December 13, 2020

Hi Adam and Alex,

Thank you for your efforts during the LUPC process. As you well know, the MVC has received a significant amount of correspondence regarding the MVRHS application. So we understand how some issues and questions raised in these documents might have gotten lost in the pile. To help, we took the liberty of compiling them in one place.

Below is a catalog of questions raised in the written testimony of experts, environmental leaders and community members that have not been adequately addressed in the Applicant's proposal documents or MVC Staff Report thus far, but, as we are sure you will agree, are critical to the decision-making process.

Given the number of outstanding questions and areas of concerns (see below!), we assume there will be at least one more LUPC meeting after Monday, December 14th so that your team and the Applicant have time to research and respond. It would be a disservice to the community for the MVC to close out pre-public hearings of the LUPC without conveying to the Applicant the expectation that the following must be addressed for a ruling to be rendered.

<u>Financial (from the All Island Finance Committee thread unless otherwise noted)</u>

- Is this project financially viable? According to the application, the entire athletic campus (not including the enlarged field house) is projected to cost $11,343,164 to construct. And according to Finance Director Mark Friedman's calculations, it will cost $16.9 million over 20 years. Again, these calculations do not include the enlarged field house. Where is the money coming from? Is the proposed maintenance plan and long-term cost estimate sufficient to maintain a safe, quality field and can it be implemented within the school's annual facility's budget? (AIFC, Horsley Whitten)
- The Superintendent has repeatedly promised the public that the installation will be privately funded. Is there a financial guarantee? If so, what is it? Does it include both Phase I and Phase II? Are there conditions attached to the donation? Is the donation subject to contingencies? Are the funds irrevocably committed? What is the total amount? The terms of the deal should be transparent. (AIFC, MVC)
- Assuming the installation costs are indeed privately funded, what impacts will this have on the school's future MSBA requests where projects are approved based on demonstrable need? (MVC) Does the MVC or MVRHS think that taxpayers will be prepared to shoulder 100% of the MVRHS building renovation/rebuild costs estimated at over $100 million?
- Please request MVRHS' long-term financial plan for the complex's operation and maintenance (including replacement). Given that synthetic turf is a perpetual system, where is the financial plan showing that the school will have the funds to replace the carpet, shock pad, and infill as needed to ensure that it is safe for the generations of students who will have to recreate on this field? There are plenty of examples of unsafe failed synthetic fields still in use due to a lack of replacement funding. And there are plenty of schools now burdened with the choice of replacing an unsafe, failed field for $500,000+ or paying their teachers.
- Will MVRHS absorb all additional costs associated with this project including maintenance of the field house, the synthetic field, and the periodic synthetic field replacement costs? If so, are all six towns prepared to absorb their share of these additional costs in perpetuity? Or will they be passed along to athletes in the form of higher registration fees, usage fees, and/or potentially a pay to play model? If the latter, this approach would exacerbate financial disparities in the midst of an economic downturn.

- According to the maintenance guidelines included in the MVRHS application, daily, weekly, and monthly maintenance of the synthetic field is required to maintain the field's safety and to maintain its warranty. What are the actual costs for the specified maintenance? Who will perform it? Will they be subcontracted or salaried? What is the quote from the certified, off island contractors who perform technical aspects of the maintenance including the regular "end of life assessment" tests documented in the application?
- A review of the warranties for each constituent part of the synthetic field might be prudent. Typically a single warranty does not cover all aspects of the field's sub-grade infrastructure, irrigation, shock pad, carpet, and infill. Instead there are separate warranties and warranty voiding conditions for each element (some of which could contravene each other).
- Will the school's current insurance policy cover this project? What will the incremental costs be? Please review the policy that covers this.
- Hurricanes (or tornadoes as we saw last summer) can be catastrophic to a synthetic field. If large quantities of infill are lost and/or the carpet is ruined, are replenishment and replacement costs covered in the school's insurance policy? If not, MVRHS could be looking at significant costs following any major storm event. Where will these funds come from or will the school's game field sit unsafe/unusable until funding is somehow secured?
- MVRHS has already received two legal warnings from a law firm with expertise in toxic exposure (currently representing Martha's Vineyard Airport Commission in their lawsuit over PFAS contamination). The warnings relate specifically to environmental and human health impacts related to chemicals found in plastic fields. Who will be liable should a lawsuit be filed against MVRHS?
- Why is the MVRHS leadership focusing on fundraising for this particular effort when there is so much critical need throughout the school? Shouldn't we be focused on making sure students have safe, clean buildings. (AIFC, Susan Desmarais, Betsy Dripps)
- HAI stated that in the past standard manufacturer's warranties, often favor the manufacturer and not the owner. It is for this reason that MGL allows the designer of record to create specific criteria that may be different, or stronger, and that is in favor of the owner. So we should be expecting personalized warranties for the synthetic turf system at MVRHS. Surely HAI always advocates for the very best warranties for their clients, so where are examples of personalized manufacturers warranties from HAI's previous projects? (OBPB)
- How will the replacements be funded? (MVC, Molly Glasgow)
- All Islanders should consider the very possible scenario in which the once-per-decade replacement interval coincides with a time of budgetary tightening across the school system. Will the funding still be available for more costly natural infill material? (Vineyard Conservation Society)
- Shouldn't this project be put on hold for at least a year, until the covid dust has settled somewhat and the whole Vineyard has a better picture of the economic and social fallout of the shutdown of the economy, both off-Island and on the Island? To charge ahead at this point is simply irresponsible to all Islanders who foot the bills for the high school and will be obliged to do so going forward, regardless of other financial obligations. (Katherine Scott)
- The school district has shown an extraordinary inability over a long period of time to secure funding to properly maintain the assets they have, whether it be through preventive maintenance, upgrading or replacement. How in good conscience can we as an Island approve an expenditure of the proposed magnitude given this historical reality? (Brock Callen)
- It appears the project proposal under your consideration was funded through an inappropriate use of Excess & Deficiency monies, in violation of the warrant language approved by some of the towns. Has this been investigated? (Diana Conway)
- The manufacturer's guidance provided in the master plan indicates that even with low use, the synthetic field requires weekly infill refill and re-leveling with total surface brushing every two weeks

(at a minimum). It is conceivable that during heavy use periods, field inspection and maintenance may be required more frequently. What is the expected frequency of top dressing and infill replacement and how much does this cost per year? This is not in the proposed maintenance budget. (Horsley Whitten)

- Costs to maintain non-field facilities? (MVC)
- The maintenance budget provided for the natural grass field is not based on the maintenance plan provided in the Applicant's "Annual Maintenance Plan." Where is the accurate budget for the natural grass field in Phase 1? (Horsley Whitten, NGAG, The Field Fund)
- What are the budgeted costs and spending plans for maintaining the other MVRHS fields not included in this project, but needed for an overall field budget for the MVRHS? (The Field Fund)
- Will the expense of this project exacerbate DEI (diversity, equity and inclusion) issues at the MVRHS and in our community at large? (Rev. Cathlin Baker)

<u>Water Quality</u>

- The proposed site lies in the already stressed Sengekontacket and Lagoon Pond watersheds and in a Zone 2 wellhead protection area. Yet the science regarding toxic runoff and leaching from the two-and-a-half acre plastic field and rubber track (similar examples of which have been shown to contain cadmium, benzene and other carcinogens) is unsettled; the impact of repeated applications of as yet unspecified disinfectant and cleaning chemicals unknown. How does the MVC weigh these risks with so many unknowns? (WT ConCom)
- What type of chemicals will need to be applied to the artificial turf to maintain the warranty and keep it sanitary? (OB Shellfish Committee)
- The high school playing field is in a Zone II wellhead protection area. How might toxic chemical use (from plastic additives and maintenance chemicals) in a wellhead area leach from the turf and contaminate our drinking water? (Liz Durkee, OB Shellfish Committee)
- What about Lagoon Pond and Sengekontacket Pond as these ponds are already compromised with nitrogen loading? (OB Shellfish Committee)
- How has this project been evaluated for environmental performance re: groundwater protectionism? (OBPB)
- Are the proposed test wells sufficient and placed in the correct locations? (MVC)
- Exactly which fertilizers will be used for grass field maintenance and in what amounts? (MVC)
- Why is there not a closed catch basin system in the plan so the chemicals (whether coming from the plastic field degradation, or the chemicals used to maintain the field) can be hauled off for processing and not leach in the headwaters of the Lagoon and Sengekontacket Pond? (Dan Martino)
- The applicant has replaced (or added pretreatment to) three drywells with rain gardens/bioretention, which are BMPs that provide some level of nitrogen reduction. Additional review of the modeling report would be needed to evaluate the contributing drainage area and functionality of these practices. No improvement over existing conditions elsewhere on site were offered (i.e., parking lot management). (Horsley Whitten)
- Without calculations we are unable to confirm leaching basins are sized to accommodate predicted flows. The Applicant should confirm this. (Horsley Whitten)
- Stormwater pollution monitoring has indicated nitrogen export from wood chips in oxygenated environments. Huntress acknowledged that there would be a large volume of material used on the field. We would recommend, if the field is constructed, testing effluent from the field for nitrogen species. Is there a plan and budget for this? (Horsley Whitten)
- Has there been confirmation and supporting evidence provided to support the statement that the infill will not leach nitrogen? (MVC)

- A more thorough review of the revised landscaping plan in comparison to the original plans would be needed to expand on our comments and to evaluate planting suitability for the three new stormwater management areas. (Horsley Whitten)
- The plastic field industry promotes regular field disinfection, especially during the Covid-19 pandemic. The NFL sanitizes their fields after every use. However, the Applicant states that water is sufficient. Has the manufacturer signed-off on a disinfection plan? Will the MVRHS insurance policy require sanitizing? (MVC, The Field Fund)
- We need to find out if the plastic field can leach into our water table. We all drink that water and the high school fields sit right on top of the main aquifer of our island. Does that run off drain into our local ponds? (Betsy Dripps)

<u>PFAS</u>

- The Boston Globe reports that PFAS chemicals have been found in every sample tested thus far, a finding confirmed by a spokesperson for Shaw Industries, one of the leading synthetic turf brands, who said these chemicals are commonly used by synthetic turf manufacturers. PFAS chemicals can remain in the environment, particularly in water, for many decades and can move through air, soil, and into groundwater. PFAS also bio-accumulate in plants, animals and humans. These contaminants are readily absorbed by the body and may persist in the body for long periods of time. **While much of the PFAS research has focused on ingestion, several more recent studies have demonstrated that dermal exposure to PFAS poses serious health risks as well. This means athletes themselves could be vulnerable to direct toxic exposure through their skin and/or hand to mouth contact. This exposure risk increases given how common turf burns are on synthetic turf fields. Based upon the foregoing, knowingly installing a product that is intended for long term, regular use by minors, that sits atop a Zone II Wellhead Protection Area, and is likely to contain PFAS would be beyond irresponsible. Given this and the flurry of litigation around PFAS, including the Martha's Vineyard Airport Commission, why wouldn't the MVC and the Applicant take every opportunity to confirm that there are no PFAS chemicals in the proposed products? (James L. Ferraro Jr., Esq.)
- The MVC hired the environmental firm, Horsley Whitten, to conduct a third-party review of this project. This resulted in a recommendation for comprehensive PFAS testing, to which the Applicant has objected. Since PFAS are used in the manufacture of the plastic fibers, shouldn't this comprehensive testing be undertaken before any further consideration of the project? Once installed, a plastic field is unlikely to be ever returned to natural grass, so it behooves us to undertake the most comprehensive risk evaluation possible at this time. (WT ConCom)
- PFAS are part of a large class of chemicals, many of which are not identified. Will the testing include probable presence or just limited number of identifiable compounds? (MVC)
- We disagree with the Applicant. Given the amount of concern related to potential groundwater contamination, the TOP and TEO testing is desirable, especially if the standard PFAS tests are negative or non-detect. Unlike the standard PFAS testing, the samples are oxidized to mimic conditions in the environment, which we now know can lead to the formation of the regulated PFAS compounds. Our understanding of PFAS contamination is evolving and these methods are relatively new, but are not unusual. TOP and TEO estimate sample costs are $460 and $200 per sample, respectively. The Organofluorine compound would be the only additional parameter added to the risk analysis. (Horsley Whitten)
- Ultimately, I think you want to get to a point where the public has confidence in the standards you are applying and in the testing you are requiring. For the reason I previously stated, I don't think your current testing program will accomplish this. The most current work in this area is in fact utilizing the elemental fluorine testing we are recommending. This testing can be done for as little as $75 per sample. "PFAS-free is defined as zero intentionally added PFAS to the product and PFAS

contamination in the product must be less than 0.0001 percent by weight of the product (1 part per million) total organic fluorine as measured by combustion ion chromatography." This is the exact standard and test method we are suggesting you apply to your evaluation. Our definition for what is considered PFAS is based on a well understood and commonly accepted class approach to describing PFAS chemicals. I have included the definition from the GreenScreen methods below. Again most of these chemistries are not measurable by the methods you are currently using. It is still unclear from the link you provided why your consultant is objecting to this testing. I hope we can help you get to the point where the public will have confidence in the work you are doing. (Jeff Gearhart)

- Is there proof that PFAS are not in any part of the proposed turf? If it does not contain PFAS, what chemical has taken its place? (Liz Durkee)
- How is the liability risk of toxins, including "forever chemicals" acceptable when they may leach from fields into the surrounding environment - soil, ponds, groundwater? (Mary Jane Mongillo-Williams)
- Are the adhesives used for sealing seams or other installation steps being tested for PFAS? (Horsley Whitten)

<u>Plastics / Contamination</u>

- Given that plastic degrades via bacteria, UV light and abrasive processes, that they contain various chemical additives, and act as sponges, absorbing persistent, bioaccumulative and toxic contaminants from the environment -- and that oysters can readily ingest these microplastics -- is the MVC going to consider how microplastics could threaten the values of Lagoon Pond oysters socially, economically, and environmentally? (Catherine Tobin)
- Has the Applicant supplied photos of synthetic fields at various stages in life cycle? (MVC)
- How can towns advocate bans on plastic straws and drinks sold in plastic bottles in an effort to reduce residents' exposure to plastics and to protect the environment yet agree to synthetic fields? (Molly Glasgow, Cynthia Doyle, Elizabeth Durkee, Jana and Richard Bertkau)
- How can we ignore the concerns about synthetic turf including the plastics and hazardous materials that go into them and their effects on people and wildlife? (Mass Audubon at Felix Neck, Vineyard Conservation Society)
- How is the infill maintained and where does it migrate over the lifespan of the field? (MVC)
- What about the pollutants that build up on the artificial turf will run-off in rain events, during storms, and when the turf is washed? Runoff pollutes our groundwater, coastal ponds and shellfish habitat. (Liz Durkee)
- The latest VCS "Conservation Almanac" highlighted a recent study that solved the mystery of what was causing the decades-long decimation of Coho salmon population in Puget Sound: a toxin from tires that made its way into storm runoff. The infill currently being proposed for MV is not tire crumb (though tire crumb was part of the original proposal and was switched after pushback from VCS and others), but the plastic field industry continues to tout the "benefits and safety" of crumb rubber and continues to market it to less savvy consumers. A typical tire crumb field contains 20,000-40,000 pulverized tires. How reliable is this industry? (VCS, The Field Fund)
- How can we justify installing a 2-acre field, with each carpet containing the equivalent to 46 million plastic straws or 3.2 million plastic bags, both of which have been banned on the island – bans notably led by island school children? (Cynthia Doyle)
- Artificial turf fields actually shed their plastic blades of grass which spread everywhere as plastic pollution. Illustrated in this attached close-up photo of my red socks after a game on "woven" artificial turf. Now multiply those by however many legs on however many players a day for however many years. Going unnoticed, the blades get tracked wherever we go, come home with us, tossed into the laundry and washed down the drain in the washer, accompanying what is already the leading source of widespread micro plastic pollution in the ocean. Does the Vineyard want to be a

part of the plastic pollution solution or continue to be part of the plastic pollution problem? (Gregory Countinho)
- Aren't we trying to get rid of plastic on our island? (Betsy Dripps)

Climate Change
- How has this project been evaluated for environmental performance re: LID techniques and its use of greening methods? (OBPB)
- What is the true carbon footprint associated with a synthetic field production, maintenance, and disposal, compared to grass field maintained with electric equipment? (MVC, Sue Hruby)
- What are the types and quantities of gases that will be emitted from the carpet once it is exposed to solar radiation and breaks down from use, especially considering the high surface area occupied by this material including each individual blade of plastic "grass"? (Sara-Jeanne Royer, OB Shellfish Committee, Sue Hruby, Mary Jane Mongillo-Williams, James L. Ferraro Jr., Esq.)
- How much carbon sequestration potential is lost by replacing acreage of soil with a concrete surface? (Sue Hruby)
- What are the impacts of replacing a cool surface with a heat-trapping surface? (Sue Hruby)
- What is "acceptable" about increasing greenhouse gases on our small island? (Susan Desmaris)
- Climate action includes the following: eliminating the use of greenhouse gas-emitting fossil fuels and protecting the restorative values of the natural environment. Isn't artificial turf a step backward on both counts? (Liz Durkee, John Abrams)
- Temperatures are rising. Between now and mid-century the local temperature is expected to rise by between 2.5 and 5.8 degrees. Artificial turf creates heat; natural grass cools. This affects people and animals alike. Will the MVC weigh this impact in their decision? (Liz Durkee, Mass Audubon at Felix Neck)
- What about the fact that more powerful storms with stronger winds and heavier rainfall could cause serious and repetitive damage to the synthetic fields? Climate change brings heavier and more frequent rainfall. (Liz Durkee)
- Replacing the existing field lighting system with a more efficient system will provide some energy conservation benefit, but a comparison of current and proposed electrical use was not provided. The applicant should provide additional information on the lighting design, including lighting control system. HW recommends the applicant apply for certification from the IDA to ensure compliance throughout the design and construction process. The certification consists of two phases, a review of plans (costing $1,000) and a field verification once construction is complete (costing $3,000). If they can show the criteria and compliance, a formal certification from IDA may not be needed.
- Does the MVC prioritize regenerative land care, which is now seen as a best practice for climate change mitigation? Regenerative land care includes keeping the ground covered with a living carpet of plant life at all times, minimizing tillage and soil disturbance, and applying compost and other soil building materials to restore the plant/soil microbiome. (Island Grown)
- At a time when island towns are passing bylaws to reduce plastic use, what about deep concerns about replacing healthy, cooling, natural grass fields with acres of plastic that will have to be periodically replaced and disposed of, with all the attendant environmental costs and hazards? (WT ConCom)
- We know we must break our addiction to the fossil fuel industry and instead invest in our soil to help it capture as much carbon as possible. We know we need to avoid the use of materials that further contribute to global warming and instead use plants to lower surface temperatures. We understand that to adapt to stronger and more frequent storms and wildfires, we must avoid materials incompatible with these events and instead take preventative measures. And we realize that we should avoid materials that add to our waste stream and instead embrace those that are

regenerative. Will this application be evaluated in light of MVC's Climate Task Force goals? (Field Fund sign-on letter with over 150 signees)

Disposal

- What will happen to the artificial turf when it needs to be replaced? Do we want to put more plastic into a landfill somewhere? (OB Shellfish Committee, Molly Glasgow, Betsy Dripps)
- Where is the basic verifiable information regarding real recycling versus rumors of recycling? Real recycling requires a process which is proven, practical, makes sense from a cost perspective and carbon emissions standpoint, and produces a scalable and functional product. At this time there is no ReMatch or GBN-AGR recycling facility operating or under construction in the United States. The Synthetic Turf Council has stated that the logistics, cost, and carbon footprint of shipping used artificial turf significant distances can be problematic and needs to be a consideration for projects. Note that despite the presence of the ReMatch facility in Denmark, there are still massive stockpiles of old artificial turf in Europe (see "Artificial Turf Mountain"). It is also unclear what products are actually being produced from the "agglomerate" at this time. (MV Times, Amanda Farber, The Field Fund)
- Given the trouble we have had in identifying viable "100% closed loop recycling," can the Applicant provide examples from other projects HAI has worked on that have been completely successfully recycled? Specifically, it would be helpful to see Certificates of Compliance including references to job name, site location, serial number of containers, date received at recycling plant, the location of the recycling plant, date processed into post-consumer products, as well as information about the post-consumer products. (MV Times, Amanda Farber).
- In our opinion, the escrow and documentation requirements, etc. outlined in the application do not address the practicality of end of life options for the field. We recommend the applicant document the most likely scenario for implementing the requirements listed above versus disposal in the local landfill so a more transparent environmental cost/benefit analysis can be performed. The resource expenditures needed, for example, to transport materials overseas for recycling are not only costly, but are not likely to result in a net positive or carbon neutral outcome.(Horsley Whitten)
- In the MVRHS Press Release, the list of Phase 1 elements contains a very misleading line: "One multi-purpose synthetic and recyclable turf field from sustainable sources." There are no such things as "sustainable sources" for the creation of plastic, regardless of whether it's recycled. Perhaps the biggest misconception about plastic is that it is infinitely recyclable. Not only is plastic made from fossil fuels, not biodegradable and containing toxic petrochemicals, but it can only be recycled a maximum of TWICE before its polymers weaken to be down-cycled into a nonrecyclable product. Then there it remains for hundreds/thousands of years, releasing greenhouse gasses while breaking into smaller bits and spreading everywhere. Why are these products referred to as "recyclable"? (Gregory Coutinho)
- Is there a proven track record for these new products and technology (woven turf vs. poly) regarding their durability? (MVC)
- What are the Applicant's alternative analysis for end of life recycling/disposal? (MVC)
- What are real world costs/examples for the cost of shipping and removal of an old carpet and shock pad? (Diana Conway, The Field Fund)

Human Health

- What are the actual (not relative) concussion rates of the system specifically proposed for MV? (MVC)
- What does the annual field inspections include? What if the results indicate there is a problem? What protocols (and funds?) will be in place to address safety issues if/when they arise? (MVC)

- Is synthetic turf what is safest and healthiest for our players? Perhaps many people do not understand that synthetic fields are not the safest and healthiest surface for our athletes to play on. Synthetic fields are especially hard on knees. Turf surfaces do not give with athletes as they plant their cleats or turf shoes running forward and then try to change direction. Young girls in particular have more torn ACLs practicing and playing on turf. This would be the same for all field athletes playing football, soccer, field hockey or lacrosse. There is also research out there showing an increase in the amount of concussions played on synthetic turf. Other common injuries for all ages playing on turf are turf burn which occurs when the players fall on the field. Those abrasions can easily get infected. Have you ever noticed NFL players with wide tape all along their arms? Many field players also get black toe caused by jamming one's toes as your cleats make a sudden stop on the turf to change direction. Then there is the real problem of the particles in the synthetic surface that often adhere to the players' cleats, socks, legs and can even be inhaled. Even if there is a small chance that these could cause cancer in one of our precious island kids why do we want to take a chance? (Betsy Dripps)
- I witnessed how hot a synthetic turf field can get when my daughter played in the NCAA championships at Lehigh University. The temperature on the field at game time was 100 degrees. Players had to be cooled down with buckets of cold water when they came off the field in order to prevent heat exhaustion. (Betsy Dripps)
- What are the effects of toxic biocides needed to sanitize the field against MRSA and the increased resistance to bacteria to the efficacy of those agents? (Sue Hruby)
- What is "acceptable risk" when the dice you are throwing are the lives of island athletes? (Susan Desmarais)
- What about the fact that this synthetic field will be used by minors, who are "exquisitely vulnerable to the health effects of toxic environmental exposures? This vulnerability is due to a number of factors including, but not limited to, children's unique physiology and behaviors, rapidly developing organ systems, and immature detoxification mechanisms. Additionally, because of their young age, children have more future years of life and therefore more time to develop chronic diseases." (Molly Glasgow)
- What are the concussion rates with the proposed system – BrockFill, silica sand and GreenField's woven turf? (Mary Jane Mongillo-Williams, PhD, RN)
- The most competitive soccer leagues do not play on artificial turf. The NFL Players Association recently demanded that all practice and game fields be converted back to natural grass, citing the high injury rates and heat associated with synthetic fields. And the men's and women's US National Teams have both negotiated to play on natural grass as well, referring to synthetic turf as a "second-class surface." Why should our children have to play on it? (Aaron Robinson, The Field Fund)
- The safety data sheet for BrockFill, which is made of southern yellow pine, states that "inhalable wood dust is not expected to be generated during normal use." It also states that "inhalable wood dust can be carcinogenic." This product is new. Will inhalable wood dust be generated during use? In addition to being carcinogenic, wood dust inhalation can cause respiratory problems. (Liz Durkee)
- The changing climate is increasing air pollution and low level ozone, both of which also contribute to an increase in respiratory diseases. What will the collective impact of the BrockFill and increasing air pollution be on respiratory health? (Liz Durkee)
- What about the potentially carcinogenic silica sand used with BrockFill? (Liz Durkee)
- Astroturf, the first generation of synthetic grass, was originally called "Chemgrass" and was developed by Monsanto, the company that manufactured DDT, PCBs, Agent Orange and Roundup. The third generation used carcinogenic crumb rubber. Industries are known for claiming that their products are harmless – how many times have they been proven wrong? Cigarettes, opioids and

asbestos come to mind.Who is to say the fourth generation of synthetic turf is any safer than previous generations? (Liz Durkee)

- Where is the wisdom in installing a massive synthetic surface (where athletes sweat, bleed, spit, etc) that requires sanitizing – particularly during the age of COVID? (Katie Carroll)
- It seems the Applicant does not recommend disinfection of the plastic field surface. How will MVRHS ensure that it is safe for play? Does the Applicant have studies that establish that rain water is enough to ward off issues like MRSA? (The Field Fund)
- Studies show that concussions actually increase, not decrease on artificial turf fields, as is cited in the Healio article which you may already have read. (Gregory Coutinho)
- Independent confirmation of temperature data (synthetic vs. natural?) (MVC)
- How do you feel when you read this? I don't find this list very reassuring yet these are all tips for safer play on artificial turf as recommended by Mount Sinai's Children's Environmental Health Center, dated May, 2017 (Katie Carroll)
    - Avoid use on very hot days
    - Avoid use for passive activities (i.e. sitting, lounging, picnicking)
    - Monitor young children to prevent accidental ingestion
    - Always wear shoes on artificial turf
    - Wash hands before eating, drinking, or adjusting mouth guard
    - Clean cuts and abrasions immediately
    - Brush hair thoroughly after play
    - Remove and clean shoes and gear outside before getting in car
    - At home, take off shoes and shake out children's equipment & clothes outside or over the garbage
    - Shower immediately after playing on artificial turf
    - Vacuum any infill that comes into your home

<u>Fire Hazard</u>

- The MVC's 2015 Hazard Mitigation Plan (HMP) for Seven Towns in Duke's County identified wildfire as one of the most significant overall hazards across the whole county. The MVC's website page entitled "Drought and Wildfire" states, "The Vineyard probably has more people and buildings at risk from wildfire than at any time in our history..." and concludes by recommending the reduction of the fuel load, the installation of extensive water supply lines, and "requiring or promoting greater use of fireproof construction." The multi-acre rubberized track surface, shock pad (made of polypropylene / ethylene copolymer), and synthetic carpet each pose toxic fire risk. The proximity of the rubber track and synthetic field to both forested areas as well as more densely populated structures (MVRHS, YMCA, MV Arena, Martha's Vineyard Community Services, and Island Elderly Housing, among others) compound these risks, particularly during wind driven wildfires. Synthetic turf fire produces toxic smoke, releasing potentially hazardous materials into our environment and threatening the safety of first responders and nearby students, etc. Mowed natural grass has long been utilized as a firebreak. Since there are few suitable substitutes for the rubber track surface, isn't ensuring there is mowed natural grass all around it seems like the most prudent choice from a wildfire standpoint? (Fire Emergency Coalition)
- If the MVC and/or OBPB are unable to outright deny construction of this potential toxic fire hazard, will they consider whether specialized fire fighting materials, equipment, and/or training will be necessary to protect island firefighters and EMTs as they control a rubber track and synthetic turf fire? (Fire Emergency Coalition)
- Will a firebreak between the track and the nearby tree line near Ryan's Way be considered? (Fire Emergency Coalition)

- Will a proven fire control system that can detect and suppress a rubber track and synthetic turf fire long enough for people in the surrounding area to evacuate be required? The system should be able to operate automatically in case of power outages. (Fire Emergency Coalition)
- Will a specific “toxic smoke” plan be required to be in place should a shelter in place order be given? (Fire Emergency Coalition)
- Will you consider whether MVRHS as well as nearby buildings including the YMCA, Arena, MVCS, and Island Elderly Housing are airtight enough to keep potentially toxic smoke out, as well as whether the buildings’ ventilation systems could operate without using outside air? (Fire Emergency Coalition)
- Will the OBPB and MVC take fire danger seriously when evaluating the merits of this proposal and take appropriate steps to ensure the safety of firefighters, EMTs, MVRHS students and staff, as well as its neighbors? (Fire Emergency Coalition)
- What about the potential fire hazard posed by such a sizable area of flammable, toxic petrochemical material abutting the State Forest? (WT ConCom)
- Why would we install a flammable surface next to the State Forest when natural grass acts as a carbon sink and is a natural fire break? (Mary Jane Mongillo-Williams, PhD, RN)
- Fire safety plan or equivalent? (MVC)
- Has the Fire Department been asked to provide guidance and review of the regulations? (OBPB)

<u>Rural Character / Community Values</u>

- How can we, as the guardians of future generations, as the guardians of Martha’s Vineyard and as the guardians of our own health, vote to rip out the earth and replace it with plastic? (Molly Glasgow)
- What attracts people to the island is its natural, not artificial character which seems to be in keeping with an environmentally conscious community. (Gregory Coutinho)
- Besides being a coach, I am also part of an Environmental Educators group who have been working with all our island children teaching them how to take care of our fragile environment here on the Vineyard. We all cherish the natural beauty of the island and as educators we are helping our children to better understand our world and showing them how each one of us can make a difference. How wonderful it has been to see the students and their teachers at the West Tisbury School and the Charter School create Plastic Free MV and speak out of the dangers of plastic. Don’t we need to listen to them? (Betsy Dripps)
- Why are we engaging in the purchasing and promoting the production of roughly 2 acres of petrochemicals produced plastic? As a community, we are aware of the already widespread polluting effects of plastic around the globe. (Gregory Coutinho)
- Isn’t the choice of a plastic turf field a nihilistic one, even if it were somehow 100% shed-proof (which it is not, as you can see), because you'd be monetarily feeding the demand for more plastic while adding to a growing problem which as ocean-loving Vineyarders we should instead be making every effort to reverse? (Gregory Coutinho)
- As much as I love working with athletes I also value the importance of a good education. Not every student at the high school is an athlete. We have lots of talented artists, musicians, writers and scientists at our high school who do not participate in athletics aside from gym class. They deserve the very best too. Our high school right now needs some serious attention, so why is building a state of the art athletic complex at the top of the list? We need to look at the bigger picture in order to provide the best possible education for all our high school students. (Betsy Dripps)
- Consider planting more vegetation to create a better buffer between the site and the Edgartown-Vineyard Haven Road. Though the Applicant has written that the plant list was updated, it is not apparent that additional plantings were added. (Horsley Whitten)

Process

- The Applicant formally invoked the Dover Amendment in regards to the Oak Bluffs Planning Board. In the same legal letter, they state that the same can be done in regards to the MVC. What are the implications of this for the review process? (The Field Fund)
- Why is the MVC scheduling a public hearing one month from now when comprehensive PFAS testing has not yet happened? Many of the letters of support for synthetic turf are based on the promise that the proposed system would be PFAS-free (and recyclable, for that matter). Shouldn't those facts be known early on in the process? In fact, wouldn't the Applicant themselves would want clarity on that from the onset as well so they can represent their proposal accurately? And if the comprehensive testing were to reveal that there are indeed PFAS chemicals in any of the specified components, wouldn't the Applicant go back to the drawing board and revise their application? (The Field Fund)
- Why are we not joining other communities who are fighting these artificial fields, or communities who at the very least, are placing temporary moratoriums, and waiting until more can be known about the health, economic prudence and safety of this sort of material? (The Martha's Vineyard Environmental Educators Alliance)

Incremental Growth / Master Planning

- A master plan is critical to developing a thoughtful, efficient and economical solution that addresses all the needs that this property must satisfy. A master plan should first be developed to provide a road map, or game plan, for executing all future projects. To move forward with one project without regard to the other needs for the high school places a restriction on future planning; why would either the Commission or the Planning Board approve this plan? (Stephanie Mashek, Brock Callen, OBPB)
- Solving the educational, mechanical and construction needs of the building is a daunting and expensive proposition and the largest investment that will, at some point, need to be made. Why would a field project that is a small fraction of the cost of a building project become a driver, or at worse a hindrance, in the planning for a new or renovated school building? (Stephanie Mashek)
- Shouldn't the failings of the building be leading and setting the course for the whole school campus and NOT the playing fields? (Virginia Jones)
- Isn't this Martha's Vineyard, a community that prides ourselves on the beauty of the natural environment? The incremental destruction of the environment, acre by acre, diminishes the values and functions of the natural world and affects the local economy - our livelihood - that relies on a clean, natural environment. (Liz Durkee)
- Several options in the master plan require clearing of mature forest in the southeast corner of the site, which is within BioMap 2 Core Habitat. The southwest corner of the athletic field complex is now part of the Core Habitat for species of conservation concern (Figure 1). If this area is to be considered for clearing, we recommend the applicant conduct a more thorough inventory of the species present and the number of trees that will be removed. It is unclear if development of this portion of the site will conflict with open space requirements for the property as a whole, or if mitigation could be offered. This area is part of the forested corridor connecting critical habitats on the north and south side of the road. Further clearing will add to fragmentation issues, habitat loss, and increased invasive species. While this is not technically part of the current application, the naming of the plans set as "Phase One" indicates subsequent phases of work are anticipated. (Horsley Whitten)
- Has this proposal been assessed in the context of the overall MVRHS campus abutting EDG-VH Rd.? (OBPB)

- Has the impact on pedestrian safety based on incremental development of property been evaluated? (OBPB)
- What conditions if any to be placed on remaining undeveloped land — old growth forest? (OBPB)
- Is the MVC applying land-use guidelines for all phases of this project as they pertain to stated environmental goals of the MVC? (OBPB)
- How has this project been evaluated for environmental performance re: adoption of existing planting and species selection? (OBPB)
- Have Water Authority or Fire / Law enforcement been asked to provide guidance and review of regulations? Or the State Forest Department regarding input as it pertains to forest service, long and short term vision? (OBPB)
- What are the impacts of future phases on school bus parking? (OBPB, MVC)
- What are the impacts of the existing track envelope (including having two impervious, rubber surfaces in a Zone II)? (OBPB)
- What if the Applicant does not have the fiscal ability to complete and maintain the project proposal, including future phases? (OBPB)
- Is the MVC concerned about increased vehicle traffic due to the proposed consolidation of island-wide sporting events and practices at the site? (WT ConCom, MVC)

<u>Natural Grass Field Design and Maintenance</u>

- Existing MVRHS natural grass fields are not in poor condition because of “too much use”. Their poor condition is from A) improper original construction, and B) a lack of/minimal maintenance over many years. The traffic load was not the issue. Maintenance failed, not the fields. Why do the Documents and Design include photos with a basic diagnosis of current field conditions, but do nothing to explore why/how the fields got to this point? (Natural Grass Advisory Group)
- Techniques and approaches for natural grass field renovation, construction, and maintenance have evolved greatly over the last 10 years. New technology, advances in agronomy, and improvements in testing/data analysis create a new world of possibilities for high-use grass. Why do the Documents and Design utilize no new techniques or approaches for improving natural grass fields? Why would we base assumptions about grass field performance on antiquated field design and maintenance practices? (Natural Grass Advisory Group)
- Design and specification writing for natural grass renovation, construction, and maintenance have also evolved greatly over the last 10 years. To avoid the failures of the past, design and specifications must be thorough in order to ensure the “new” field meets the expectations of the users. The Documents and Design are vague on nearly every aspect of the project (on both fields). This lack of specifics allows a contractor to take shortcuts and can (will) create disagreements that lead to change orders that will drive up costs. For Field 2 (grass), the lack of specifications for irrigation, soil amendments, construction approach, and/or grass planting can lead to future field failure. How will MVC/OBPB ensure this is not the case? (Natural Grass Advisory Group)
- Proper natural grass field renovation, construction, and maintenance requires specialized contractors and equipment. Why do the Documents and Design not provide qualifications or requirements for this specialized work? (Natural Grass Advisory Group)
- Why does the proposal call for the grass field to have 1.5% “barn roof” crown, when this outdated design impacts playability and promotes water to move off the field right down into the bench areas? Best practices call for a “turtle back” grading plan if any, depending on soil infiltration testing. (Natural Grass Advisory Group)
- Many of the details in the Applicant’s plan – sand-loading, stripping, drainage and irrigation specs, field grading, sod and seed selection, soil amendments, etc. – are not only not best practices, but

they do not appear to be data driven, which can lead to field failures. (Natural Grass Advisory Group).

- The Applicant says “Apply necessary fertilization, mineral support and soil amendments are required by the project specifications.” Has the Applicant conferred with a licensed agronomist and discussed their fertilization recommendations and specifications based on actual MVRHS soil analysis? (Natural Grass Advisory Group)
- Athletic fields orientation is to be north-south unless there is no other way to place the field. In a space this large, with the main game field being the foundation of the Sports Park, a north-south orientation should be seriously considered to not impact afternoon play. Has the Applicant justified their choice of poor game field orientation? (Natural Grass Advisory Group)
- Master Plan calls for the synthetic field “maximum size” to be 360’ x 210’. Higher level youth soccer is played at 225’. This is one of the most common “mistakes" that we see with clients and synthetic fields. With as much space as the MVRHS sports park has, the minimum recommended width could go as high as 250’ for maximum impact. *With our work on all the other fields on Martha’s Vineyard, we know that there is only 1 full-size soccer field currently (Veterans). Has the Applicant sufficiently addressed the field size question in their master plan to ensure that the field sizes will be appropriate for high school play? (Natural Grass Advisory Group)
- Has the Applicant justified why they are putting the “game field” inside the track? Putting a track around a field built for competitions/with a stadium is not recommended. The field inside the track is limited in size. More field space is always better than less field space. Track and field practices are impacted by the use of the stadium for other competitions, limiting the time the track can be used by the team, and also the time that the track can be used by the general public. Spectators are pushed back away from the field where they are not as involved in the action. Fans want closer to the action – not further away. (Natural Grass Advisory Group)
- This “Annual Maintenance Plan” is completely inadequate. A grass field maintained following this plan will be in poor condition/will fail if it receives any more than just basic use. Knowing this, how will MVC/OBPB ensure this is not the case? (Natural Grass Advisory Group)
- The budget provided is not based on the maintenance plan provided in the Applicant’s “Annual Maintenance Plan.” Will the budget be updated to reflect the maintenance protocols? (Natural Grass Advisory Group, Horsley Whitten)
- Has the Applicant responded to the questions related to field maintenance? (MVC)

<u>Usage</u>

- While Mr. Huntress has stated that a well-maintained grass field could sustain 680-800 hours of use, the figure presented by the high school would seem to merit that we consider artificial turf. Unfortunately, either from error or bias, the figures the administration submitted misrepresent the actual amount of usage, and the usage formula used by the Huntress group compounds the error. After originally stating that teams use the fields 5 days per week, based on documentation by MV@Play, the high school has more recently claimed the use is 6 days per week. There are times in a season, when there are Saturday games, that a team will have 6 events in a week and there are times that some teams will practice on a Saturday when they don't have a game, but this usage is more than offset by away games and Saturdays when teams don't practice. Factoring in away games, in order to average 6 usages per week teams would have to be practicing or playing games every day of the week. Except for one pre-season weekend, I know of no team that does this. Using the more accurate figure of 5 uses per team per week reduces the total high school field usage from 950 to 800 per year. Furthermore, the administration has inflated the youth sport usage by inexplicably including Babe Ruth baseball on the multi-purpose fields when they play on the baseball fields. Assuming the rest of their analysis of youth sports is accurate, the total youth sport usage

should come to 320 per year rather than the 400 listed in their document. Finally, the Huntress formula for hours of use per year is based on the high school standard of 2.5 hours per practice. This is fine when applied to high school usage, but it grossly inflates the youth sports use. Youth lacrosse, by far the heaviest user of the fields, hold practices and games that last only an hour. Even if all the other non-high school groups practice for two hours, the average use for all these groups comes to less than 1.5 hours per event. When one recalculates the annual usage of the fields based on these revised and more accurate figures, the current field use comes to slightly less than 500 hours per field per year. Has there been any outside, objective calculus of the actual usage numbers? This seems critical since it is at the crux of the argument for a synthetic field. (Richard Bennett)

- What is the current MVRHS Field Use Policy? (MVC)
- Weighted analysis of current and projected field use? (MVC)
- Methods for determining maximum use? (MVC)
- Will there be a heat policy as some other schools have to protect athletes from high temperatures? If so, please provide a sample and estimates for how many events will be cancelled as a result. (The Field Fund)
- Will the MVRHS embrace a “pay to play” model to offset the costs of an expensive artificial field? (MVC)
- Will the “pay to play” model exacerbate diversity, equity and inclusion? (Rev. Cathlin Baker)
- What is the overall campus plan for usage and play? Phase I, only addresses producing two new fields, while taking another existing field off-line (Women’s JV Softball). Who will use what fields? Are there Title 9 infractions to watch for? What is the time frame for subsequent phases? What if funds for future phases don’t materialize? (The Field Fund)
- If the broader community is to have access as a centralized resource, what will the traffic impacts on that corridor be? (MVC)
- The Edgartown Boys and Girls Club is planning to expand their campus. How will that campus affect usage at the MVRHS given the island’s population? (The Field Fund)
- We are concerned about increased light pollution and the effects on wildlife, including rare and endangered species since the new field is proposed to be heavily used by the wider community, including during night-time hours. Will those impacts be evaluated? (WT ConCom)
- Lastly, as far as the regional impact of having a big athletic complex at the high school that can be used by our entire community, we have to think about the implications of such a complex. Then the fields would be overused by adult teams and youth teams as well as our high school athletes. I feel that the high school fields are for our high school athletes and perhaps the middle school teams that will feed into the high school programs in season. Do we really want outside groups not sponsored by the high school playing on those fields at night when there is no security? The youth teams especially under 12 are much better off practicing and playing at their local elementary school fields where parents and siblings can be on the sidelines cheering them on. (Betsy Dripps)

Thank you for your attention to these important questions, which are already on the record. We expect you will confirm to the public that their concerns will be addressed as part of the MVC’s review process.

Respectfully submitted,

Mollie Doyle, Dardanella Slavin, Rebekah Thomson
The Field Fund