



October X, 2014

Martha Sapp, Acting Administrator
NJDEP Green Acres Program
Mail Code 501-01
PO Box 420
Trenton, NJ 08625-0420

RE: Hamilton YMCA, Sawmill Improvement Project, NJ DEP Green Acres Non-profit Assistance Application

Dear Ms. Sapp,

I urge you to reject the request to partially fund new artificial turf fields at the Hamilton YMCA facility as part of their NJ DEP Green Acres Non-profit Assistance Application for the Sawmill Improvement Project. The Delaware Riverkeeper Network opposes the use of artificial turf because of the contamination threat it poses to aquatic ecosystems and the environment and because of the health and safety threat it poses to our children and community.

Leaching of contaminants from artificial turf as the result of surface water runoff from precipitation is believed by experts to be a great risk for the environment.¹ Synthetic turf is generally made with rubber from waste tires. Hazardous substances found in tires may persist in the environment including polycyclic aromatic hydrocarbons (PAHs), phthalates and certain metals. These substances may be bioaccumulative, carcinogenic, reprotoxic, mutagenic and/or endocrine disrupting. As the material in artificial turf weathers and degrades it leaches these toxic substances over the life of the field under ambient temperatures and conditions. As the artificial turf is used there is also a level of "erosion" that takes place and can result in fine particles that could be carried to local waterways.² The synthetic grass fibers can also be a significant source of pollution, albeit significantly lesser amounts leach from the synthetic grass than the rubber infill.³ All of these pollutant substances contribute to contamination of soil, plants and aquatic ecosystems and pose a risk of toxic effects for aquatic and sediment dwelling organisms.⁴ The resulting environmental harm is on-going and long-term, happening over many years.

Furthermore, the use of artificial turf denies us the benefits of natural grass. Natural grass and soil can filter pollution that would otherwise enter the stream ecosystem, including pollution washed from the neighboring lands and impervious surfaces. Natural grass can also help infiltration stormwater by soaking up and remove runoff water. And lastly, natural fields can provide habitat for birds and insects which enrich our lives and the education of our children. Artificial turf provides no pollution filtering, no habitat, and does not help the infiltration system better handle its stormwater.

¹ T. Kallqvist, Norwegian Institute for Water Research (NIVA), Environmental Risk Assessment of Artificial Turf Systems, December 2005, p. 5; NIVA, Evaluation of the Environmental Risks of Synthetic Turf, 2005; KEM, Swedish Chemicals Agency, Facts: Synthetic Turf, April 2007.

² T. Kallqvist, NIVA, Environmental Risk Assessment of Artificial Turf Systems, December 2005, p. 18.

³ Byggforsk, SINTEF Building and Infrastructure, Potential Health and Environmental Effects Associated with Synthetic Turf Systems, 2004, as referenced in KEM, Swedish Chemicals Agency, Facts: Synthetic Turf, April 2007.

⁴ Quoting Dr. Linda Chalker-Scott, Washington State University -- Turfgrass Resource Center, Facts About Artificial Turf and Natural Grass; T. Kallqvist, Norwegian Institute for Water Research (NIVA), Environmental Risk Assessment of Artificial Turf Systems, December 2005, p. 17.; Connecticut Agricultural Experiment Station, Examination of Crumb Rubber Produced from Recycled Tires.

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The health implications of artificial turf also raise significant concern. Direct human exposure to the hazardous substances contained in artificial turf occurs via three pathways: inhalation as chemicals off gas from the turf, skin contact, or ingestion including by children or infants who come into contact with the material.⁵ Testing has found known probable human carcinogens at hazardous levels on artificial turf fields.⁶ There is growing evidence linking artificial turf with serious and potentially life threatening staph infections including MRSA (methicillin-resistant staphylococcus aureus).⁷ There is double the risk of head traumas such as concussions associated with artificial turf compared to natural turf, and artificial turf presents a 5 times greater risk of more severe head injury.⁸ Artificial turf gets dramatically hotter than surrounding land uses including asphalt with surface temperatures as much as 140 degrees F hotter than natural grass fields.⁹ Moreover, little is known about the health ramifications of repeated exposure over time.

It is important to note that the environmental, health and safety impacts of artificial turf are in need of further study. But there is enough information to cause concern and to warrant a conservative approach in decision-making and to direct the community away from artificial turf and towards the traditional use of natural grass for sports and public play fields. The growing body of scientific evidence about turf continues to shed light on new and controversial issues surround the installation of these fields.

It is important that NJDEP makes the decision that is most protective of our community, our environment and our children. The drawbacks and risks associated with artificial turf do not warrant your investing in it. Please do not fund this nonprofit assistance application with Green Acres money because of the environmental and health harms posed by this proposed activity.

Respectfully,



Maya K. van Rossum
the Delaware Riverkeeper

⁵ Environment & Human Health, Inc., Artificial Turf, Exposures to Ground-Up Rubber Tires, 2007.

⁶ Rachel's Democracy & Health News #992, Hazardous Chemicals in Synthetic Turf, Follow-up Analyses, April 12, 2007.

⁷ Texas Football Succumbs to Virulent Staph Infection from Turf, December 21, 2007, Bloomberg Press.

⁸ Dr. M. Shorten, J.A. Himmelsbach, BioMechanica, Sports Surfaces and the Risk of Traumatic Brain Injury. See also K.M. Guskiewica, N.L. Weaver, D.A. Padua, W.E. Garrett Jr., Epidemiology of Concussion in Collegiate and High School Football Players, Sep-Oct 2000 & Does the Use of Artificial Turf Contribute to Head Injuries, The Journal of Trauma-Injury, Infection and Critical Care, Oct 2002 for the finding that artificial turf increases the level of injury in comparison to natural grass fields.

⁹ SportsTurf Managers Association, A Guide to Synthetic and natural Turfgrass for Sports Fields, Selection, Construction and Maintenance Considerations.