

Montgomery County Civic Federation  
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Artificial Turf Working Group

May 12, 2011

To Members of the Artificial Turf Working Group:

I am commenting on the Public Draft, '*A Review of Benefits and Issues Associated with Natural and Artificial Turf Rectangular Stadium Fields*' on behalf of the Montgomery County Civic Federation. Here are comments:

1. Overall, the report is sloppily put together with random quotes and studies thrown in. Please state the number of labor hours per person charged to this task.
2. Mr. Joe Lavorgna, a consultant, is shown as the author in the 'properties' section of the report. Mr. Lavorgna is a private consultant. Please list his other clients, and state whether FieldTurf Tarkett or any other synthetic turf companies are his clients. Please provide data to show that Mr. Lavorgna does not have a conflict of interest regarding artificial turf, FieldTurf Tarkett, or any other synthetic turf manufacturer.
3. Regarding the Working Group. Please state how often the working group met, who attended each meeting, and please provide the notes and minutes from the meetings in an appendix.
4. DEP staff are referenced throughout. Please add the names of the DEP staff that were involved in this study.
5. The report does not address the main request from the Council Committee, which is, conduct a water quality study of the artificial turf runoff. Where is this study?
6. Please explain why no one from the Natural Turf sod community in the Montgomery County Agricultural Reserve was included in the working group. Instead it appears that language from FieldTurf Tarkett's marketing messages have made their way into this document. The Maryland Soccer Foundation was also consulted. Again, no natural sod farmers in our own community were either part of the working group, or consulted. Please explain why this is so. As a result of the make-up of the Working Group, the 'report' appears biased.
7. Page 4, Operations Benefits for artificial turf fields.' Please provide a comparable bulleted list for 'Operational Benefits for natural turf fields.' This text re-emphasizes the bias of this report for artificial turf. It appears that this working group was biased from the outset.
8. Page 5, 'environmental impacts of building additional natural grass fields.' What environmental impacts? Natural grass fields have a beneficial effect on the environment as opposed to artificial turf. Please state which adverse impacts are meant by this statement.

9. Page 5, 'Public/Human Health Concerns' Please add heavy metals, lead, and carcinogens to this bullet list. These are well known components of ground crumb rubber turf fields. According to the journal, *Environmental Health Perspectives*, "The most common types of synthetic rubber used in tires are composed of **ethylene-propylene** and **styrene-butadiene** combined with vulcanizing agents, fillers, plasticizers, and antioxidants in different quantities, depending on the manufacturer. Tire rubber also contains **polyaromatic hydrocarbons (PAHs), phthalates, and volatile organic compounds (VOCs).**" and, "According to the Rubber Manufacturers Association, only 8 states have no restrictions on placing tires in landfills. Most of these restrictions have to do with preventing pest problems and tire fires, which release toxicants such as **arsenic, cadmium, lead, nickel, PAHs, and VOCs.**" Please add these elements and carcinogens to the bullet list. And, please add this text, "A recent study from the University of Medicine and Dentistry of New Jersey (UMDNJ)-School of Public Health found that, "when children or athletes ingest the tiny rubber granules in synthetic turf, it is likely that a significant portion of the lead in the granules will be absorbed by their bodies' gastric fluids." This study was completed on the 'new' generation of artificial turf, made of tire crumbs. The study was led by Dr. Junfeng Zhang, associate dean and professor of environmental and occupational health at the UMDNJ-School of Public Health. The study examined lead levels in rubber granules from four parks in NYC, and simulated digestive tract absorption in two of the samples. The findings were as follows: Even though the samples had relatively low concentrations of lead in the rubber granules, substantial amounts of lead were absorbed into synthetic gastric juices. According to health professionals, even the tiniest amount of lead in the system will affect the health and cognitive ability of children.
10. Page 6, environmental impacts; again the statement that DEP has not provided any specific recommendations. Here and throughout the document the reader is left to wonder why DEP would not comment or provide recommendations on this report. Please provide some explanation as to why DEP staff and subject matter experts apparently refused to participate in this working group, or provide expertise or guidance.
11. Page 7, regarding '...should continue to monitor the success or failure...' This suggests the county has been monitoring these infills. Please provide references to this monitoring, and provide the data that has resulted from this monitoring. How long has the monitoring been underway? Please provide some dates and a timeline. In addition, please provide some metrics that will be, and have been, 'monitored.' How will the 'success' or 'failure' be calculated? On what scientific basis?
12. Page 8, change '...fields include only high school stadium fields.' Change to 'fields include all 25 high school stadium fields.'
13. Page 12, regarding 'Land Preservation, Parks, and Recreation Plan, please add a reference; which plan?
14. Page 12, change 'Safe Fields Coalition' to Safe, Healthy Playing Fields Coalition' 'Safe Fields Coalition' is not the correct name of this organization.

15. Page 13, '...members did not feel...' this is not an analysis. Feelings are not analysis. Please provide some rational analysis to back up these statements.
16. Page 13, 'Individuals...have spoken with...Kevin Mercer...' This is a poor, sloppy approach and is hardly what one would expect from a serious study of adverse and beneficial effects of a material that consists of ground up rubber auto and truck tires. There is no introduction or basis for this discussion. There is no attempt to explain why these particular people were chosen to interview. The discussions appear random, as if someone decided to pick up the phone, make a brief call, and spend a few minutes typing up their telephone notes. It appears, as it does throughout this entire document, that there was no planning and no forethought put into this 'Review' document. Please provide the telephone notes for these discussions.
17. Page 13, 'Several members within Parks staff...' Who? Which members? Again the sloppiness of this report is evident. Please provide names of people. Provide specifics.
18. Page 15, regarding 'Practice fields are frequently very hard rock-laden...' Please add text explaining that the reason these fields are hard and rock-laden is because they were poorly built in the first place, using debris rather than carefully built with an appropriate sub-base, soil, and the like. Please explain that the original construction of these fields was poor and the result of the poor original construction is these existing fields.
19. Pages 15-18. Again, this is a bucket list of unrelated statements. The report in these pages claims installation and use of artificial turf fields can solve everything from traffic accidents to child obesity. Claims like this in this report detracts from any viability this report has.
20. Page 18, regarding reducing fertilizer, pesticides, etc. Please add the requirements of constant chemical washing required as maintenance for artificial turf. Please add the chemical ingredients of these washes, and the costs. Please add that, according to, [http://articles.directorym.com/Artificial\\_Turf\\_Disadvantages-a974322.html](http://articles.directorym.com/Artificial_Turf_Disadvantages-a974322.html) NaturaLawn of America, "Real grass controls erosion, produces oxygen, helps eliminate dust, is an air and water filter and a noise reducer. Grass also acts as a natural "air conditioner" for the climate at ground level. Real turf is an essential part of our ecosystem. Lawns contain microbial activity, bird life, shelter for small mammals, etc. So gaining a permanently green lawn with synthetic turf will actually cut back the biodiversity of an area.  
  
Water is another factor to consider. Having synthetic turf might conserve water during a drought, but some studies have shown that it also leads to flooding during heavy rains due to its less absorbent nature. This flooding then can cause erosion and result in polluting our waterways."
21. Page 20, using the warranty information from the manufacturer and not looking for independent verification again shows the bias of this report. Please provide actual maximum use based on other studies.
22. Page 25, regarding, 'Current Examples of Fields in Montgomery County,' please add data from Montgomery County sod farmers.

23. Page 29, regarding the bullet list of physical health effects, please add heavy metals, lead, and carcinogens to this bullet list, all of which are in these artificial turf materials.
24. Page 30, regarding DHHS not being equipped with the necessary specialized expertise' Please explain why this agency appears not to have wanted to participate in this study.
25. Regarding the synopses of these studies reviewed by the Working Group, most of these studies are inconclusive, for example, from the State of New York report, "...findings should not be considered conclusive due to the limited amount of data available." Or, from the 'Review of the Potential Safety Risks...', "...additional air studies...would provide more representative data..." and the like. Will the county government provide some direction as to data collection and presentation of some real data? Again, the hodgepodge of reports and quotes does not help this review or provide any sort of direction for the County. The reader is left wondering what the purpose of this report was. Clearly it was not to provide objective data or review of objective data to the Council or to the community. It falls far short of the Council's stated intent.
26. Page 42, regarding the analysis conducted on a carpet sample from the artificial turf field at Montgomery Blair High School, provide the study and results in an appendix in the final version of this document.
27. Page 45, regarding the heat island effect. See attached. The idea that a study of impacts from a single artificial turf field is relevant to a serious analysis of environmental effects of artificial turf is a misunderstanding of the heat island effect, which is cumulative. In addition, the Montgomery County Public Schools proposes to place artificial turf fields, all colored a dark green to mimic natural turf, at all 25 high schools. Each field, if it is the size of a football field, is approximately 1.322 acres. Even excluding the artificial turf fields that the Parks department has been and plans to install, this is over 33 acres of dark colored artificial turf. Dark material absorbs more heat than white or lighter colored material. For aesthetic purposes the material is dyed a dark color. It would relieve some of the heat absorption if the material is a light color.
28. Page 45, Recycling and/or Disposal of Artificial Turf Fields. Because of the well-known toxic material of which this material consists, the fields, which have a life of approximately 8-10 years, will need to be disposed of in a hazardous waste disposal area. That cost is considerably more than simple disposal in a land fill. Please address the cost per field.
29. Page 46, Recommendation: add the cost of the disposal of this toxic material in a hazardous materials landfill location.
30. Appendix F, reference to 'a study of a field in France (Moretto, 2007), please add that this study was completed "in partnership with FieldTurf Tarkett." In fact, the lack of context for this study is egregious and speaks to the bias of this entire report.

In sum this exercise was a foolish waste of taxpayer money in an attempt to pretend that this Working Group actually carried out the direction of the Council. It did not. The public is ill-served by attempts to circumvent the requests of the Council.

Sincerely,

Paula Bienenfeld  
Education Committee Chair  
Montgomery County Civic Federation

Attachment

**Attachment: Heat Islands Created by Artificial Turf**

Artificial turf fields are well known for their great ability to trap heat, unlike natural sod, which cools our planet; and our neighborhoods.

**Artificial turf creates 'heat islands' with temperatures of up to 120 degrees Fahrenheit to 160 degrees Fahrenheit.**

Dr. Stuart Gaffin, a professor at Columbia University and an Associate Research Scientist at that university's Center for Climate Systems Research, initially began his studies researching how trees and parks cool the city. In his research he noticed an odd phenomenon; heat islands, which he initially assumed were caused by large buildings. He looked further, and realized that the 'heat islands' were caused by artificial turf.



NASA Satellite Photo, August 14, 2002, New York City, shows heat islands, the red squares at left. The photo on the right shows the lower left to be a building and rooftop. The green area in the larger yellow frame to the right is an artificial turf playing field.