

Mount Greylock Regional School District School Committee

Location: Zoom Remote Meeting

Date: December 14, 2020

Time: 5-6 pm

Join Zoom Meeting

<https://zoom.us/j/95142649388?pwd=MHJzSTk0cIZSNUg3LzRzTzJIN0ZFZz09>

Meeting ID: 951 4264 9388

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+16468769923,,95142649388# US (New York)

Per Governor Baker's order suspending certain provisions of the Open Meeting Law, M.G.L. c. 30A sec. 20, the public will not be allowed to physically access this School Committee meeting.

Please see our Public Comment Policy for Guidelines regarding Public Comment at Remote Meetings:

<https://z2policy.ctspublish.com/masc/browse/mtgreylockset/mtgreylock/BEDH-R>

Special Open Session/Phase II Turf Forum Agenda

- I. Call to order
- II. Mission: At Mount Greylock Regional School District, our mission is to create a community of learners working together in a safe and challenging learning environment that encourages restorative based processes, respect, inclusive diversity, courtesy, integrity, and responsibility through the high expectations and cooperation resulting in life-long learning and personal growth.
- III. Public Comment regarding Artificial Turf Field
- IV. Motion to adjourn

This meeting will be posted on the MGRSD YouTube page

<https://www.youtube.com/channel/UCLR0nrLhpZHlyPFUhaMxPSg> and will be broadcast on WilliNet TV channel 1302 in Williamstown.

Public Comment List 12.14.20 Fields Session

Name:	Address:
Dave Armet	
Suk Namkoong	
Al Terranova	
Brian Gill	
Thomas Ostheimer	
Malcolm Smith	
Alison Carter	
Rob Abel	
Jim Easton	
Talia Cappadona/Julius Munemo	
Peter Harrison	
Blair Dils	
Joe Finnegan	
Jonathan Igoe	
Anne O' Connor	
Huff Templeton	
Christian Malone	
Wendy Penner	
Molly Polk/Peter Low	
Bridget Spann	
Ken Kuttner	
Erin Keiser-Clark	
Dr. Nicholas Wright	
Michael Nixon	
Marc McDermott	
Hugh Daley	
Keith Taft	

From: [AC Kirsch](#)
To: [Hugh L. Guilderson](#); [School Committee](#); [McCandless, Jason](#)
Cc: [Vigiard, Stacie](#)
Subject: Athletic Turf Field Project
Date: Saturday, December 12, 2020 3:12:43 PM

Mount Greylock Regional School Committee

School Committee at schoolcommittee@mgrhs.org
Superintendent [Jason McCandless](#)
Copy to svigiard@mgrhs.org

Re: Athletic Fields Turf Project

Dear members of the Committee,

The following are our concerns with respect to artificial turf:

1. This is not the kind of project that can be done efficiently during the winter.
2. Have the contract documents been amended in an effort to reduce the cost of the project and provide an alternate bid for a grass field, as the Committee said it would do last year?
3. Several financial and environmental concerns have not been addressed. We are aware that the subcommittee discussed them, but many parents and taxpayers are still concerned. To rush the project out for bid now dismisses our concerns.
4. The life cycle cost of the synthetic turf field will be significantly greater than the life cycle cost of a grass field. That is an unjustifiable additional long-term financial burden.
5. Can you provide evidence/certification that none of the components of the turf field will contain PFAS or other bio-hazards?
6. Since the answer to item 5 likely is “no,” then can you provide evidence/certification that there is a legal disposal site for the turf field components within the lower 48 states of the United States and do you have a current estimate of the cost of their disposal?

Most egregiously, this rush to bid is insisting on one highly controversial, possibly too costly and dubious solution when natural grass is the more prudent choice.

Respectfully submitted,

Arlene C. Kirsch, MS, MPA

Hugh L. Guilderson, PhD

From: [Baker-White, Robert](#)
To: [School Committee](#)
Subject: Turf field
Date: Saturday, December 12, 2020 7:35:26 PM

Hello,

I will not be available at 5:00 pm Monday to join the meeting. I would, however, like to express my view that a natural grass field for the school grounds makes much more sense to me, given the unknown ecological impact that artificial "turf" could produce years down the road. We don't know enough. Let's stay with a natural solution, and put in place the necessary safeguards that will be necessary for safety and environmental health.

Robert Baker-White
70 Ballou Lane
Williamstown

From: [Tracy Baker-White](#)
To: [School Committee](#)
Subject: turf field
Date: Saturday, December 12, 2020 2:35:48 PM

Dear School Committee,

As a member of our community interested in both our children's welfare and our environment, I strongly oppose the idea of a turf field at Mt. Greylock High School.

Thank you,

Tracy Baker-White

From: [Ralph Hammann](#)
To: [School Committee](#)
Subject: Against Artificial Turf
Date: Sunday, December 13, 2020 6:24:39 PM

To Members of the School Committee:

As I am not sure that I can attend the public comment session on the matter of artificial vs real turf, please know that I am strongly opposed to the use of artificial turf.

I am sure that my viewpoints on the environmental impact, health concerns and irresponsible and outrageous expense will be well-represented by others sharing the same perspective.

I was angered at the manner in which this controversial matter was pushed through at the meeting that was dominated by Al Teranova and hope that the present committee will deliberate more carefully.

Sincerely,

Ralph Hammann

413-841-9211
42 Cold Spring Road
Williamstown, MA 01267

From: [Karen Shepard](#)
To: [School Committee](#)
Subject: request for letter to be read aloud
Date: Monday, December 14, 2020 8:10:48 AM

To the School Committee,

I can't be at the meeting tonight, but I'd like to request that the following letter be read aloud, if that's possible.

Thanks so much,
Karen Shepard

To the Committee:

I live in Williamstown and am the parent for three former Greylock students. I'd like to voice my concerns about both the process and logic behind the decisions involving the athletic fields at Greylock.

I have concerns about the process of the Committee's decision-making. Have promises about that process been kept? Are the Committee's decisions in the best interests of the community (financially, environmentally, and in terms of public health)? For example, is this project really the best use of resources as the school faces the short and long term effects of a global pandemic?

Over the nearly thirty years that I've been involved with the school district, I've seen Greylock get better and better at including the community in the school decision-making. I have hope that, especially in this moment when the need for transparency and inclusion are at an all-time high, the Committee understands how important that inclusion is.

In addition, I'd like to share the opinions of a former specialist from Sports Turf Specialties, an athletic field construction company. He has no vested interest in the Greylock fields, and he had this to say about fields:

"A properly installed and maintained sand based natural turf field has an indefinite lifespan. Even with heavy play and events, a field can be stripped and re-sodded or repaired with ease and at minimal comparative cost. The costs associated with installing artificial fields and replacing them (they do have a lifespan which is not nearly as long as most expect) is astronomical. Injuries are far more common and severe on artificial turf. There are differing opinions on the effects of the chemical composition of artificial turf, but the heat produced is a big problem, and they need to be watered down to control temperature. They need to be constantly disinfected and tested for hardness, repaired, irrigated, and infill needs to be replaced swept and dragged weekly or monthly. In the industry, it has become more and more common for facilities to replace artificial turf fields (which were all the rage for a while) and convert back to natural turf."

This specialist offered to share his expertise with anyone on the committee months ago. As far as I know, no one has reached out to him, but I'm sure his offer still stands.

I hope that this new iteration of the School Committee will do what it can to build trust between the Committee and the community as this decision about the field is made.

Thanks for your time,
Karen Shepard

From: [Bridget Spann](#)
To: [School Committee](#); [McCandless, Jason](#)
Subject: Fwd: concerns about the process of considering an artificial turf field for MGRHS
Date: Monday, December 14, 2020 10:34:52 AM

Hello School Committee and Superintendent McCandless,

I am resending this comment shared at the October 16 SC meeting, as I realize that many of you are new and may not have heard this information.

Thank you

Bridget Spann

----- Forwarded message -----

From: **Bridget Spann** <bridget@caretakerfarm.org>
Date: Fri, Oct 16, 2020 at 8:59 AM
Subject: concerns about the process of considering an artificial turf field for MGRHS
To: <schoolcommittee@mgrhs.org>
Cc: <jbergeron@mgrhs.org>, <rputnam@mgrhs.org>

Dear School Committee,

I am writing with concern about the process that has led to a noon meeting today, scheduled at a time when many people (myself included) are not available due to their work or family commitments.

Rather than spending an exorbitant amount on a single artificial turf field, these funds could be better utilized to invest in a new natural grass field and a track and to improve the existing grass fields through organic management. The substitution of BrockFill for crumb rubber does not allay the serious financial and environmental concerns about this project.

Organically-managed natural grass fields are safe, cost-effective and environmentally-friendly, yet the Phase II subcommittee doesn't appear to have investigated in any serious way the cost or benefits of an organically-managed natural grass field. Instead it only pursued the artificial turf option based on the consultation of Traverse Landscape Architects.

Traverse Landscape Architects has designed numerous artificial turf fields, but its website doesn't have a single example of a natural grass field. In its July 2019 presentation to the community, Traverse utilized a "cost per hours of use" project

to present an artificial turf field as a better return on our investment (<https://www.forbes.com/sites/mikeozanian/2014/09/28/how-taxpayers-get-fooled-on-the-cost-of-an-artificial-turf-field/#4548087b5db2>), and neglected to provide information in its cost analysis about the significant disposal costs that our community would incur when replacing the infill or the artificial grass carpet. Traverse also referenced a recycling option for the plastic grass carpet that does not exist in our country, with the result that tons of waste from artificial turf fields is piling up because it can't be recycled and nobody wants to pay for proper disposal.

In its Return on Investment chart, Traverse included a \$500,000 replacement cost for a natural grass field after 10 years, a figure that perhaps suggests laying down new sod (?). This figure makes no sense with respect to organic turf fields. After improving the soil chemistry to support the growth of the roots of the grass, one would never want to rip out a properly maintained organic grass field and replace it 10 years later.

Traverse also indicated that grass fields wouldn't be available during October when they would be over-seeded, but a common over-seeding practice on high use, high expectation fields is to broadcast seed and allow the athletes to cleat it in. The Trinity Engineering report presented to the SC on Jan. 9, 2020 relied on information and consultation from Traverse: This report incorporated cost data from Traverse and utilized the same misleading "cost per play hour" formula outlined in the Forbes article; for the calculations in this report, it was assumed (again based on consultation from Traverse) that grass fields wouldn't be available for use in October, which further skews their "cost per play hour" formula.

Many people compare inadequately maintained grass fields, which is what the community has experienced at MGRHS in recent years, to a perfectly maintained artificial turf field, which is what we see on the Williams campus. While I agree that an investment is needed in the athletic fields at MGRHS, I don't think that a single artificial turf field will best address our concerns for athletes having access to quality playing fields and athletic facilities.

For the existing grass fields, depending on their initial condition, 3-5 years of organic turf maintenance might be needed to bring them up to optimal standards, although results would be noticed in the first year. Organic management includes soil testing, aeration, application of organic products including fertilizer and soil amendments to increase soil quality, overseeding, altered mowing practices and irrigation. For every 1% increase in organic matter, a grass field can hold an additional 21,000 gallons of water (USDA Natural Resources Conservation Service), which means that organically managed grass fields are available for more days of play as they can handle more wetness than conventional fields. Over time, as the field's soil chemistry improves, organic maintenance is less costly because fewer inputs are needed, such that it can be more cost effective than conventional management of natural grass.

Artificial turf fields are not maintenance-free. They also need to be maintained on a regular basis: fluffing, redistributing, shock testing infill, period static control and chemical disinfection of materials, seam repairs, infill replacement, top surface replacement, field lines erasing and repainting, organic matter removal, and watering to lower temperatures on hot days. Now there is an additional market for new chemical disinfectants for artificial turf fields to address COVID-19, as the virus can linger on plastic up to 3 days (New England Journal of Medicine); however, as COVID-19 is inactivated at temperatures higher than 132.8 degrees (World Health Organization), and artificial turf fields regularly reach temperatures beyond 132.8F on warmer days, the increased temperature of the playing surface will not only stress our athletes, it will kill the virus. (<https://themotzgroup.com/synthetic/motz365/disinfecting-your-synthetic-turf-field-during-covid-19/>).

As you move forward with your decision-making process, I ask that you be direct with the community about the costs that we will incur if an artificial turf field is installed at MGRHS.

For your review:

Cost per hours of use projections

<https://www.forbes.com/sites/mikeozanian/2014/09/28/how-taxpayers-get-fooled-on-the-cost-of-an-artificial-turf-field/#4548087b5db2>

How Taxpayers Get Fooled On The Cost Of An Artificial Turf Field - September 2014
Towards the bottom of the chart the number of hours the artificial turf field is used is doubled to twice the use of the natural grass field, thus based on "cost per hours of use" projections the artificial field is now cheaper.

Cost analysis

https://www.turi.org/Our_Work/Community/Artificial_Turf/Cost_Analysis

The cost analysis by Toxics Use Reduction Institute at UMASS Lowell draws from industry publications, articles in the press, university projects, and personal communications from municipal grounds managers. Summary: TURI found that in nearly all scenarios artificial turf fields have higher life-cycle costs than natural turf for an equivalent area.

Recent news pertaining to artificial turf:

1. <https://www.gazettenet.com/Holyoke-sues-over-defects-in-high-school-turf-36145202>

The city of Holyoke is suing three companies over what it says are defects in the \$1.4 million turf field installed at Holyoke High School in 2017. September 2020

2. <https://apnews.com/article/nfl-football-archive->

[9b34d4402f2f82ae60708605f65aa560](https://www.theday.com/article/20200829/NWS12/200829392)

NFL Players Association asking teams to change all fields to natural grass

The NFL Players Association president cited the league's official injury reports from 2012-2018 to state his case that natural grass fields provide a much lower risk for injuries, compared to artificial surfaces, during practices and games.

The analysis shows that players have a 28% overall higher rate of non-contact lower extremity injuries on turf. Non-contact knee injuries occur at a 32% higher clip and non-contact foot or ankle injuries are 69% percent more likely on artificial fields.

3. <https://www.theday.com/article/20200829/NWS12/200829392> August 29, 2020

The brand new, nearly complete synthetic turf field at East Haven High School -- a \$1.2 million job -- was destroyed by Thursday's storm just three or four days before the contractor was supposed to turn it over to the school.

Thank you for your serious consideration of this matter.

Bridget Spann

1210 Hancock Rd.
Williamstown, MA 01267
(413) 458-9691

--

Bridget Spann

Caretaker Farm
1210 Hancock Rd.
Williamstown, MA 01267

(413) 458-9691

From: [Brian Drake](#)
To: [School Committee](#); [McCandless, Jason](#)
Subject: Turf Forum and Future Vote
Date: Monday, December 14, 2020 11:19:51 AM
Attachments: [Turf Fields.msg](#)

Dear School Committee and Dr. McCandless,

Thank you for your efforts to move the Phase II process along so early in many of your tenure's as a SC Member / Superintendent! This process has been going on for about 5 years now and I wanted to share some data and perspectives for your consideration.

As a former collegiate soccer player at both UConn and UMass Lowell, I have spent my entire life playing/coaching on all types of surfaces. I have been a youth coach and/or a soccer camp operator since high school. This continues here in town and since moving here in 2016, my wife and I have coached about 25 teams (soccer, basketball, and softball) between us in 4 ½ years. I cannot make myself available for public comment tonight because I am coaching 5th and 6th grade basketball, but I wanted to add my input.

My email and the expert backup data clearly state out that our district is NOT in a position to be able to sufficiently maintain a grass surface. The results of this October 2020 meeting lead to a vote that went in the direction of building a synthetic field for playability reasons and more. Please continue considering this important objective for our entire community's benefit.

Lastly, and most importantly, I am asking each of you to act expeditiously with this project. These last 5 years of data gathering have been painful, as we have presented a ton of evidence on both sides of the argument, yet the SC has been unable (or unwilling) to make a decision. This has been due to the information always leading back to a recommendation for building a synthetic field. Those against have then called for further review in stating that their information wasn't heard. It has reminded me of our current president refusing to accept the results. The real losers because of this process, have been the classes that are graduating from Greylock each year in not having had the opportunity to play on this new field. Here is hoping that this group can be a catalyst for a final prudent decision!

All my best,
Brian Drake
1565 Hancock Rd
Williamstown, MA 01267
(617) 276-6060

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From: [Brian Drake](#)
To: [School Committee](#)
Cc: [Putnam, Robert](#); [Kendra Drake](#)
Subject: Turf Fields
Attachments: [MGRHS Summary of Findings FINAL.pdf](#)
[MGRHS Advisory Group Cover.pdf](#)

Dear MGR School Committee,

I am writing as a passionate member of our community with 2 kids in the district and 1 more who will be joining his sisters in a few years. The first reason I am writing is to implore you to please vote on the Phase II Turf field as soon as possible. We have talked, and talked, and then talked some more. Regardless of the outcome, you have a responsibility to make a decision on the matter based on the years of review and discourse. There are a number of new committee members joining post-election and it would be unfair to let this vote fall on their hands.

Secondly, regarding your vote I strongly urge you to vote for a playable synthetic field turf surface that our community will be proud to own. I found the attached summary to be a great resource for anyone to read if they disagree with a yes vote for field turf. For me, this has been a classic case of a very small percentage of our population doing everything they can to block this exciting new opportunity for our community. The facts of the matter are that a natural grass field cannot survive in our climate unless 3 needs are met:

1. Minimal play.
2. A large maintenance budget.
3. Optimal water supply.

We don't have #2 and #3 is questionable based on our well situation. As for #1, it would not be ideal to have a brand new natural grass field that would need to be used sparingly or else ruin the surface. Take a look at the Williams College Cole fields. No one is allowed on the game fields except for games and walk throughs before a game. It is also maintained through the college's large facilities budget and expert team. This approach allows these fields to stay in the shape we experience. Further, the MIAA calendar requires high school student athletes to play in late October, November, March, and early April. These are precisely the months where grass cannot withstand activity. It is why I cannot play golf at Taconic until often May 1st and that is with an incredible professional groundskeeping team doing everything they can to let us out on the course.

Regarding the safety concerns that have been raised, there are literally thousands of experts that support these synthetic fields as being safe based on years of research. This research was shared time and time again, but the minority naysayers point to their own minimal research as being gospel. The proposed Brockfill material further reduces any health concerns as pointed out on page one of the attached summary findings. Even with those 2 points mentioned, in one of the most hypocritical examples of an argument, our children play on the Williams, MCLA, BCC, or other turf fields on a regular basis. In fact, the current MG athletic schedule for backup games due to weather uses these turf fields.

There have also been some committee concerns about the financial liability down the road for a replacement turf surface or other up keep. I would ask you consider the total school budget in thinking about maintenance and how does this change that total budget any differently than the brand new administrative building you voted to install. What happens when that roof needs to be replaced? Will that be budgeted? The boiler? It is a valid question and consideration for how to budget this new turf for the long haul, but certainly NOT a reason to vote against. Vote for and be prudent with your budget projections.

Lastly, I would like to encourage you to consider a track be installed around our high schools synthetic turf athletic field as part of this project. Tracks are a community asset that inspire health and athletic excellence. We should be proud of this facility and a track is important part of this project. Besides the simple fact that our high school track teams need a track, our other student athletes and physical education classes should be able to make use of a track facility on their campus. This is an exciting opportunity for this committee to vote in the final beautiful touches on a great junior/senior high school for our district to be proud to leverage as we attract and retain families to the proud towns of Hancock, Lanesborough, New Ashford, and Williamstown. Have pride in this vote, it matters for us all!

All our best,
Brian and Kendra Drake
1565 Hancock Rd
Williamstown, MA 01267

Environmental Issues:

PAHs:

This issue of Polycyclic Aromatic Hydrocarbons (PAH) chemicals in the crumb rubber in fill was raised. The issue of PAH compounds is largely a moot point now that the Brockfill material has been proposed in lieu of crumb rubber. The Brockfill material is made from natural materials consisting of a wood and sand mixture. However, if crumb rubber is again proposed, the following information below may be helpful.

I read and reviewed all of the studies identified in the FAQs from August 2019. None of the studies identified in the FAQ document identified definitive connections between the crumb rubber and the health impacts raised at the meetings, in fact the studies disprove the concerns. Another more recent study from the Netherlands was referenced by a concerned individual (REACH, RIVM, 2018, Annex XV Restriction Report, Proposal for Restriction). I also reviewed this study. In summary, this study recommends a maximum allowable limit of the REACH-8 PAHs (a group of 8 PAH compounds regulated in the EU) be lowered from its current limit of 387 mg/kg to 17 mg/kg. The study points out that 95% of the crumb rubber fields sampled in the study already meet this standard.

To put the PAH issue in perspective, the REACH-8 PAH limit is very similar to that of the PAH level of background soil as documented by the MADEP. PAHs exist in our environment at levels similar to the crumb rubber. MADEP has background soil concentrations listed for 6 of the 8, REACH-8 PAHs. These 6 PAHs total to 9.5 mg/kg background soil. See page 5 of 5, of the attached MADEP background soil data document.

The Brockfill is REACH compliant and California Prop-65 compliant.

PFAS:

The issue of PFAS chemicals in the turf grass mat was raised. I had subsequent follow up discussions with Traverse to better understand why they thought the PFAS data presented at one of the meetings was inconclusive. First, there is no USEPA approved method to determine PFAS in solids. The only approved methods that exist are for liquids. Second, the PFAS was inferred based on Flourine levels, but no data was submitted to back up the assertion of PFAS.

Traverse indicated that manufacturers currently provide documentation that the turf grass produced is PFAS, PFOS and Flourine free. See examples of the documentation attached.

Ability to Recycle Materials:

The shock pad, which underlays the artificial turf grass is able to be recycled. The Brockfill material, when removed, can be used on site on grass fields since it is wood and sand and can be recycled on site. The only component of the artificial turf field that is not fully recyclable at the moment is the backing for the artificial turf grass. There is one facility in the Netherlands that can recycle turf grass and the same company has plans to build a facility in the USA. According to Art, the industry is aware of the problem and is working to address the recycling issue. With the Artificial Turf change out being 10 to 15 years away, it is very likely a recycling facility will be available when the artificial turf is due to be changed out.

There is a recyclable turf grass product available now, but according to Traverse it would cost an additional \$40,000 over the cost of what was specified in the last design and in the cost estimate attached.

Availability of the Field for Use:

The issue of the Artificial Turf field being able to provide more hours of use was raised at the meeting. In order to try to quantify how much more use and since the two alternatives, a grass field and an artificial turf field, do not offer the same level of availability (due to cold weather seasonal constraints and maintenance requirements) it is necessary to more fully evaluate the alternatives to arrive at a uniform basis of comparison.

To do so, I obtained the number of individuals on each sports team that would use the new field, the number of individuals on the physical education program and the number of hours per week that these individuals could utilize the new field. All data for sport teams and physical education came from the Athletic Director. I applied seasonal and maintenance limitations to the grass field and the artificial turf field according to my conversations with Traverse.

I then did a calculation of each alternative to determine the total number of hours of use projected for each field alternative and the total playhours available for each alternative. In both alternatives, I split the hours between the existing John Allen field (when available), and the proposed field alternative, in order to avoid over counting the hours of availability of the new field, which would run in favor of Artificial Turf since it is available more often than a grass field.

Refer to the attached, Use Diagram and notes for supporting calculations.

In summary,

- The Artificial Turf/John Allen Field alternative provides 850 hours and 58,508 playhours of projected use versus 524 hours and 34,053 playhours of projected use for the Grass/John Allen Field alternative. The Artificial Turf/John Allen Field results in 62% more hours of use and 72% more playhours than the Grass/John Allen Field alternative.
- Perhaps more important, is the Artificial Turf field can provide 4 additional weeks of play in the early Spring and 8 additional weeks off play in the late Fall. Certainly, this will be debated, but please note, this comparison is based on conversation with Traverse and is based on comparison of an Artificial Turf field to a properly maintained grass field which must not be used when dormant and should be over seeded in the Spring and Fall. Using the grass field during the dormant season and skipping the over seeding will result in a less than optimal performance and is not a fair comparison between the two alternatives. Both options assume optimal maintenance.

Cost Comparison Evaluations:

Lastly, since both the availability for use, as well as, the cost differs between the two alternatives, making a direct comparison between the two alternatives is difficult without 'normalizing' them in some way. To do this I calculated the cost per playhour for each alternative. I took the total projected capital cost from Traverse and divided it by the total hours and playhours calculated above. I did the cost

comparison for the hours & playhours of the proposed fields only, as well as, cost per hour when used in conjunction with the John Allen Field.

Refer to the attached, Use Diagram and notes for supporting calculations. Also refer to the Cost Comparison spreadsheet.

- In terms of cost per playhour, the Artificial Turf field alone is \$58/playhour, versus \$102/playhour for the new Grass Field alone. When considered in conjunction with the use of the existing John Allen Field, the cost per playhour for the Artificial Turf/John Allen combination is \$41/playhour, versus \$51/playhour for the new Grass Field/John Allen combination. In either case, the Artificial Turf field results in a more cost effective option per playhour.
- In terms of use of the Artificial Turf field, the projected hours of use of the Artificial Turf field alone is 588 hours/year versus 262 hours/year for the Grass field alternative. This estimate is on the low side of what an Artificial Turf field can sustain (2500 hours per year is possible), which means the expected life of the field should be extended beyond the warranty life. A 12 year life expectancy of the Artificial Turf was assumed in the cost calculations described below. The Artificial Turf may well last longer than 12 years which further improves the economics of the Artificial Turf option.
- The Artificial Turf option requires a larger capital investment than the Grass Field option, approximately \$2.4 million for the Artificial Turf versus \$1.75 million for the Grass Field option.
- The Artificial Turf alternative results in a lower annual expense rate when considering the annual maintenance cost and the replacement cost, based on a comparison of a properly maintained grass field. Annual cost for Artificial Turf is estimated at \$55,600 vs. \$65,000 for the Grass Field alternative. Comparison of a non-properly maintained grass field would require that a similar comparison be made of an Artificial Turf, ie: not properly maintained, and such a comparison would not be useful for decision making purposes.

Conclusions:

The Artificial Turf alternative requires 38% more capital investment than the Grass Field option, yet it stands out as a better option for the following reasons:

1. The Artificial Turf alternative provides more than double the projected hours of use than the Grass Field Option (588 hours vs. 262 hours).
2. When not considering the contribution of hours of use from the John Allen Field, the Artificial Turf field alternative provides more than double the projected playhours of use than the Grass Field alternative (41,481 playhours vs. 17,027 playhours).
3. When considering the contribution of hours from the John Allen Field, the Artificial Turf field alternative provides 1.7 times the projected playhours of use than the Grass Field alternative (58,508 playhours vs. 34,053 playhours).
4. When alternatives are compared on a \$ per playhour basis, the Artificial Turf cost per playhour is 56%-80% of the cost Grass Field alternative (\$58/\$102 and \$41/\$51).
5. The Artificial Turf alternative provides a lower annual maintenance and refurbishment cost (\$55,600 vs. \$65,000).
6. The Artificial Turf alternative has up to 12 weeks more project availability over a properly maintained Grass Field alternative which benefits the sports programs as it relates to scheduling, busing and post season play.
7. Moving the early and late season events off of the John Allen Field will allow for proper maintenance of the John Allen Field allowing for its condition to be improved.
8. Environmental concerns regarding the infill material have been address by substituting the Brockfill material, which is a natural fill and can be recycled on site.
9. Environmental concerns regarding PFAS chemicals in the turf mat can be address by utilizing materials certified to be PFAS, PFOS and Flourine free.
10. Concerns regarding recycling have been addressed with the exception of the Artificial Turf mat, which is expected to be addressed in the near future based on industry trends, or alternatively a more expensive option for a fully recyclable turf mat exists.

Use Diagram
Alternative 1: Grass Field

Use Limitations										January				February				March				April				May				June				July				August				September				October				November				December																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Cost of Alternative 1 \$ 1,740,000
Cost/Manhour Grass Field Only \$ 102 (Cost of New Field/Manhours of New Field Only)
Cost/Manhour Combined \$ 51 (Cost of New Field/Manhours of New Field + John Allen Field)

Use Diagram
Alternative 2: Artificial Turf Field

Use Limitations Alt. 2										January				February				March				April				May				June				July				August				September				October				November				December											
Snow										Snow																																												Snow											
Use Limitations Grass																																																																	
Reseeding																		Seed																																															
Dormant										Dormant																																																Dormant							
Availability & Use																																																																	
John Allen Field										0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																
Alternative 2 Field										0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%															
		Wks. Avail		Wks. Avail		Total Hrs.		Total Hrs.		Playhrs		Playhrs																																																					
Teams/Users		Persons	J. Allen	Alt. 2	Hrs/Wk	J. Allen	Alt. 2	J. Allen	Alt. 2																																																								
Physical Education		370	15	28	2.9	22	60	8094	22123									Physical Education																																															
Football		26.6	6	14	12	36	132	958	3511																																																								
Boys Soccer		40.8	6	12	12	36	108	1469	4406																																																								
Girls Soccer		43.6	6	12	12	36	108	1570	4709																																																								
Boys Lacrosse		36.2	11	13	12	66	90	2389	3258									Boys Lacrosse																																															
Girls Lacrosse		38.6	11	13	12	66	90	2548	3474									Girls Lacrosse																																															
			Total			262	588	17027		41481																																																							
			Total both Fields			850		58508																																																									

Cost of Alternative 2 \$ 2,396,000
Cost/Manhour Grass Field Only \$ 58 (Cost of New Field/Manhours of New Field Only)
Cost/Manhour Combined \$ 41 (Cost of New Field/Manhours of New Field + John Allen Field)

Use Diagram Notes

From Mt. Greylock Athletic Director

	No. of Players/Yr (5 yr Average)	Avg or Typ. Wks.	Avg. or Typ. Hrs/week	Avg. or Typ. Playhours/Yr	Notes
Physical Education	370	39	2.92	42088	Assumed 39 weeks of PE in school year
Football	26.6	16	12	5107	
Boys Soccer	40.8	12	12	5875	
Girls Soccer	43.6	12	12	6278	
Boys Lacrosse	36.2	12	12	5213	
Girls Lacrosse	38.6	12	12	5558	
Baseball	40.2	3	12	1447	These weeks are possibly available if Art. Turf is used
Softball	27.8	3	12	1001	These weeks are possibly available if Art. Turf is used
Tennis (Boys & Girls)	23.2	2	12	557	These weeks are possibly available if Art. Turf is used
Track (Boys & Girls)	96.6	2	6	1159	These weeks are possibly available if Art. Turf is used
Cross Country (Boys & Girls)	93.6	6	1	562	These weeks are possibly available if Art. Turf is used
				74845	Total Hours of Sports & PE per year

	Manhours Alternative Only	Manhours Both Fields	Cost of Field	Cost/Manhour Alternative Only	Cost/Manhour Both Fields
Artificial Turf	41481	58508	2,396,000	\$ 57.76	\$ 40.95
Grass	17027	34053	1,740,000	\$ 102.19	\$ 51.10

COST ALTERNATIVE 1 vs. ALTERNATIVE 2

COST ALTERNATIVE 1 vs. ALTERNATIVE 2		PROJECTED COSTS		
	Data Provided by	Annual	Source	
Alternative 1: Proposed New Sustainable Grass Field				
Capital Cost	Traverse Landscape			
	\$ 460,000			
				Includes vehicular pavement to baseball and new softball field
ADA / Title IX Upgrades	\$ 540,000			
Infrastructure (e.g. fencing)	\$ 15,000			
Maintenance	\$ 35,000	\$ 35,000	Annual Amount	
Utilities and Lighting	\$ 525,000			
Irrigation	\$ 165,000			Includes new well needed for operation
Rehab of Field (\$300,000 in 10 years)		\$ 30,000	Annual amount	
TOTAL COST	\$ 1,740,000			
TOTAL ANNUAL COST		\$ 65,000		
Alternative 2: Proposed New Synthetic Turf Field				
Capital Cost	Traverse Landscape			
	\$ 1,300,000			
				Includes vehicular pavements and new softball field
ADA / Title IX Upgrades	\$ 540,000			
Infrastructure (e.g. fencing)	\$ 15,000			
Maintenance (brushing, grooming, etc.)	\$ 16,000	\$ 16,000	Annually	
Utilities and Lighting	\$ 525,000			
Drainage System Maintenance	\$ -			
Rehab of Field (\$475,000 in 12 years)		\$ 39,600	Annual amount	
TOTAL COST	\$ 2,396,000			
TOTAL ANNUAL COST		\$ 55,600		



Massachusetts
Department
of
ENVIRONMENTAL
PROTECTION

technical update

Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil

Updates: Section 2.3 *Guidance for Disposal Site Risk Characterization – In Support of the Massachusetts Contingency Plan (1992)*

Discussion

Polycyclic Aromatic Hydrocarbons ("PAHs") are ubiquitous and consistently present in the environment and are typically formed during the incomplete burning of organic material including wood, coal, oil, gasoline and garbage. PAHs are also found in crude oil, coal tar, creosote and asphalt. Historically, PAHs have been associated with human activities such as cooking, heating homes and industries and fuel for operating automobiles, although low levels of PAHs are also present in the environment from natural sources, such as forest fires. Their presence in the environment at higher concentrations is an artifact of habitation and is due to the widespread practice of emptying fireplaces, stoves, boilers, garbage, etc. in rural and urban areas over the past several hundred years. As a result, it is very common to detect "background" levels of PAHs in soils. Metals are both naturally occurring and found in man-made materials (such as paint, fuel, fertilizers and pesticides) widely distributed in the environment. Naturally occurring metals present in wood and coal are often found concentrated in ash residue.

DEP has obtained background data from various sources documenting the concentrations of PAHs and metals in soil affected by human activities, particularly soil associated with wood ash and coal ash. These levels are representative of typical concentrations found in areas with fill material, *not* pristine conditions. DEP has also compiled background soil data for metals that are representative of undisturbed, natural conditions.

The identification of generic values for PAHs and metals in soil is intended to streamline the risk characterization process (310 CMR 40.0900) and determination of applicable Response Action Outcome Category (310 CMR 40.1000). Nothing in this Technical Update obviates the need to establish location-specific background conditions for other purposes, such as compliance with the anti-degradation provisions of the Massachusetts Contingency Plan ("MCP") described at 310 CMR 40.0032(3).

Definition of Background (310 CMR 40.0006)

Background means those levels of oil and hazardous material that would exist in the absence of the disposal site of concern which are either:

- (a) ubiquitous and consistently present in the environment at and in the vicinity of the disposal site of concern; and attributable to geologic or ecological conditions, or atmospheric deposition of industrial process or engine emissions;
- (b) attributable to coal ash or wood ash associated with fill material;
- (c) releases to groundwater from a public water supply system; or
- (d) petroleum residues that are incidental to the normal operation of motor vehicles.

Table 1.
MADEP Identified Background Levels in Soil

Revised - 8

	Concentration in "Natural" Soil	Concentration in Soil Containing Coal Ash or Wood Ash Associated With Fill Material
OIL OR HAZARDOUS MATERIAL	mg/kg	mg/kg
ACENAPHTHENE ²	0.5	2
ACENAPHTHYLENE ²	0.5	1
ANTHRACENE ²	1	4
ALUMINUM ¹	10,000	10,000
ANTIMONY	1	7
ARSENIC	20	20
BARIUM ¹	50	50
✓ BENZO(a)ANTHRACENE ²	2✓	9
✓ BENZO(a)PYRENE ²	2✓	7
✓ BENZO(b)FLUORANTHENE ²	2✓	8
BENZO(g,h,i)PERYLENE ²	1	3
✓ BENZO(k)FLUORANTHENE ²	1✓	4
BERYLLIUM	0.4	0.9
CADMIUM	2	3
CHROMIUM (TOTAL)	30	40
CHROMIUM(III)	30	40
CHROMIUM(VI)	30	40
✓ CHRYSENE ²	2✓	7
COBALT ¹	4	4
COPPER	40	200
✓ DIBENZO(a,h)ANTHRACENE ²	0.5✓	1
FLUORANTHENE ²	4	10
FLUORENE ²	1	2
INDENO(1,2,3-cd)PYRENE ²	1	3
IRON ¹	20,000	20,000
LEAD	100	600
MAGNESIUM ¹	5,000	5,000
MANGANESE ¹	300	300
MERCURY	0.3	1
METHYLNAPHTHALENE, 2- ²	0.5	1
NAPHTHALENE ²	0.5	1
NICKEL	20	30
PHENANTHRENE ²	3	20
PYRENE ²	4	20
SELENIUM	0.5	1
SILVER	0.6	5
THALLIUM	0.6	5
VANADIUM ¹	30	30
ZINC	100	300

(Values rounded to one significant figure.)

¹ In the absence of fill-specific data, the "natural" soil value has been adopted.

² In the absence of data specific to "natural" soil, a lower percentile value from the fill data set has been adopted.

Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108-4746

Commonwealth of
Massachusetts
Jane Swift, Governor

Executive Office of
Environmental Affairs
Bob Durand, Secretary

Department of
Environmental Protection
Lauren A. Liss, Commissioner

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alternate format by calling our
ADA Coordinator at
(617) 574-6872.





FAQs: TenCate Grass on PFAS

10/23/19

Does synthetic turf contain substances that cause cancer?

TenCate Grass does not manufacture any products using materials that are known to cause cancer. We take customers' safety extremely seriously. The wellbeing of the communities we serve is our number one priority.

What are PFAS?

Poly and perfluorinated alkyl substances, or PFAS substances, are a family of chemical compounds used in many products, like rain jackets, tennis shoes and fast food wrappers. Some manufacturers rely on them to apply durable waterproof coatings to their products.

Scientists have recently begun to express some concerns about the safety of some forms of PFAS: PFOS or PFOA materials. The scientific community's understanding of PFAS is still evolving, but early research suggests that some particular types could be dangerous to humans. TenCate Grass customers shouldn't be concerned about this. TenCate's turf fibers are not manufactured with any PFOS or PFOA materials.

What about recent reporting in The Intercept and the Boston Globe alleging that artificial turf contains PFAS?

That reporting was highly speculative. As several environmentalists and environmental organizations have pointed out, there are a number of problems with the science those articles have cited, including dubious testing methods and conditions and an extremely small sample size. We'd be happy to refer you to those experts if you'd like to learn more.

Do TenCate products contain PFAS?

Again, we want to assure our customers that the fibers that TenCate Grass grass uses to manufacture synthetic turf do not contain any PFOS (the type of PFAS resported in the Boston Globe).

What about the backing (or other components of carpet)?

Out of an abundance of caution, and to provide an extra layer of reassurance to our customers, we are currently in the process of confirming that none of our suppliers' products contain PFOS or PFOA materials.

What standards does TenCate adhere to for consumer safety?

TenCate Grass products fully comply with the most stringent environmental standards in the world, California's Prop 65 and Europe's REACH. We are happy to do so.

What's more, TenCate designs turf products that have minimal impact on the environment. In fact, our newest woven IRONTURF fields are 100-percent recyclable.

Morton
Extrusionstechnik GmbH

Abtsteinach
Germany

**DECLARATION FOR FIELDTURF/ TARKETT SPORTS REGARDING THE
MANUFACTURING OF ARTIFICIAL TURF FILAMENTS**

We, Morton Extrusionstechnik GmbH, as supplier of artificial turf filaments to FieldTurf/ Tarkett Sports ,
declare the following for the year **2019**:

- X Our Company is Quality Management System certified (ISO 13485, ISO 9001...).
- X The products that we have supplied have been manufactured under the same conditions and parameters and there have not been changes neither in the manufacturing process nor in the components involved to.
- X There have not been changes in the raw material components for manufacturing final product supplied to above mentioned company.
- X Suppliers Argus and Zschimmer & Schwarz of the raw materials "processing aids" and "spin finish" remain the same.
- X Products supplied are in accordance with above mentioned company raw material specifications.
- X Products supplied are Fluorine free.
- X Products supplied do not contain PFAS (Polyfluoroalkyl Substances).
- X Products supplied do not contain PFOS (Perfluorooctane Sulfonates).
- X Products supplied do not contain any substance listed in the last version of the candidate list of Substances of Very High Concern (SVHC), according to REACH regulations (N° 1907/2006).
For updated list, please refer to website <http://echa.europa.eu>.

To whom it may concern, this declaration is issued on October 22nd, 2019

Signature:



Title: Managing Director

Responsible: Dr. Ulrich Berghaus

Stamp:

Morton Extrusionstechnik GmbH
Im Pfarrgrund 5
69518 Abtsteinach
Germany

The management system of

Morton Extrusionstechnik GmbH

Im Pfarrgrund 5
D-69518 Abtsteinach



has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Development and manufacture of man-made fibres

This certificate is valid from 22.10.2019 until 21.10.2022 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date.

Issue 4

The audit leading to this certificate commenced on 16.09.2019.
Previous issue certificate validity date was until 21.10.2019.

Authorised by

ppa Jan Meemken
Director CBE Germany

Hagen Sanne
Head of Certification Body



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December 31, 2019

Mr. Dan Caplinger
Chair, School Committee
Mt. Greylock Regional School District
1781 Cold Spring Road
Williamstown, MA 01267

Mr. Caplinger:

As you are aware, I was asked to serve on the Advisory Group to provide input and guidance on several concerns related to the evaluation of two alternatives for the proposed field at Mt. Greylock Regional High School. I have been pleased to try to offer my service in this matter. In the following letter and attached summary of my findings I provide my thoughts and perspective on the issues raised. To be clear, these findings are solely my opinion and not that of the Advisory Group.

On the environmental front, I have read and fully reviewed all of the studies on Artificial Turf that were referenced in the Frequently Asked Questions from August 2019, as well as, the latest study on Polycyclic Aromatic Hydrocarbons (PAHs) from the Netherlands referenced by a concerned individual. I have also attempted to better understand the PFAS issue raised at the last subcommittee meeting, as well as, the issues related to recycling of the artificial turf components.

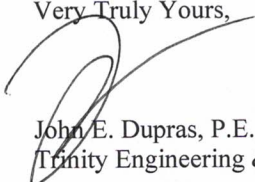
In terms of maintenance and refurbishment costs, I have worked to understand as best I can in the time available, the two alternatives proposed, including a full review of the plans and follow up calls and emails with Traverse to better understand the designs, the maintenance required, and the associated costs.

I noted in my review that it is very difficult to make a comparison of the two alternatives since the seasonal availability and therefore the use provided by the two options is so very different. Furthermore, when one tries to relate the availability of an alternative to the number of hours of use by the Physical Education students or team sports members, it became even harder to understand given the various sport schedules, number of individuals and seasonal limitations of each option. Therefore, in order to try to quantify the use of the two alternatives, I put together a Use Diagram in a weekly calendar format that spells out the availability of each alternative; a properly maintained grass field and a properly maintained artificial turf field. With information from the Athletic Director I have projected hours of use for team sports and PE students for each alternative, as well as, projected hours of play, in units of 'playhours' for each alternative.

Lastly, using cost data from the Traverse Landscaping and vetted, at least in part, by the Advisory Group, I have provided annual maintenance and refurbishment estimates, as well as, a cost per playhour for each option, which is useful for comparing the value (ie: playhours) delivered by each alternative.

It is my hope that committee may find this useful. I have done my best to present the information in an objective way. Please feel free to call should you have any questions or concerns.

Very Truly Yours,



John E. Dupras, P.E.
Trinity Engineering & Technical Services, LLC

From: [Art, Henry](#)
To: [School Committee](#)
Subject: The Issue of the Plastic Pitch(es)
Date: Monday, December 14, 2020 2:06:07 PM

Dear School Committee,

I will be unable to attend the public forum this afternoon, but wanted to clarify any confusion about my perspective on the "turf field" project. I write as a parent of MGRHS alumni, a neighbor of the campus (1/2 mile distant), and an ecologist who pays taxes to the town of Williamstown and therefore the school district. Granted that the annual maintenance might be less for a plastic turf surface than weekly mowing a living grass surface for 5-6 months per year, I emplace the Greylock School Committee to consider the total life cycle costs of a plastic pitches versus an appropriately maintained grass field. Living grass may last indefinitely if properly maintained, while plastic turf appears to last around a decade and then needs to be replaced, the old, worn out surface and probably subsurface most likely headed for a landfill somewhere, and then we are back to square one. I'd hate to see the Town having to come up with funds for the replacement in the early 2030s.

I hope the school committee does take a longer term, imaginative approach considering where the world must be heading -- toward distributed solar and wind electricity powering maintenance vehicles, which would make the life cycle and embodied energy cost analysis tip significantly in the direction of a preference toward well-maintained grass fields (just consider the US Women's National Soccer Team's demand to not play on plastic turfs, but on natural grass just like the Men's Team does).

Finally I am concerned by the unknowables of what really is in the ground-up rubber tire pellets that underlay the plastic turf surface. I have noticed bright green algal blooms coming off the Farley-Lamb Field at Williams, and would prefer that our collective children were not exposed to the tire companies' proprietary formulations that are literally kicked-up from the subsurface as the turf field is used. To trade off the potential deleterious health and wellness effects for extended seasons of use, to me seems short-sided. I'd rather to see delays in the starts of some spring sports than potentially compromising the health of our kids.

I wish you all well as you grapple with this issue that has little of a "middle-ground" possible.

Yours,

Hank Art

--

Henry W. Art

Research Associate, Center for Environmental Studies
Robert F. Rosenberg Professor of Biology & Environmental Studies, Emeritus

55 Mission Park Drive
Williamstown, MA 01267

Office: 413-597-2461
email: hart@williams.edu

Fax: 413-597-3495

Please don't print this e-mail unless you really need to. Thank you.

From: Jane Patton <patton721@yahoo.com>
Sent: Monday, December 14, 2020 12:47 PM
To: Julia Bowen; Elfenbein, Curtis; Bowen, Julia
Subject: Turf Field at MG

Julia & Curtis,

I am writing to you as a private citizen concerning the turf field at Mt Greylock. I am unable to attend the meeting this evening as I have DIRE committee and BoS meetings at 5 and 7pm respectively.

I would say I am reasonably well informed with the ongoing debate over whether or not to put a turf field in at the high school. I have not seen any definitive data that suggests turf fields are automatically more dangerous to players, whether it relates to actual play on the turf, or harmful toxins, etc. that may exist in the fabrication of the field. The reality is, we currently have no public fields in Williamstown that are functional year round. We have what I would call a 'makeshift' field at WES, where baseball, soccer and lax are played; we have the Carl Ripken baseball field; and I believe there is a baseball (softball) diamond behind the school on Harrison Street, though I don't know if it is still functional.

Mt Greylock has six or seven fields - all natural grass. The school sits on 114 acres of land. To take one field (approximately two acres), and make it turf does not seem unreasonable to me. Currently, there are schools who will not play at MG due to the fact that the natural fields are often dangerous due to weather conditions - especially November through April.

I write to vigorously state my support for a turf field. The funds are there and available to use, and it's simply time to move on and put this issue to rest.

Many thanks to you both for your service on this committee - I appreciate the time and energy that it takes and I applaud you for it.

With warmest regards,

Jane Patton
153 Gale Road
Williamstown

On Dec 13, 2020, at 4:54 PM, Win Stuebner <eastuebner@gmail.com> wrote:
Hi Julia,

First of all, I apologize for using your personal email for a School Committee matter but I wasn't entirely certain how to get the message to you on the SC email without sending it to the whole committee.

As you know, John Skavlem has really poured a huge amount of effort into the researching and evaluating the best options for the fields. And, as I am certain you are also aware the delays, endless hearings, forums etc. have been extremely frustrating for him. A year ago, when the sub-groups recommendations first went before the SC and concerns were raised at the last minute, John asked me for my thoughts regarding any health concerns with artificial fields and I readily agreed as I firmly believe that they are the best option.

I am not qualified to opine on cost or environmental issues but did testify both in person and in several lengthy letters to the SC that my research indicates that there is not a significant concern in this regard. Interestingly enough, my opinions were never acknowledged, except by Steve Miller. Yet time after time the opponents of the field were given the opportunity - with accompanying publicity - to expound on specious, speculative, unnecessarily alarmist health concerns - most of which have been debunked by expert studies.

John asked me if I could be present tomorrow evening but I have another commitment. I don't know if health concerns will be at the forefront but, you lucky woman, I am attaching a couple of my previous email missives to the SC on the subject for your perusal should you care to look at them (I apologize that they came out sideways). Steve Miller has placed these somewhere in the record as well.

Good luck tomorrow. I am really hopeful that this can proceed, at least to the bidding stage!

Hope that you and the family have a good, healthy holiday.

Win

P.S. If, for some reason you should want to torture yourself, I have reams of some of the most boring studies you would ever care to see that support my conclusions.

Attached scans



Win Stuebner <eastuebner@gmail.com>

Turf Field Health considerations

10 messages

Win Stuebner <eastuebner@gmail.com>

Tue, Sep 3, 2019 at 8:45 AM

To: "schoolcommittee@mgrhs.org" <schoolcommittee@mgrhs.org>

Bcc: John Skavlem <jskavlem@collaboration.capital>

Dear School Committee members:

I am aware that you have been deluged with emails regarding the artificial turf field and since I have already sent one email to you a few weeks ago, I hesitated to add to your burden. However, learning of the content of some of the messages that you have been receiving and reading the letter in the Eagle on Sunday, I have no choice but rebut the unfortunate misinformation that is being promoted by a small group of members of our community.

First let me establish my credentials. I have practiced medicine in Northern Berkshire County for 40+ years. After retiring from the Williamstown Medical Associates, I have been primarily interested in Community Health. I serve on the Board of Berkshire Health System. I have been active with EMS services having led the recovery of Village Ambulance after its embezzlement episode and also leading the merger effort with North Adams Ambulance to form Northern Berkshire EMS. I serve on the Williamstown Board of Health.

One aspect of promoting community health is to institute and encourage programs and information that benefit the community. However, another aspect is to attempt to correct misleading health information. The prime example is the continued anti-vaccination hysteria which defies all scientific evidence. While the health aspects of turf fields are more nuanced, statements and innuendo about the fields have been made that must be challenged.

Everybody agrees that crumb rubber contains multiple metals and chemicals that can be classified as toxins and evaluating their health risks is appropriate. However, multiple national, state and local organizations as well as colleges and universities (including Williams, BCC and MCLA) have concluded that the health risks of crumb rubber fields are so low that they are safe to play on. The FAQ sheet put out by the sub-Committee which has been studying field options for over a year is thorough and contains references to many of these organizations. Therefore, I won't repeat them but would urge you to read as many as possible but realize that this is an imposition on your schedules and may not be possible. However, **the N.Y. State Department of Health and the Washington State Department of Health statements are particularly helpful in answering specific questions and are worth reading.**

The group which appears to be leading and orchestrating opposition to the field seems to have based most of their information on publications by a group called EHHI, a small environmental advocacy group based in Connecticut. This group does no research of their own but looks at studies related to a number of environmental issues in addition to turf fields (including questions about the safety of cell phones!). Much has been made of an article that cites 22 different studies of turf fields. All except three were done before 2011, the latest was 2015 - not exactly current. I have reviewed the findings of all of these studies. Many of them actually found toxin levels to be acceptable - however, in every instance EHHI found some reason to criticize the studies despite the fact that most were from experienced toxicology authors. These reasons varied and have been stated - essentially verbatim - by the turf opposition's group self-appointed "expert" (which he is not - nor am I). Despite finding fault with these studies, the fact remains that EHHI (nor any other organization) can not cite studies that document actual adverse health risks from exposure to artificial turf fields and that, quite simply, is because **none exist**.

EHHI has several physicians and scientists associated with Yale on its board. However, an interesting insight into the credence/influence of EHHI can be found in an article in the Yale Daily News on January 25, 2019 describing Yale's decision to put artificial turf in the Yale Bowl for the 2019 season. The article mentions that EHHI was invited to give input. This was obviously not convincing as Yale proceeded with the turf field. The same article indicates that, with Yale's decision to put in artificial turf, **7 out of 8 Ivy League Schools now have artificial turf fields** (Brown being the exception). Needless to say, these institutions are quite capable of evaluating the available science and making decisions based on fact rather than on supposition.

physical and chemical testing that crumb rubber has undergone to determine if they are preferable substitutes for crumb rubber for use as infill material. Thermoplastic elastomer, for example, has been found to release greater amounts of PAHs in water and air than does crumb rubber.

N.Y. STATE SUMMARY

Summary of Information for Crumb-Rubber Infilled Synthetic Turf Athletic Fields

Health Concern	Finding
Heat stress	Surface temperatures on crumb-rubber infilled synthetic turf fields can reach levels of discomfort and may contribute to heat stress. This warrants consideration when making decisions about installing and using a synthetic turf field. While watering synthetic turf may briefly reduce surface temperatures, a number of factors may influence its effectiveness. People using these fields should be advised to remain hydrated and to seek relief from the heat in shaded areas.
Injury	Overall, studies have found no consistent differences in injury rates between natural and crumb-rubber infilled synthetic turf.
Infection	Skin cuts and abrasions that may result from contact with athletic fields (natural and synthetic turf) are susceptible to infection. Athletes and others developing skin abrasions should clean the wounds and seek prompt medical attention. Athletes should avoid sharing equipment, razors, towels, soap and other objects with others, because these items can spread germs.
Latex allergy	NYSDOH is not aware of cases of latex allergy resulting from contact with crumb rubber or synthetic turf fields.
Chemical exposures	Results from numerous studies suggest that the potential for chemical exposures from crumb rubber in synthetic turf is low; further studies by the federal government and California are underway to fill data gaps and decrease uncertainties.
Cancer	Analyses in California and Washington State have not found support for cancer associations with artificial turf field use; various exposure and risk assessments do not support a cancer risk.

Where Can I Get More Information?

Please [email us](#), call us at [\(518\) 402-7800](#), or mail your request to:

*Center for Environmental Health
Bureau of Toxic Substance Assessment*

Many studies, both pro and con, have mentioned that they were awaiting the results of a comprehensive study of turf fields by the EPA and the CDC in collaboration with the Consumer Product Safety Commission. The release of those findings were delayed by several months as the organizations sought even broader input. Phase I of that study was released at the end of July and stated "the report supports the premise that while chemicals are present as expected in the tire crumb rubber, human exposure appears to be limited based on what is released into air or simulated biological fluids (gastric, saliva and sweat)". **This is not an equivocal finding!** Phase II of the study will be released at a later date. It has come to my attention that some of those opposed to the turf fields are bringing up the fact that an organization called PEEP has questioned the validity of the study. This organization has a history of questioning multiple EPA findings over the years and has little credence within the scientific community.

It is very understandable that parents should/would express concerns re: the safety of turf fields. Raising those concerns affords the opportunity to alleviate their worries with an honest discussion of the facts. It is hopefully reassuring for them to point out that multiple state and national agencies, research universities and numerous other colleges, high schools and local Boards of Health have deemed these fields safe to play on.

The opposition to the Mt. Greylock turf field, unfortunately, has presented only the side of the argument that is part of their agenda, failing to even acknowledge that the **vast** preponderance of evidence endorses the safety of these fields. They assert that any claim of safety can be attributed to the artificial turf industry. Does anyone seriously believe that the numerous institutions (such as Williams) and government organizations that have declared the fields to be safe are in the pocket of the industry? Further, to make the statement, apparently a favorite tactic - witness the Eagle letter - that the children and young adults who use the Mt. Greylock field will be part of an "uncontrolled experiment" is, quite frankly, specious, irresponsible and unnecessarily alarmist. Turf fields have been in use for 3+ decades, now number around 10,000 and have been played on by hundreds of thousands athletes of all ages and skill levels. With that extensive use there should, by now, be at least a suspicion of deleterious health effects. The only one that has been raised is the concern of Amy Griffin, the University of Washington women's soccer coach that there might be an increased incidence of blood cancers in soccer players. This was evaluated by the State of Washington Health Department and the University of Washington School of Public Health and was found not to be the case. Parenthetically, Ms. Griffin is quoted as stating that her own children play on turf fields.

The goal of all of us, I am certain, is to provide an athletic facility that will give the students of our communities the ability to be as active as possible. If an artificial turf field best fits that need, even skeptics agree that physical activity is more important than the very small, and as yet undocumented, health risk. Thus, unless the School Committee is privy to research that is not public knowledge and that refutes the conclusions of so many respected organizations/institutions, to deny the youth of our communities a safe, reliable state of the art athletic facility solely on the remote possibility of adverse health effects would be difficult to justify. I urge the School Committee to base your decision on facts rather than on emotions.

Thank you for the time and effort that you have obviously had to devote to this issue. I invite any of you who have questions to reach out to me and I will be happy to discuss further.

Erwin A. Stuebner, Jr., M.D.

Tue, Sep 3, 2019 at 8:46 AM

----- Forwarded message -----
From: **Win Stuebner** <eastuebner@gmail.com>
Date: Thu, Nov 14, 2019 at 3:32 PM
Subject: Artificial turf
To: <schoolcommittee@mgrhs.org>

Dear members,

It has been brought to my attention that there will be a discussion of PAH's at the meeting tonight despite assurances that the artificial turf fields were not to be discussed. I have previously written in greater length to you re: the overwhelming science that supports the health safety of artificial turf. I would be remiss if I did not pass on several articles that have been cited as raising concerns but which, in actuality confirm the safety of these fields. Both describe the Dutch government's studies. They are attached to this note.

The arguments that purport to raise concerns re: the threat to the health of athletes using these fields are, and I repeat myself, specious, selective and alarmist. Do these folks have knowledge that major universities e.g. Michigan, Wisconsin, Notre Dame, Stanford, all the Ivy League schools with the exception of Brown have? Somehow, I doubt that.

Lastly, artificial turf fields have been used for decades with millions of athletes participating and there have been no proven adverse health effects documented. A first year student in epidemiology would have enough knowledge to know that is more than enough time to see such adverse effects emerge.

Thank you for your consideration,

Erwin A. Stuebner, Jr., M.D.

This multi-agency research effort, known as the Federal Research Action Plan on Recycled Tire Crumb Used on Playing Fields and Playgrounds (FRAP), is focused on assessing potential human exposure, which includes conducting research activities to characterize the chemicals associated with tire crumb rubber and to identify the ways in which people may be exposed to those chemicals based on their activities on synthetic turf fields. Also, the FRAP includes characterizing emissions and bioaccessibility to differentiate what is present in the tire crumb rubber from what people may actually be exposed to from tire crumb rubber.

Federal Research

EPA
2019

This coordinated *Federal Research Action Plan on Recycled Tire Crumb Used on Playing Fields and Playgrounds* (FRAP) includes outreach to key stakeholders, such as athletes and parents, and seeks to:

- Fill important data and knowledge gaps.
- Characterize constituents of tire crumb.
- Identify ways in which people may be exposed to tire crumb rubber based on their activities on the fields.

The study has four parts:

- Literature Review/Gap Analysis (EPA and CDC/ATSDR)
- Recycled Tire Crumb Characterization (EPA and CDC/ATSDR)
- Exposure Characterization Study (EPA and CDC/ATSDR)
- Playground Study (Consumer Product Safety Commission)

Based upon available literature, this research effort represents the largest tire crumb rubber study conducted in the United States. While this report is not a risk assessment, the information and results from the effort will fill specific data gaps about the potential for human exposure to chemical constituents associated with tire crumb rubber used in synthetic turf fields. In general, the findings from the report support the premise that while chemicals are present as expected in the tire crumb rubber, human exposure appears to be limited based on what is released into air or simulated biological fluids (gastric fluid, saliva and sweat).

Timeline

Currently, CDC/ATSDR is initiating a biomonitoring study to investigate potential exposure to constituents in tire crumb rubber. The CDC/ATSDR 30-day Federal Register Notice inviting comments on the information collection request, "Exposure Characterization and Measurements during Activities Conducted on Synthetic Turf Fields with Tire Crumb Rubber Infill," **EXIT** has now closed.

- [Crumb Rubber Characterization](#)
- [30-day Federal Register Notice: Comment on Information Collection Request for Exposure Characterization and Measurements during Activities Conducted on Synthetic Turf Fields with Tire Crumb Rubber Infill - Closes May 22, 2019](#)
- [60-day Federal Register Notice: Comment on proposed supplemental sample collections - Closed February 25, 2019](#)
- [International Society of Exposure Science Meeting Presentations](#)
- [2017 Federal Register Notice: Public Comment and Federal Responses](#)
- [30-day Federal Register Notice: Comment on Information Collection Request for Characterization of Exposure](#)

From: [Nicole Anagnos](#)
To: [School Committee](#)
Subject: opposing artificial turf
Date: Monday, December 14, 2020 4:04:56 PM

Dear Members of the School Committee,

We write to you today to ask you to seriously consider and listen to all of the parents and community members that are opposed to artificial turf. As parents of two 9th grade athletes, we strongly support a natural grass field. The possibility of short and long term health effects on our children from an artificial turf and its toxic components is a risk not worth taking.

Thank you,
Ted and Nicole Anagnos

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Nicole Anagnos
<https://klobeauty.com>

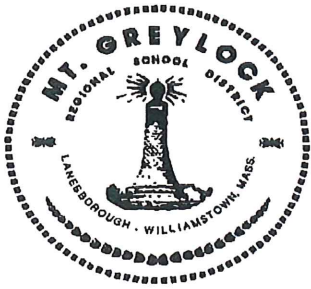
From: [Lucie Polk](#)
To: [School Committee](#)
Subject: Athletic Fields
Date: Sunday, December 13, 2020 8:33:02 PM

To the School Committee:

Please carefully consider any decisions regarding the Athletic Fields Project at MGRHS. We are living in uncertain and difficult times. Spending money just because it is there is not wise. Please look at the options to work with Mother Nature on the fields considering the long term effect on the health and safety of our children as well as the environment. Be good stewards as you look to the future.

Thank you,

Lucie Polk



Mount Greylock Regional School District
1781 Cold Spring Road
Williamstown, MA 01267
413-458-9582
FAX (413) 458-9581
www.mgrhs.org

Amended and Restated Description of the Fund for Mt. Greylock Regional School District Capital Projects

To clarify the original intent of the parties, this Amended and Restated Description supersedes and replaces in its entirety the Description of the Fund for Mount Greylock Regional School District Capital Projects signed by Mount Greylock Regional School District on August 8, 2017 and by Williams College on August 9, 2017.

In its Fiscal Year 2017, Williams established the Fund for Mt. Greylock Regional School District Capital Projects (the "Fund"), with beginning principal of \$5 million. As set forth below, payments from the Fund shall be limited to capital projects at Mount Greylock Regional School, 1781 Cold Spring Road, Williamstown, MA (the "School").

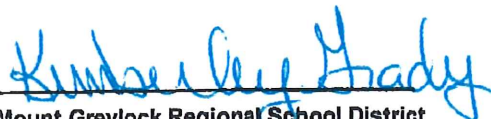
The college treats the Fund like an endowment. For all its endowments the college each year determines what percent of the market value of the principal will be distributed to endowment spending accounts. This payout rate is approved by the college's board of trustees annually, and currently is 5% of the average principal measured in the previous 12 quarters. Any additional earning or growth is returned to principal. Unused dollars in each spending account are carried forward in that account to the following year.

When the amount in the spending account for the Fund is zero, the district may spend from the principal.


Payment from the Fund may be made (a) to the Mount Greylock Regional School District either to reimburse the district for capital project expenses at the School, or in advance to provide funds to be used by the District for payment of capital project expenses at the School, or (b) directly to third-party suppliers or contractors for material and/or services delivered or provided for capital projects at the School, all of which shall be as determined and directed by the Mt. Greylock School Committee. The committee may use this money to cover all or part of the cost of any capital project at that School that the district undertakes, whether alone or with other public entities.

Unspent principal in the Fund will grow or recede without limit along with the college's endowments.

The Fund will cease to exist when the Mt. Greylock Regional School District is no longer the primary entity educating students in Williamstown, or upon the expenditure of the entire spending account and principal.



Mount Greylock Regional School District
Date: 2/28/18



Williams College
Date: 3/9/18