



Meeting Minutes

Turf Fields Advisory Committee Meeting #2

January 6, 2016 2:45-4:45pm

Members Present:

Benner, Steve	Kish, David
Brown, Patrick	Knutson, Nick
Burke, Jeff	Larson, Chad
Cowan, Ron	Lawyer, Curtis
Clarke, Steve	McAtee, Molly
Cushman, Colin	Pitton, Amber
Denton, Julie	Read, Matthew
Everett, James	Reilly, Kay
Flint, Ted	Ryan, Kevin
Harding, Bob	Stinson, Jonah
Hatch, Greg	Swanson, William
Hust, Lisa	Hodge, Gary
Keeley, Brian	Weeda, Brian

Members Absent:

Vaughn, Jeff

Ron Cowan, Executive Director of Capital Projects and school facilities, welcomed the committee and asked Steve Clarke, Kay Reilly and Jonah Stinson to introduce themselves as they were unable to attend the December 17 meet when other introductions were made.

A motion to approve the December 17, 2015 minutes passed unanimously.

Ron noted that the December 17 meeting was fairly fast paced and included a fair amount of information being disseminated. With that he opened the floor to questions in case members did not feel they had an opportunity to ask questions earlier or if questions had come to mind since the last meeting. A question was asked if the District was really going to build the fields. Ron responded that the overwhelming approval of the 2013 Bond was an indicator that the community wanted new synthetic fields built.

Ron briefly reviewed the handouts that each committee member should have: a) Detailed Turf and Infill Type information for Washington State installations (information for over 300 fields); b) Summary Turf and Infill Type information (the 300 fields categorized by Turf and Infill Type); c) Field Descriptions and Infill Type for Regional Fields (Civic Field, Joe Martin, WWU, etc.), Alternative to crumb rubber Infill Fields (including a GeoFill, Coated Crumb Rubber, Nikegrind and TPE), and a suggested list of 5 fields for

the committee to consider visiting on their upcoming field tour on January 20, 2016; d) Information from the Washington State Department of Health and the Environmental Protection Agency related to crumb rubber that Dr. Greg Stern asked the committee to review prior to the meeting (the committee also viewed an ESPN segment related to crumb rubber: <http://espn.go.com/espnw/news-commentary/article/14206717/how-safe-fields-where-play>) ; e) Playing Field Turf and Infill Alternative matrix; and e) a Draft Itinerary for the January 20 field tour.

Ron reintroduced Bob Harding and Jeff Burke from DA Hogan. Bob continued the Turf 101 workshop teaching about turf fiber (Monofilament, Slit Film), backings and coatings and moving on to explain about different turf infill materials.

The most common infill material for synthetic turf fields is **Styrene Butadiene Rubber (SBR)**, more commonly known as **crumb rubber**. It comes from recycled tires. All synthetic turf fields in Whatcom County (Civic Field, Joe Martin, WWU, WCC), as well as over 300 other turf fields in Washington state use crumb rubber for infill. This is the infill material that has recently appeared in the news related to possible health concerns associated with it. Bob noted that crumb rubber has been the most investigated material for possible health effects.

Bob went on to explain that there are other types of infill materials other than crumb rubber:

- **Coated Crumb Rubber** is the standard crumb rubber that is painted then coated with polyurethane. It is currently used on 2 fields in Washington.
- **Nikegrind** is ground up Nike shoe rubber and is currently used on 3 fields in Washington. It has been used as underlayment material on synthetic running tracks for 10-15 years. He noted that the performance of this material is not well documented and that this material has not been tested for possible health effects.
- **Sand (silica)** is another alternative used with short turf fibers. It tends to be abrasive and is not used on any fields in Washington as the only infill material. However silica sand is used in combination with each of the resilient infill materials.
- **Ethylene propylene diene monomer (EPDM)** is a synthetic rubber that is very soft, expensive and somewhat difficult to obtain. It has been widely used on synthetic running tracks all over the world and in European synthetic turf fields until recently as the color seems to change over time. It is currently used on 1 field in Washington.
- **Thermoplastic elastomer (TPE)** is essentially the same material used to make plastic wine corks. It is completely recyclable and very expensive. It is currently used on 1 field in Washington.
- **Geofill** is comprised coconut fiber, rice husks and cork. It is organic, completely recyclable, requires amendments every 2 years and must be kept moist which means some watering is required. There can be some weed growth and the material must be scarified from as it tends to 'cake up'. It is currently used on 1 field in Washington.
- **Zeofill** is a mineral (Zeolyte) consisting essentially 'kitty litter, is not very durable and might require watering. It is not used on any fields in Washington.
- **Purefill** is a combination of natural cork and sand and requires a shock pad. It is not used on any fields in Washington.

Bob briefly discussed supplemental padding systems that are sometimes added, and sometimes required with certain types of turf. These pads add to the shock absorption properties of the turf and infill material alone, and provide long term impact attenuation benefits.

He then discussed the different types of turf materials including AstroTurf, FieldTurf, Sprinturf, Hellas, and Shaw Sports Turf.

Following his discussion committee members were able to spend time examining actual samples of the infill, supplemental padding and turf materials.

Ron introduced Dr. Greg Stern, Health Officer for the Whatcom County Health Department who spoke about perspectives related to turf infill materials.

Dr. Stern explained that rather than recommend a specific infill, he would discuss how health risks are assessed, and pointed out that there are risks and benefits associated with each material, and that there are gaps in information about toxicity in all of them. He wanted to provide a framework for the discussion of the health impacts of the infill materials, and review the major concerns, especially those that have been raised about crumb rubber.

Dr. Stern reviewed general concerns that have been raised about SBR (crumb rubber) related to toxicity and potential to cause cancer, by reviewing basics of toxicity and basics of cancer epidemiology. SBR and other materials may contain toxins, but the toxicity depends on the exposure of a person to the toxins, to the release of the toxin from the material. In regard to SBR, there have been several reviews, listed on the Washington Department of Health and EPA web pages for artificial turf that the committee reviewed prior to this meeting. SBR is the most extensively studied of the infill materials, and both organizations have concluded that the results of studies so far have not indicated a significant health risk from its use, and both acknowledge that further study is needed. Given the extent of the studies that have been done, it becomes less likely that new information will show major health impacts. One concern that recently arose is whether there is an association of exposure to crumb rubber with cancer, raised by UW Assistant Soccer Coach Amy Griffin, who has compiled a list of soccer goalies who have contracted cancer. DOH is looking at cases from her list of Washington residents and will be determining if there are higher than expected rates of specific cancers among them. If there is evidence of more than expected cancers, they will do a follow up investigation to determine whether exposure to specific types of athletic fields was an independent cancer risk factor.

Dr. Stern briefly mentioned alternatives to SRB and their risks and benefits. He pointed out that although there are several categories of infill material, there are multiple sources of each type, and their composition isn't standardized.

- Dirt fields may contain toxic and carcinogenic substances, depending on prior use of the land and the composition of the soil and past and current additives, like fertilizers, pesticides, and prior industrial uses. There is a higher risk of trauma playing on a dirt field than a synthetic turf field, and more bacteria in dirt fields than on artificial turf.

- Rice and coconut infill materials are organic, but they are not necessarily pristine. We don't know what the rice and coconut has been grown in and if that material contained any chemicals. In addition, bacteria can grow in this type of infill which might pose a health hazard to some.
- Ground up athletic shoe materials (Nikegrind) may also contain toxins, and composition may vary from source to source.
- The health benefits of increased physical activity from increased access to athletic fields using artificial turf must be considered in comparing health effects of artificial turf with natural turf, where use is more limited by the effects of weather.

Dr. Stern answered a few questions from the committee and they thanked him for taking the time to prepare and present to them.

Steve Clarke then reviewed the upcoming field tour on January 20, 2016. The tour will cover 5 different sites and where the committee will have an opportunity to see 4 different turf types and 5 different types of infill materials including the only field in the state using an organic infill (Geofill).

The meeting adjourned 4:45 p.m.