

Article 18: Citizen Petition – General Bylaw Change: Artificial Turf Field Moratorium

Sponsored by: Debbie Tatro, 10 Sturges Road, and 14 others

To see if the Town of Sharon will vote to amend its General Bylaws Part I: Administrative Legislation, Chapter 61: Public Property, by adding a new Article III: Artificial Turf Field Moratorium, as follows:

ARTICLE III
Artificial Turf Field Moratorium

§61-5 Artificial Turf Field Moratorium in the Town of Sharon

A. Purpose. The purpose of this moratorium is to protect Lake Massapoag, and the town’s wetlands, rivers, streams, ponds, groundwater, drinking water, soil, fish and wildlife, as well as human health. Current artificial turf carpets have known environmental and health hazards. They contain toxic chemicals, including flame retardants, plasticizers, and PFAS, a class of synthetic compounds that includes approximately 4,700 chemicals. PFAS are a particular health threat, as they are highly persistent “forever chemicals” that never fully degrade, accumulate in our bodies, and adversely impact human health even at low levels of exposure. A new regulation promulgated by the Massachusetts Department of Environmental Protection establishes a drinking water standard of 20 parts per trillion for the sum of six specific PFAS. Thus, artificial turf installation could potentially contaminate Lake Massapoag, rivers, streams, ponds, ground water, soil and drinking water in the Town of Sharon by leaching chemicals. Plastic grass blades also break off artificial turf and would be blown by the wind to surrounding areas where they would break down into microplastic which does not fully degrade, thereby threatening to contaminate the nearby natural areas with PFAS, microplastics and other chemicals. Current infill materials are also problematic: crumb rubber from scrap tires is likely toxic, organic infill must be watered to get it to stay in place, and can freeze, which requires the addition of anti-freeze substances to prevent athlete falls. Artificial turf carpets are produced from petroleum. They are also not currently recyclable in the U.S. One facility in Pennsylvania collects turf fields for “recycling”, but only recycles the crumb rubber that is removed from the plastic carpet. Current plastic artificial turf fields are also not biodegradable or compostable.

B. Definitions

ARTIFICIAL TURF shall mean any grass turf carpet composed of petroleum-based plastic, whether or not the plastic turf contains PFAS.

PFAS shall mean a class of per- and poly-fluoroalkyl substances.

C. Regulated Conduct

The Town of Sharon shall not install artificial turf on any land, of any size, owned by the Town, for a period of three years from the effective date of the moratorium.

D. Exemptions.

Synthetic turf grass carpets made of plant-based bioplastic which is entirely biodegradable or compostable, and is certified to be free of PFAS.

Or take any other action relative thereto.

Proponent’s Statement of Rationale

A three-year moratorium allows time to study the environmental and financial implications of artificial (plastic) turf, either of which could be substantial.

The initial cost of a plastic athletic field is \$1 million, and the 20-ton plastic carpet must be discarded and replaced every 8 years, a substantial recurring expense. Athletic field maintenance experts have quoted that the existing grass field could be improved at an initial cost of \$7,500 (Tom Irwin Advisors), or renovated with new premier sod for \$200K (Sports Turf Specialties). Many studies indicate annualized life-cycle costs are less for natural grass vs. artificial turf. A properly maintained grass field can provide twice as much playing time as the current fields see, allowing the town to increase playing opportunities without artificial turf.

A plastic field at the high school would threaten multiple natural resources: adjacent wetland, Lake Massapoag and drinking water. Plastic turf also breaks down into microplastics, which accumulate in soil. The plastic carpet may contain PFAS chemicals that do not biodegrade, and accumulate in soil, water, and ultimately our bodies. PFAS chemicals are associated with health issues at low exposures, leading the MassDEP to implement strict drinking water standards (1000-fold less than standards for other known toxins). This has public health implications as well as financial costs if abatement of these chemicals is required in the future.

FINANCE COMMITTEE RECOMMENDATION:

An affirmative vote under this citizens' petition would amend Town Bylaws by adding a new Section 61-5, which would impose a three-year moratorium on the installation in any Town location of artificial (synthetic) turf fields containing petroleum-based plastic, whether or not the turf contains PFAS, which is a class of per- and poly-fluoroalkyl substances. The proposed Bylaw amendment is particularly relevant in anticipation of new athletic fields being installed at the high school site in connection with the construction of a new high school complex.

The arguments in favor of a moratorium are summarized above in the proponent's statement and a case for synthetic turf has been made by consultants hired by the Sharon Standing Building Committee as part of the new Sharon High School project. In a presentation to the Finance Committee on April 23, 2020, Warner Larson Landscape Architects, compared the costs and usability of synthetic turf and natural grass athletic fields in the context of the new high school. The presentation referenced year-round sports program needs (including school programming and youth and rec leagues) totaling 1348 hours, which a synthetic field would be able to accommodate, while a newly reconstructed grass field with amended soil would allow for an estimated annual use of 500 hours. Natural grass fields are unusable after heavy rains. The increased available usage of a synthetic field could alleviate wear and tear on the Town's nine other grass playing fields.

On a total dollar cost basis as presented by Warner Larson, natural grass would be the less expensive option over both an 8-year and 16-year time frame. The projected 8-year lifecycle cost for synthetic turf is estimated to be \$1.1M (\$993,200 install plus \$10,500 annual maintenance) compared to \$725K (\$457,000 initial plus \$33,960 annual maintenance) for natural grass. The warranty for the proposed synthetic turf field is limited to eight years, at which time the top layer (carpet and infill) would be replaced. The next layer down, the shock pad, lasts for 2 or more turf lifecycles. As a result, over a 16-year period, the cost comparison is \$1.7M (includes a \$550,000 renovation after 8 years) for synthetic turf compared to \$1.2M for natural grass. However, when factoring in the projected hours of use that have been identified, the costs on a per hour basis tip in favor of synthetic turf. On a cost per hour of use

basis, synthetic turf projects to be roughly half the cost of natural grass over both an 8-year and 16-year timeframe. This cost advantage clearly depends on the realized use of the fields.

While this proposed moratorium is not specific to the high school site, members of the Finance Committee shared concerns around environmental impact to the natural resources at that location, namely Lake Massapoag, the adjacent wetlands and groundwater. The synthetic turf field proposed for that site would utilize an organic infill made of engineered wood particles from sustainably grown and harvested pine trees, rather than crumb rubber, to minimize risk of environmental contamination. An independent study conducted by Dr. David Teeter and presented to the Standing Building Committee on January 21, 2020 concluded that environmental risk was minimized by these selections.

The majority of Finance Committee members felt that the due diligence conducted by the Standing Building Committee highlighted the potential value and acceptable risk profile of a synthetic turf field in an appropriate site, making a town-wide three-year moratorium unwarranted. The minority members believe that arguments in favor of the moratorium outweigh the arguments against it.

The Standing Building Committee voted 7 to 3 in favor of the installation of synthetic turf at the new high school complex. While this was not a vote on this article, it demonstrates opposition to this citizen's petition. In contrast, the Conservation Commission, which has ultimate authority in the matter, voted 5 to 2 against installing synthetic turf at the high school site. If this proposed moratorium should fail to pass, installation of a synthetic turf field at the high school site would require a successful appeal of the Conservation Commission's vote. The recommendation of the Finance Committee regarding the proposed moratorium should not be interpreted as a vote in favor of synthetic turf at any specific location or a vote in favor of an appeal of the Conservation Commission's decision.

The Board of Health voted 0-4-1 in favor of approval.
The Select Board voted 2-1-0 in favor of approval.

THE FINANCE COMMITTEE VOTED 2-9-0 IN FAVOR OF APPROVAL. THE COMMITTEE IS NOT RECOMMENDING APPROVAL OF THIS ARTICLE.

QUANTUM OF VOTE: Majority vote

ANTICIPATED MOTION: That the Town amend its General Bylaws Part I: Administrative Legislation, Chapter 61: Public Property, by adding a new Article III: Artificial Turf Field Moratorium, exactly as printed on pages 36 through 37 of the warrant for this Annual Town Meeting, except deletion of the words "or take any other action relative thereto."