

Engineering,  
Landscape Architecture  
and Environmental Science



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March 2, 2009

Environment Committee  
Connecticut General Assembly  
Hartford, CT 06106

**RE: Raised Bill 924  
An Act Concerning a Moratorium on State-funded Artificial Turf Athletic Fields  
and the Posting of Signs**

Dear Members of the Environment Committee:

For two years there has been proposed legislation to place a moratorium in the installation of synthetic athletic turf based on the assumption that there is a significant health risk to the athletes who may use the fields. Such an action seems to be somewhat drastic particularly since there has not been scientific evidence to support the underlying assumption of that there is a risk.

In 2007, the Connecticut Agricultural Experiment Station (CAES) examined an extremely small sample of the rubber infill used in the construction of a synthetic field and found that the rubber contained a host of chemical compounds, some of which considered to be potentially harmful. This was a laboratory "bench" test and did not reflect actual field conditions.

As a professional engineering and environmental consulting firm that designs (but does not install) athletic fields, both natural grass fields and synthetic fields, and advises school boards and municipalities on the issues of field safety and construction, we undertook an independent evaluation of three fields with respect to air quality, water quality, and temperature. The cost of our study was funded from our own resources for the sole purpose of being better able to advise our clients. In undertaking the study, we followed sampling and testing protocols established by EPA, NIOSH and other similar standards. In addition, we discussed with the staff of the Department of Public Health our testing methodologies to be sure that the data we collected would be useful to them and to anyone else who may be interested in the subject matter. We compared the results of our testing to air and water quality standards published by the EPA and the State of Connecticut.

Our study found:

- On one of the hottest days of 2008 when the ambient temperature was approximately 100 degrees, the surface temperature of the synthetic turf fabric was significantly elevated above the ambient temperature. However, the temperature of the rubber was only slightly higher than the ambient temperature. The temperature of the rubber did not rise to the level used in the laboratory tests conducted by CAES.

- Of the heavy metals identified by CAES in their laboratory test, only zinc was found in the runoff and the level of the zinc was significantly below the drinking water standard and declined over time. In fact, there was 100 percent survival in the aquatic toxicity test. Our results were generally consistent with the findings found in the published literature.
- The air quality was found to be virtually free of the compounds noted by CAES in their laboratory tests. Only benzothiazole was detected, and this was detected at just one of 10 different sampling locations. The noted concentration was nearly 600 times lower in an actual field condition than noted in the laboratory.

A full copy of our findings can be found at [www.miloneandmacbroom.com](http://www.miloneandmacbroom.com).

We provided a copy of our study to the Departments of Public Health and Environmental Protection and, thus far, neither department has seen the need to institute a moratorium on the construction of synthetic fields. We support the continued study of the issue now being conducted by the State of Connecticut but, based on our analysis and previously published reports from Europe, Canada, and California, we do not believe that a moratorium is warranted at this time.

Very truly yours,

MILONE & MACBROOM, INC.

*Vincent C. McDermott;*  
Vincent C. McDermott, FASLA, AICP  
Senior Vice President

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