

ARTICLE 16: Synthetic Turf Moratorium

## **ARTICLE 16. Five-Year Moratorium on the Installation of Synthetic Turf on Town Land**

To see if the Town will adopt a moratorium on the construction or installation of any synthetic turf (defined as monofilament carpet with loose infill) on any land, of any size, owned by the town, for a five-year time period starting on May 1, 2022 and ending on May 1, 2027, or to take any other action relative thereto.

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# What is Involved

- This moratorium is an extension of the moratorium first put in place at the 2016 Town Meeting.
- It would apply to all town land in Concord including the Concord Public Schools. The moratorium would not apply to private land nor the Concord-Carlisle Regional High School fields, including the Douglas-White Fields, and the Stadium Field.

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# Synthetic Turf



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# Health Concerns for Children

- The crumb rubber in Concord's synthetic turf contains known carcinogens and endocrine disrupters e.g.
  - Benzo(a)pyrene (highly carcinogenic – banned in Europe since 2010)
  - Bis(2-ethylhexyl)phthalate (endocrine disrupter)
- Children are more susceptible to developmental hormones and carcinogens than adults.
- Children are repeatedly exposed to these chemicals when playing on synthetic turf.

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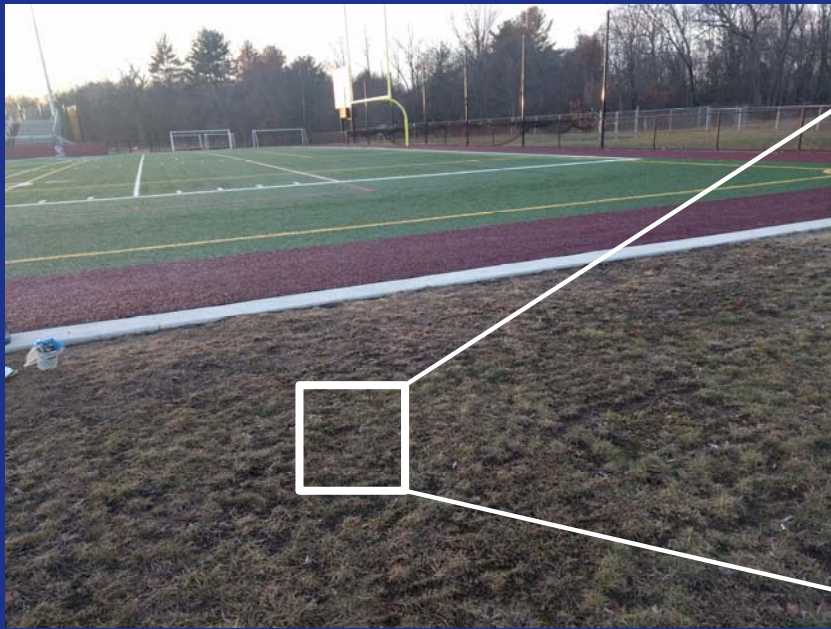
### **Health Concerns for Children** (Continued)

- In 2016, three government agencies together launched the **Federal Research Action Plan** to study crumb rubber and its effects on human health. This study is not yet complete so does not answer questions about health risks.
- Since our moratorium was initiated, more chemicals of concern have been identified in synthetic turf.
- There have been no properly conducted, case control studies on the risks of synthetic turf to children.

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# Stadium Field

3-5% of crumb rubber is lost from each field every year.





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# PFAS Pollution

- The “grass” blades in synthetic turf are made with the aid of polyfluoroalkyl substances (PFAS) as extrusion agents.
- Plastics used in synthetic turf have been found to contain PFAS chemicals, as has Brockfill made from wooden pellets.
- PFAS do not degrade over time but accumulate in the environment indefinitely.
- PFAS create serious health risks e.g. birth defects, cancer and immune suppression.

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### **PFAS Pollution** (Continued)

- Tests to measure PFAS chemicals are only available for a few out of the thousands that exist.
- Massachusetts regulates measurable PFAS in drinking water to a limit of 20 ng/liter. In 2021, the Hugh Cargill well already had over half the legal limit.
- The addition of more synthetic turf threatens to further contaminate our water supply and potentially require expensive water treatments.



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# Plastic Pollution

- The plastic “grass” blades break off at a rate of 0.3 mm per year resulting in microplastics being constantly washed out of the fields.
- The new plastic bead infills could also pollute Concord’s waterways.

## **Sustainability Principles**

The construction of synthetic turf fields works against the sustainability principles adopted by the town in 2011:

- By replacing an organic ecosystem with toxic chemicals that accumulate and pollute the soil and water;
- By making these fields net emitters of carbon, rather than capturing carbon by photosynthesis;
- By destroying the biodiversity that grass fields support;
- By adding to the toxic waste in landfills when the fields are disposed of.

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# Organically Managed Grass

- Improvements in grass varieties have led to grasses that stand up to hard use and drought, and can be managed without pesticides and herbicides.
- U. of Missouri study showed that over a 16 year period, organically managed grass fields were far less expensive than conventional fields or synthetic turf.
- Some clubs are replacing their synthetic turf fields with natural grass because of increased leg and foot injuries.

## Disposal of Synthetic Turf

- Synthetic turf fields need to be replaced every 10-13 years and they are not currently recyclable.
- Turf fields are usually disposed of out of state in a landfill.
- Removal + Transportation + Landfill costs are estimated at \$350,000 per field

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# In Conclusion

We are asking the town to continue the current moratorium on synthetic turf for another five years:

- To protect our children from exposure to untested and toxic chemicals;
- To allow the ongoing research on synthetic turf to be completed;
- To protect our town from the toxic chemicals washing out of these fields

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### **In Conclusion** (Continued)

- To maintain our grass fields as a valuable ecosystem that captures carbon;
- To protect the town from the increasing costs of disposal and replacement of synthetic turf fields.

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