BOARD OF HEALTH MEETING
Town Building- Selectmen's Meeting Room
November 13, 2017

The meeting was called to order at 7:15 p.m. Present were members Arne Soslow, M. D. (AS), John G. Schuler, M. D. (JS), Brian McNamara (BM), Susan Green (SG) and Chairperson Elisabeth Brewer, M. D. (EB). Also present were Julia Junghanns, (JJ) Director of Public Health and Patti White, Department Assistant.

7:15 p.m. Public Comment- there were none.

7:40 p.m. Presentation by Weston & Sampson regarding merits and characteristics of synthetic turf sports field systems and natural turf sports field systems

Cass Chroust, (Cass C) Weston & Sampson (W&S) - similar presentation that had been provided to the Recreation Commission

Natural vs synthetic- significant studies of fields in Wayland over the last decade- there is a lot of use on the fields, it is mostly rectangular fields, and there is a shortage of fields.
W & S Just finalized the High school Master Plan; working with Recreation. Existing field of Crumb rubber will be replaced with a new field that will be wider providing an additional ½ acre of new surface.

Pros and cons of Artificial turf vs Natural grass

Natural Turf

Cost- cheaper to construct and replace/re-sod
Playability - must be dried out to play on
Higher maintenance costs - will not stand up to wear and tear if not maintained
Limited field time - Natural turf is limited to 350- 600 hours of playable time, 600 hours is for higher performance fields
Native soils may contain—metals and carcinogens
Environmental impact— from fertilization and nutrients

Synthetic turf Fields

Higher cost to build, repair and replace
Useful life 10 to 15 years (depends on Maintenance)
More playing time- up to 2000 hours per year- can be played 20 to 30 min after rain
Less intensive maintenance program
Fewer injuries due to playing surface and consistence g- max (controlled surface) performance
Potential heat hazards - Countered with different infill options; lighter color product or spray down to cool

Infill options

Rubber plastic (crumb rubber) is most widely used can be virgin or recycled
Organic and natural infill products; which may have different requirements to keep infill in place
Minerals /mineral coated – Less resiliency, harder surface

Marie Rudiman (Marie R)-Toxicologist with Weston and Sampson; 23 yrs. Evaluate chemicals to determine if they cause an unacceptable
Risk = exposure X toxicity

Chemicals in synthetic turf are bound in the grass mesh or the crumb rubber. Material to be installed will be tested for Metals, Benzothiazole, PHAs, SVOCs and VOCs
Risk determination

Compare to applicable standards
Ingestion of Crumb rubber
Dermal contact with crumb rubber and turf bed
Inhalation of chemicals that may volatilize from synthetic field
leaching of chemicals into groundwater

We will evaluate data collected from proposed fields in same manner

Data for discussing community concerns

Industry Data-industry supplied and independent data

Maximum concentration of metals compared to Standard Guidelines for ASTM and European Standards
Standards for crumb rubber are the Toy safety standards for the US and Europe

Native soils have background levels of metals, DEP did a study of Massachusetts soils and determined the background concentration of metals in Massachusetts soils. When compared to the maximum concentration detected in crumb rubber, Cobalt, Nickel and Zinc are shown to be above standards.

Risk assessment = Exposure X Toxicity

Choose receptor; resident living on field being exposed most days to crumb rubber by ingestion, dermal contact and inhalation of fugitive dust for a 30 year exposure using maximum concentrations in the crumb rubber
Sub chronic exposure for 1yr old child – 2 days per week for 30 weeks
Chronic exposure - 3 days per week for 30 weeks for 30 years
Potential carcinogens in the crumb rubber for 30 year period.
Exposure: Ingestion, dermal contact and inhalation of fugitive dust.
Young child (1-6) Ingest 30 mg/kg of crumb rubber on each day of exposure, older children 15 mg/kg on each day of exposure
Crumb on face, forearms, hand, lower legs and feet; assuming crumb rubber to be ingested like soil and adheres to skin like soil. In reality, because of particles, it does not really act like soil, so there is far less exposure,

W&S Conclusion - Potential exposures of all chemicals were negligible

Arne S: do you have a risk or quantitative score for turf and natural soils? Marie R: the quantitative score was .9; below the MassDEP limit of 1. Arne S: What about natural soils or organic synthetics to see how that varies? Marie R: The comparison I have was to background concentrations, we did not take natural soil samples.
Chris C: We have recommended the artificial turf fields, as there is a great need for playing fields and Wayland has a shortage of fields. We recommend artificial turf field as the hours of usage is so much greater than grass fields. Most towns in the area have at least one field, some have several, the only towns that do not are Maynard, Hudson, Stowe, Boxborough and Harvard.

John S: What is the maintenance recommended for an artificial turf field? It is my understanding that there was no regular maintenance done or care taken to the existing field for 10 years. Chris C: There are protocols for upkeep and maintenance; a very important one is that you cannot use snow plows on the fields. Maintenance would include cleaning for bacteria possibly several times a year and working to keep infill in place, to protect the grass fibers from breaking down. There is machinery to brush and relocate infill. Brian M: How do you remove snow? There was a discussion about a problem with snow removal and no equipment to do it properly. Chris C: There are several types of machines that are just for this. John S: So this will require the purchase of equipment? Brud Wright (BW)-Recreation Commission - funds have been approved by DPW and School Dept. for this. A contractor was hired for that and they groomed the fields to relocate the infill and it is believed that the fields were cleaned as well. The maintenance of field is paid from field user fees; there were no tax dollars for this. Recreation has accrued funds that were to pay for new turf

for the existing field, which will go to help fund the design of the new High School field. All rental fees are set aside for maintenance and future replacement.

John S: I understand need for turf field due to New England weather considerations, but I have concerns that there are cities like New York and Los Angeles do not allow crumb rubber fields.
Brian M: It is not that there is a turf field opposition; it is more about crumb rubber. How many companies in New England are suppliers for crumb rubber? Chris C: I don't have that information.
Brian M: The EPA is still studying and gathering data on studies being done. There are 5 agencies studying this with no conclusion. Marie R: EPA study was done several years ago that said there was no risk from synthetic turf fields, then after review, they decided to gather more data. EU study concluded there was no harm from exposure to turf fields.
Brian M: The concerns regarding crumb rubber are about the sources, and how they are being tested. Are we looking at Virgin rubber or Recycled tires? If held to high standard, that is a good thing, this is what we are trying to achieve.
Cass C: there are a number of infill options available to the town. Brian M: are they cost effective?
John S: This is a unique situation with the HH wells and protective Zone 1 so close to the high school field. Brian M: Concerns about containing the crumb rubber(the particles drifting/moving out of the field area). John S: The metals are in the grass particles, when the field was installed, the monitoring wells were never checked, no testing done. We want to know that these wells are going to be checked regularly to be sure there are no chemicals leaching into the drinking water.
Brian M: do you ever install barriers? Cass C: Best Management Practices will be vetted though the full design process.

Bill Cossart, 87 Old Sudbury: EU report was inconclusive; at the last meeting I brought the other Washington State report that was also inconclusive. Have you found any reports that say crumb rubber causes cancer? There is no scientific proof of a problem, and the original report from Washington State has now been proved to be incorrect. If there was a problem, EPA would have identified this and there would be information and/or some kind of red flag from EPA.

Elisabeth B: Scientific studies are done with data collection and analysis and can take a long time; we do not know what the answers will be until the study is complete. We do not know if crumb rubber is safe and if there are any long term health risks; it's the town's decision, knowing that we don't have a final answer; we would wish to use a safer product.
Louis Jurist- working with the Recreation Commission and School Dept. - surprised and critical of the BoH statement.- He has researched the studies of Artificial Turf that have come out and cannot find a correlation or cause regarding health problems and crumb rubber. The Board made a strongly worded statement on 8/14/17; but it is not based on any scientific fact; it is just anecdotal evidence. The 3 articles being voted on at Town Meeting are to approve design funds, there is no language regarding the use of crumb rubber.
John S: Did we recommend not creating a turf field? Did we suggest an artificial Turf field not be used? We did not. We want to be sure there is monitoring of the runoff to protect the wells.
Louis J: there is nothing in the 3 Town Meeting articles regarding crumb rubber. This is a safety issue; the fields are in bad shape and need to be replaced. The wording of the statement by the Board of Health is being used by persons who do not want to see these articles pass and are using that against the articles. Can you please reword the statement?
Brud W: The Recreation Commission would like to include the Board of Health in the design process to be a part of the decision making process for the products. Please do not preclude materials from the design process; agree to come and discuss.

Arne S: I do think we have concerns of low level chronic exposure. Until a governmental agency comes out with a statement or risk assessment, as a board we will continue to have concerns.

Tom Sciacca, Rolling lane—not MD, supports the Boards position

1) No other artificial turf fields so close to town water supply
2) All analysis for individual toxics—crumb rubber; waste tires,
   Every field is different- synergy between the toxics are undefined.

Brian M : the Board opinion is stating on the use of crumb rubber-

Brud W: There are some benefits to crumb rubber; there are some good points to the use of it. Can you describe why you use the term "concerned" ?
John S: When we had the vote; I had not seen the new article from Washington State, at the time we made the vote, the updated article from the state of Washington that showed no increase in the cancer numbers. The cluster that was discussed may be a statistical aberration, I am still unsure of the long term effects. Dealing with compounds that may have metals and carcinogens, it seems with kids involved, let's use a more natural product. This is also to protect the drinking water, we are hoping for an alternative.

Brian M: Would the board consider to re-word the statement?
Arne S: we may reword the statement? JJ: you cannot reword a statement, someone can make a motion to draft a new statement.
Brud W: the Board of Health recommendations carry weight and may affect the vote at TM. I would like to see us work together during the design phase. JS: What is the construction timetable? Brud W: If we can get the financing articles passed, we are hoping to have a design done in time for Spring Town Meeting. We are hoping to build Loker in spring of 2018 to replace the high school field, which we hope to construct in spring of 2019.
Brian M: have you seen crumb rubber being used in this type of wetlands, water area? Cass C: there are systems that can be designed to catch the crumbs and redistribute.
Arne: There are different degrees of risk, these are difficult studies to do regarding risk and kids, the cluster information. You may be more comfortable with more risk than we are.

Louis J: We have had turf field closer to water and wells, did anything show us. John S: No, because the monitoring wells were never tested. Louis J : the water has been tested. JJ: I am unaware of any regular testing being done using the monitoring wells. John: there was testing for heavy metals and there were none shown

There was a lengthy discussion with toxicity specialist, Marie R. of Weston & Sampson, part of the discussion was regarding Zinc as an indicator compound leaching from these fields. They have seen levels of zinc in other wells. Zinc has low toxicity to humans, more worried about aquatic receptors. It is an essential nutrient. They have seen it indicated in wells 10 feet and 20 feet away, the wells at 10 feet had levels 10x above the levels acceptable for aquatic. No appreciable increase in the wells 20 feet away. Dr. Soslow; how does this information relevant or non-relevant, how does it resonate with our conclusions? Louis J:the turf field has been closer to the wells for 10 years, after all this time have we seen any problems? Dr. Schuler; we have never checked the wells so we wouldn't know. Marie R. the right idea is to install the monitoring wells and they should be checked.

Linda Segal, Aqueduct Rd. It might be productive to include the water superintendent in the working group discussion regarding design criteria. It is my understanding that a Turf field when removed has to be disposed of as hazardous waste; this may be a precautionary position. You are taking a precautionary position, to protect people and wells. Comparison to natural grass, many years ago, the state government imposed regulations to not allow pesticides to school fields. JJ: the schools in town have a no pesticide use policy on their grounds.

Brian M: Are fields deemed hazardous materials? Cass C: I am not completely sure if it is considered hazardous waste or hazardous materials. Marie R: we are not certain regarding this. Louis J: I am surprised that the fields are treated as hazardous materials.

John S: Maybe in a year or two the EPA will have a final answer. I want the town to consider alternatives. Brian M: if we want the statement to be agnostic, we might wish to reword,

JJ: I would like to see the Board included in the design phase going forward we would like to see the plans to be certain the drainage is addressed/engineered well and runoff would be monitored.

JS motion: If there is consideration to replace the existing crumb rubber turf field, we urge you to investigate alternatives in addition to crumb rubber. Second AS vote 5-0 all in favor.

Susan Reed, 58 Glezen Lane: As of now the EPA has no definitive comprehensive study, If sometime during the next 1 yr. to 18 months, as this moves forward; if a major study appears showing a serious hazard, can we be sure that the 2nd field (high school) that crumb rubber will not been installed?

Linda S: If the timing is to build Loker first, to do that for spring town meeting article; the cutoff is January 15th, is it feasible to be ready for spring town meeting? : Brud W: That is up to the Recreation Commission to have ready in time for January.

8:15 p.m. Review BOH Comment 9/11/17on STM Article 12- Non-Medical/Recreational Marijuana Moratorium-Temporary moratorium Zoning Bylaw Amendment

There was a brief discussion. The Youth Advisory Committee is sponsoring article 12 for tomorrow night at Town Meeting; we had voted to support the article. EB: we (BoH) are supporting the moratorium, which will extend to January 2019.

8:20 Discuss 40B projects and potential peer reviews

Cascade- Boston Post Rd.

Hydrogeo scope and study. JJ: the scope of work has been reviewed by the Peer reviewer. JJ did provide memo with additional comments. Soil testing was done today at site, there will be additional test holes tomorrow for the drainage areas, they have indicated they would advise us to visit the site and view the test holes. Does the Board have any comments or questions?

Questions regarding elevation areas for the two leaching fields, as represented on the plans, they are close to or in the flood plain. Soil testing can be done year round, for large projects we like to witness it in the spring when is typically best to observe the seasonal high ground water table. The original testing was done in December and January of a drought year. We can use mottling, (rust lines) in test holes which reflect evidence of a seasonal high ground water table; we had identified areas where mottles were observed during today's testing.

JS: How much of the field is in flood plain? JJ: they show the local 100 yr. flood line, the elevations need to be identified.

SZ: going back in history of fir map, only part in flood plain was stream bed. Beals and Thomas are looking at these.

JJ: The state regulations do not allow for construction in a flood zone; I would like to encourage testing in areas outside of flood zone. When are monitoring wells being placed SZ: I don't have that answer.

JJ: How long will the monitoring wells in place, we should be involved in checking the monitoring wells. JJ: they will take core samples and check for water levels? SZ : wells will stay unless they need to be removed for construction, it will help determine the direction of water flow:

Groundwater mounding analysis: water goes in will it change water table. JS: Will you be able to tell if there is any other location on the property to locate? JJ: the map we are reviewing shows tests that have been overlayed on GIS map, showing all the test holes done today, showing proposed building and the stream. There were 7 holes drilled today and we show the location of monitoring wells. SZ : We know roughly where the best areas are, the monitoring wells will help to refine.

JS: if there are problems with the area being proposed, are there other areas?

Board is satisfied with the draft memo prepared by JJ for the ZBA.
JJ: Tomorrow is a meeting with town staff, the Applicant and Joe Peznola, for further discussion regarding the design of the project.

JS: What is the percentage of the impervious area. SZ: I do not know total number. Project eligibility was a 5 story building, neighbors said too high, if we go down, we go out to a longer building. It needs to be economically viable.

24 School St.
JS: Have the boundary issued been resolved yet? JJ: An engineer from Metrowest will come in to the office tomorrow to show new plans since we made our comments to the ZBA. I believe they are still working on the Title search regarding the property lines.

The new septic system at Station 2 fire station will be completed soon. The original cesspool is showing some signs of aging and concerns for structural stability (sinking around it). There will be a tight tank installed for the floor drains; the current floor drain system is out of compliance with the Boards Floor Drain Regulations.

Royal Wayland Nursing home has not installed the SoilAir system that we will allow to be installed to support and "enhance" the existing septic system. We are not certain of the current schedule of septic pumping. The installer for the SoilAir system will be coming in this week.

There will be a Tick Symposium held on November 20th at UMass Amherst from 9:30 to 3. I am interested in this event but I am not able to attend as I will be attending the MHOA annual educational conference the week before. The event is not open to the public, but Board members would be able to go if interested. I am aware of staff from other towns attending and I request information received. I am also hoping to obtain updated materials at the local/Middlesex Tick task force meeting.

The next Meeting date: Monday November 27th, in advance of the next Cascade (Mahoney's) meeting on the 29th.

December 18, 2017 looks good as well.

AS: motion to adjourn second EB vote 5-0 all in favor.

Respectfully submitted
Patti White
111317minutes
APPROVED 031918