

Memo to the Board of Health

From: Karen Buck of Friends of the Malden River

May 16, 2023

Dear Members of the Board of Health,

Thank you for your due diligence in listening to the different points of view regarding the synthetic fields.

The Friends of the Malden River continue to support the natural grass field as opposed to the synthetic fields.

There has been a cost-benefit analysis based on present values of convenience for athletic schedules. By installing a synthetic field, the City of Malden is not considering the future costs of the long lasting future consequences of climate change, episodic extreme heat, and extreme weather patterns.

Is the Board of Health and the City of Malden considering intergenerational equity issues?

The decision makers of today will most likely be gone within 8-10 years when the field has to be replaced. The decision makers will not be on the sidelines or be in the play during extreme heat. The decision makers will not have to deal with the toxic waste of tomorrow. The next generation will have to bear the future actual cost.

I have not seen any information regarding the future maintenance of the synthetic fields. The synthetic fields also need maintenance so that they don't deteriorate before their normal shelf life of 8-10 years. Lack of maintenance to the synthetic field can promote serious injuries. Studies reveal that [21.5% of all head injuries](#) suffered during sports activities were a result of an impact on the playing surface. Synthetic fields need continued maintenance for safety. There needs to be annual tests (to the tune of \$1,000) to make sure that the level of infill and the padding is safe.

Decision makers commonly use cost comparison as a method to determine whether to install gray or green infrastructure. The two basic approaches to perform a cost comparison analysis address the following:

- Only initial construction costs.
- Life cycle costs, including planning, design, installation, operation and maintenance, and replacement.

Analyzing cost alone ignores the difference in performance between green infrastructure and gray infrastructure. As a result, they provide an incomplete basis for decision-making.

Also, there is the removal costs and the consideration that this is trash that will be dumped somewhere. Today, the disposal of the plastics is costly; costs will be exponential due to the lack of space and toxicity.

Here is an example of costs from 2015. The costs can only be higher.

Table 9: Disposal Cost Summary*		
	62,625 sf field	85,000 sf field
Removal & disposal (TRC)	\$115,000 - \$148,000	\$149,000 - \$191,000
Disposal & resurfacing (STMA)	\$427,000 - \$512,000	\$553,000 - \$663,000
Transportation & landfill (STMA)	\$130,000	
Total (STMA) [disposal & resurfacing + transportation & landfill]	\$557,000 - \$642,000	\$683,000 - \$793,000
Landfill (Fresenburg) [no field size given]	\$45,000 - \$65,000	
<small>* Rounded to three significant digits. Sources: Turfgrass Resource Center. (no date.) "Natural Grass and Artificial Turf: Separating Myths and Facts." Available at http://www.nsgao.com/images/Natural-Grass-and-Artificial-Turf_booklet.pdf. STMA. (no date.) "A guide to Synthetic and Natural Turfgrass for Sports Fields, 3rd edition. Available at http://www.stma.org/sites/stma/files/STMA_Bulletins/STMA%20Syn%20and%20Nat%20Guide%203rd%20edition%20FINAL.pdf. Brad Fresenburg "More Answers to Questions about Synthetic Fields – Safety and Cost Comparison", Turfgrass Specialist & Extension Associate, University of Missouri. PowerPoint slides obtained via email December 2015.</small>		

Modern economics does not distinguish between renewable and non-renewable materials, as its very method is to equalize and quantify everything by means of a money price.

The city recently launched a Climate Action Plan and hosted a Green Malden Fair, pledging to take an "all-hands-on-deck approach to combating climate change." We need to change our point of view towards convenience. We need to stop saying, "We can't take proper care of our natural green spaces." We need to create change to protect us from climate change.

Sincerely,

Karen Buck

Friends of the Malden River