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**Artificial Turf Fields (SHS & St Johns) - Request for Policies & Procedures related to Health, Environmental, and Financial issues**

1 message

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**From: Bryan Moss**

Mon, Aug 27, 2018

To: SchoolCommittee <schoolcommittee@shrewsbury.k12.ma.us>, selectmen@shrewsburyma.gov, Kerry Stockwell <kstockwell@shrewsburyma.gov>

Cc: Kevin Mizikar <kmizikar@shrewsburyma.gov>

Dear School Committee, Board of Selectmen, and Board of Health,

Over the past two years (beginning in July 2016), I have raised the health, environmental, and financial issues related to artificial turf to the attention of the school and town numerous times and my hope is that the following Operational items related to those issues can be addressed ahead of the field openings.

**Operational Items Needing Policies and Procedures- Summary List (more details at bottom of email):**

- **Education / Signage**
- **Heat**
- **GMAX (hardness) testing**
- **Harmful bacteria (eg MRSA), mold, and mildew**
- **Water run-off & aquifer protection**
- **Infill Migration & Loss**
- **Maintenance Chemicals**
- **Financials**

It is important to set policies and procedures around the operation of the turf fields at SHS and St Johns in order to try to address the health & environmental concerns. As you can see from this news story, there is a major problem where schools and businesses have not put policies and procedures in place to address these issues.

**Trouble in the Turf: Lack of synthetic turf testing & maintenance puts athletes at risk (with 7 minute video)**

<https://www.wthr.com/article/trouble-in-the-turf-lack-of-synthetic-turf-testing-maintenance-puts-athletes-at-risk>

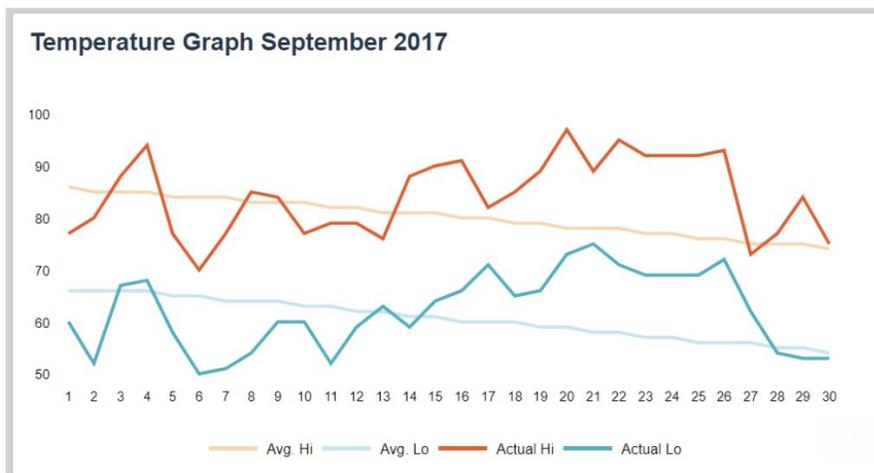
Using the Heat issue as a specific example, you can see from this News Story in Utah last year how hot the turf fields can get. There is a video showing a news team testing fields and the results they got. When the temperature was 83 degrees out, the field was up to 163 degrees.

**Artificial turf temperatures too hot for young athletes? KSL investigates (with 5 min Video)**

<https://www.ksl.com/?sid=45066889&nid=1171&title=artificial-turf-temperatures-too-hot-for-young-athletes-ksl-investigates>

If you look at last year's temperature graph for Shrewsbury it shows that the temperature was in the 80's and 90's all month long in September 2017. Using the results from the Utah news story, that would translate in the 150 degree or higher range for turf field temps. So a temperature policy is important and needed even in the month of September.

**Accuweather - Last year's Sept 2017 Temperature graph**



To understand how that temperature may relate to student and athlete health, here was an NPR article citing how a NYC Health Dept report said the following about temperatures above 115 degrees.

**High Temps On Turf Fields Spark Safety Concerns**

<https://www.npr.org/templates/story/story.php?storyId=93364750>

- NYC Health Department report says heat is the primary health concern associated with playing on the fields. It says people can suffer dehydration, heatstroke and thermal burns at field temperatures above 115 degrees.

Basically, the school/town needs to implement a temperature policy and demonstrate how it will be enforced. Also, the school/town should track and record the temperatures and resulting closures.

Even though SHS has water cannons, those usually only work temporarily (ie. 5 min to 30 min - see NY State DPH fact sheet).

**NY State DPH Fact Sheet: Crumb-Rubber Infilled Synthetic Turf Athletic Fields**

- [https://www.health.ny.gov/environmental/outdoors/synthetic\\_turf/crumb-rubber\\_infilled/fact\\_sheet.htm](https://www.health.ny.gov/environmental/outdoors/synthetic_turf/crumb-rubber_infilled/fact_sheet.htm)

Here are the additional details on the Operational items that need policies and procedures set.

## Artificial Turf Operational Items:

### Summary List:

- **Education / Signage**
- **Heat**
- **GMAX (hardness) testing**
- **Harmful bacteria (eg MRSA), mold, and mildew**
- **Water run-off & aquifer protection**
- **Infill Migration & Loss**
- **Maintenance Chemicals**
- **Financials**

### More Details:

**Signage / Education** - Health Dept recommendations both on field signs and provided to parents, coaches, athletes, students, teachers, etc. Here is an example from 2009 in CT:

TOWN OF RIDGEFIELD DEPT. OF HEALTH (CT)

The Town of Ridgefield encourages all those using artificial turf fields to observe the following recommendations:

- Wash hands and exposed body parts aggressively after playing on fields
- Turn clothes inside out as soon as possible to avoid tracking dust to other locations.
- Keep beverages closed and in bags/coolers when not drinking to minimize contamination from field dust and fibers.
- Be aware of signs of heat-related illness and dehydration. Fields can get excessively hot on warm, sunny days. Take all necessary precautions.

### **Heat -**

- Installing a heat sensor or manually checking heat to record the heat on the field and track. Keep records for historical purposes.
- Guidelines for field use at high temperatures (e.g. cover the max temperature at which the field and/or track will be closed, etc).
- Guidelines for use of water cannons to address heat
- Will the turf field have the water sub-metered to keep track of water usage?

**GMAX testing (aka Hardness/Concussion testing) - procedures**

**Harmful bacteria (eg MRSA), mold, and mildew - testing / cleaning procedures.** How will these be addressed without the use of chemicals?

### **Water run-off & aquifer protection-**

- Request Turf Product Vendors provide a listing of all chemicals used to make all field components. This should include chemicals that make up the plastics like plasticizers, phthalates, BPA, flame-retardants, uv-stabilizers, color fixatives (like lead), etc.
- testing of field run-off for those chemicals and microplastics
- testing of drinking water supply for those chemicals and microplastics
- Additional consideration for St John's who is using crumb rubber which means each of their fields will typically contain between 20,000 to 30,000 ground-up tires which means that there will a total of 40,000 - 60,000 ground-up tires adjacent to our Aquifer Protection District and I believe the run-off from their turf fields will drain into the wetlands behind the fields and crossing thru those wetlands is West Brook which continues down to Old Mill Pond and then I believe drains into Lake Quinsigamond (which then I believe also feeds our aquifer).

### **Infill Migration & Loss** - Infill migrates out of the field due to plowing, weather, etc.

- procedures to monitor infill loss - how much is lost. Will this cause problems with footing of athletes on the track.
- Will surrounding environment and wetlands be monitored and cleaned up.
- How much is budgeted to replace the infill each year?

### **Maintenance Chemicals** - double check because school dept stated no chemicals will be used; however, some maintenance manuals reference the usage of chemicals.

- Disinfectants
- Biocides
- Fungicides
- Herbicides (ie. Roundup/Glyphosate recommended in FieldTurf's "Maintenance Guidelines")
- Anti-microbial spray
- Anti-static spray
- Paint
- Paint remover
- Solvents
- De-icers

### **Financials** -

- Adjust and re-publish SHS Turf Project Rental Plan to account for the \$100,000 SYS donation that is used as a field credit
- Plan for keeping all rental money in a separate account to be used for field repairs, infill replenishment, and future carpet replacement.
- Determine the carpet replacement timeline (e.g. 8 or 10 years).
- Price out carpet replacement quotes now and track rental plan funds against that future cost to determine if on target to replace in the timeline that was determined.

Thank you for your attention in this matter and please feel free to reach out to me with any questions - thanks!

Thank you, Bryan Moss 16 Ruthen Cir