

Brookline GreenSpace Alliance has over the last 30 years advocated on behalf of Brookline's parks and open space. We present here our thoughts on the improvements to Cypress Street Playground under consideration in coordination with the High School addition and renovation, specifically the proposal to replace the natural grass field with synthetic turf.

While we understand that there is demand for playing time for team sports, Cypress Field accommodates many activities in addition to organized sports including outdoor classes, student breaks, graduation ceremonies, summer camp, softball and soccer games, dog walking, picnicking, sunbathing and other active and passive recreational activities. Over the years, natural grass has served these functions well and is the better choice for both the High School campus and the broader community.

Were Cypress Playground only an athletic field, there are many issues related to synthetic turf playing surfaces that are troublesome. Even with the promise of more playing time, health and environmental considerations would lead us to recommend natural grass for Cypress Street and to seek other solutions for athletes.

There are health concerns related to chemicals in the synthetic turf materials including the backing, the fibers used to make the "grass blades", and the infill material. The use of crumb rubber made from recycled tires for infill has been a major cause for health and environmental concerns including as an asthma trigger and for the leaching of chemicals into stormwater run-off. While alternative infill materials, which appear to have fewer adverse affects, have been proposed for Cypress Field, they have not been studied thoroughly to evaluate their long-term effects. Studies show that skin abrasions are more likely on synthetic turf and are often accompanied by infections due to bacterial contaminants which linger in synthetic material.

Another concern is that synthetic turf fields are significantly hotter than natural turf. Some studies indicate that on bright sunny days the surface temperature of synthetic turf fields can be 40° to 60° F hotter than fields of natural grass. This can lead to heat stress for those playing on these surfaces. The increased temperature of synthetic turf fields contributes to urban heat island effect for the immediate neighborhood that will become more intense as the planet warms. A draft report on vulnerability of Brookline to the impacts of climate change, prepared by the Metropolitan Area Planning Council, lists four playing fields among the hottest spots in town along with certain heavily paved areas. These four fields all have synthetic turf.

A natural grass field, unlike synthetic turf, acts to reduce carbon dioxide. A 2008 research study found that "managed lawns sequester, or store, significant amounts of carbon, capturing four times more carbon from the air than is produced by the engine of today's typical lawnmower." The study also found that "well-managed turf grasses that are cut regularly and at the appropriate height, fed with nutrients left by grass clippings, watered in a responsible way, and not disturbed at the root zone actively pull pollutants from the air, creating a greater carbon benefit." (See Ranajit Sahu, Technical Assessment of the Carbon Sequestration Potential of Managed Turfgrass in the United States (2008). The full report can be accessed at <http://www.synturf.org/images/FullCarbonReport.pdf>.

Both the initial installation costs and annualized costs for synthetic turf fields can be significantly higher than grass fields. The average lifespan for a synthetic turf covering is 8 to 12 years at which point there are disposal costs for the old covering and costs for acquisition and installation of the new covering. By comparison, with proper ongoing maintenance, natural grass fields can last 20 years.

More specific information on costs and other studies mentioned in this letter can be found in the white paper *Athletic Playing Fields and Artificial Turf: Considerations for Municipalities and Institutions* prepared by the UMass Lowell Toxics Use Reduction Institute: http://www.turi.org/Our_Work/Home_Community/Artificial_Turf

Cypress Street Playground is an historic community park eligible to be on the National Register of Historic Places. In 1871, the Town purchased the land “to be used, improved and maintained for the public use forever, as and for a Public Square, Park, Common or Playground, not otherwise.” This land was the first in the United States purchased by a municipality to serve as a public playground. Cypress Field has continued to serve as a playground and public park since that time. As it is renovated and improved for the future, its capacity to support a variety of uses should be continued. Replacing the natural grass with synthetic turf will change the character of the park to that of an athletic field used primarily for organized sports.

The many school and community uses of Cypress Street Playground complicate the decision to use synthetic turf since health and environmental concerns, as well as cultural and aesthetic considerations, need to be taken into account for the benefit of the whole community. In light of all the considerations outlined above, should we not err on the side of caution and make a commitment to install and maintain a natural grass field? Brookline GreenSpace Alliance advocates that the Park and Recreation Commission vote to install an improved natural grass field at Cypress Street Playground.