



Vineyard Conservation Society

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Martha's Vineyard Commission
33 New York Avenue
Oak Bluffs, MA 02557

October 19, 2020

Re: DRI 352-M4 MVRHS Athletic Fields

Dear Commissioners,

The Vineyard Conservation Society (VCS) is a non-profit land conservation and environmental advocacy organization that has been working for more than fifty years to protect the land, water, and unique character of Martha's Vineyard. Our purpose in writing today is primarily to offer testimony in opposition to the proposed installation of artificial turf at the High School; further, we wish to comment briefly on the recent controversy around the presence of per- and poly-fluorinated alkylated substances (PFAS) in this product.

Plastic Pollution

In recent years, VCS has made a priority of plastic waste reduction. Due to a growing public awareness of the impacts of plastic pollution, in particular on water quality, wildlife, and the marine environment, our Island has taken many positive steps to reduce its waste footprint. These range from educational efforts to change individual behavior, to the installation of water bottle refill stations, to the policy changes overwhelmingly approved by Town Meeting voters: the prohibition of the release of helium balloons, bans on disposable bottles, and the Island-wide ban on plastic shopping bags.

Against this backdrop of progress in reducing plastic pollution, replacing a natural grass field with a massive plastic carpet would be dissonant, and very disappointing. Despite its expense and the appearance of permanence, artificial turf presents plastic waste issues similar to the common disposable items our community has been working to reduce. Periodically (typically every 8 to 12 years), the entire carpet would need to be shipped off-Island, disposed of, and replaced, all at significant cost. Under normal usage, the plastic "grass" fibers gradually break down, shedding microplastics as they do. These tiny particles then enter our groundwater and streams – either directly through runoff, or by sticking to athletes' skin and clothes and washed away at home. From there, the microplastics will flow on to the ocean, causing the very same problems as plastic bags, straws, and water bottles.

PFAS and Environmental Toxicity

The contradiction with the Vineyard's demonstrated preference for reducing plastic pollution is the most clear and straightforward objection to artificial turf. However, toxicity concerns have been raised

by our local community, and by scientists and environmental advocates. The potential for long-term health impacts from playing on artificial turf arise from the presence of toxic chemicals (both known and unknown), coupled with the intense level of exposure – children playing on artificial turf routinely ingest and/or inhale small pieces of the plastic grass and infill material (the small pellets that provide cushioning). Over the years, concerns have been raised about the presence of phthalates, lead, and other carcinogens in the product itself; in addition, artificial fields require routine cleaning to remove bodily fluids and animal waste, and treatment with disinfectants to prevent fungal and bacterial growth.

The current controversy and confusion surrounding artificial turf and PFAS – including to what extent a given chemical causes health problems, and whether a specific plastic carpet contains one chemical or another – is illustrative of the broader problem in evaluating the safety of this proposal. As reported by the *Boston Globe* on October 9, high levels of PFAS were detected in multiple samples of artificial turf (both the “grass blades” and the carpet backing), as well as in a Franklin, MA wetland near where an old turf carpet had been hidden (to avoid the costs and challenges of disposal).

PFAS are a class of chemicals used in industrial manufacturing, most frequently as stain repellents, paints, and other coatings. It is important to understand that PFAS share not just chemistry, but also physical properties. Therefore, when clear evidence emerges that a certain compound is harmful to human health (as has been demonstrated with PFOS and PFOA), the offending chemical can often be replaced by a different PFAS compound that will accomplish the same industrial purpose. New PFAS compounds (and non-PFAS alternatives, which may accomplish the same purposes, but in turn may also prove toxic) are continually being developed. In our regulatory system, if a new chemical has not yet been demonstrated to cause harm, that is sufficient to allow its use in production.

Naturally, the artificial turf industry touts the safety of the new chemicals that are developed to replace the previous unsafe ones; likewise, public health and environmental advocates (including VCS) view these replacement chemicals with suspicion. We understand the lack of information on new, and often undisclosed, chemicals presents a dilemma for decision makers. What we urge, though, is that assurances of safety from the turf industry – which continues to promote materials that are known carcinogens (such as crumb rubber) – should be met with skepticism.

Looking Forward: Economic and Environmental Sustainability are Linked

Our view is that while some concerns about environmental toxicity may be inconclusive at present due to a lack of data, they are greatly magnified by the long-term commitment that artificial turf requires. Once installed, a return to natural grass is likely unfeasible. For planning purposes, one should assume that an artificial field is **essentially a permanent structure for which the environmental impact greatly depends on future maintenance decisions**. Consider three examples. First, plastic carpets marketed as lead-free (and Made-in-the-USA) do exist, but they are more expensive than imported carpets containing lead. Second, the most cost-effective infill material is crumb rubber (shredded used car tires). This toxic material was in the original proposal for the high school fields, before the proponents of the project yielded to public pressure and substituted a less toxic – but more expensive – organic material. Finally, the artificial turf industry’s claims of recyclability are not borne out in reality, as has been widely reported in mainstream news outlets (e.g. *The Atlantic*, the *Boston Globe*). At present, discarded plastic carpets are most properly sent to landfills or incinerated. Unfortunately, many are now polluting vacant

lots and public lands, waiting for disposal in a recycling center yet to be built, or shipped to overseas dumping grounds at great environmental cost.

One of the leading arguments for the necessity of artificial turf at MVRHS is a historic lack of funding for adequate maintenance of the grass fields. Considering this, it is reasonable to fear that future budgetary constraints may result in: delayed replacement of the carpet beyond the recommended lifespan; the use of more toxic, less environmentally-friendly materials at the time of replacement; and unsustainable disposal methods (should a sustainable disposal method become available in the future, it will likely be more expensive than present practices).

All Islanders should consider the very realistic scenario in which the once-per-decade replacement interval coincides with a time of budgetary tightening across the school system: will the funding still be available for organic infill material? Will Island voters choose to support this over other educational priorities, and over limiting tax assessments? Careful consideration of these financial implications is in order before committing to a course of action that will lead to difficult decisions for decades to come.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Jeremy Houser
Communications/Ecologist

Brendan O'Neill
Executive Director