made available for human exposure through consumption of seafood and even sea salt. Plastics also leach toxic additives into the environment. The alarming truth is that there is a lack of transparency regarding the chemicals that go into plastics (i.e. to make it durable) and also the chemicals that are used to assist in the manufacturing process (i.e. to smooth the surface during extrusion). This lack of information prevents consumers and regulators from fully understanding the risks. Substances found in marine animals exposed to microplastics include, but are not limited to, polyaromatic hydrocarbons, phthalates, bisphenol A (BPA), nonylphenol and phenanthrene, Triclosan, PBDE-47 and PFAS (per-and polyfluorinated substances of which there are over 5,000). It is hard to make informed decisions without a complete and accurate bank of information. The petrochemical components of synthetic turf – shock pad, woven backing and plastic carpet – are not exceptions.

Although at present there are no definitive studies linking seafood consumption with human health problems related to microplastic pollution, chemical toxins associated with plastics have been linked to numerous potential maladies in humans. It is therefore prudent that efforts be made to limit their use when safer alternatives are available.

We know and acknowledge that the MVRHS student athletes need safe and functional athletic surfaces. We too, want the best for our children, our neighbors, the environment and the shellfish. We have concluded that the risks associated with this project greatly outweigh the potential benefits when compared to those of the viable alternative of grass. There are many scenarios where plastic is the best or only material available, but this is not one of them.

Thank you for your consideration. Please feel free to request more information.

Sincerely,

Danielle Ewart,  
William Sweeney,  
& James Tilton