

# Artificial Turf: Health and Environmental Risks

## Safe Healthy Playing Fields Coalition Fact Sheet

The Safe Healthy Playing Fields Coalition (SHPFC) website ([www.safehealthyplayingfields.org](http://www.safehealthyplayingfields.org)) presents viable natural turf alternatives to synthetic turf, which places toxins and carcinogens in the bodies of our children and streams of our watershed. Know the risks to your health and the environment BEFORE these carpets are installed because backtracking is costly. Information to be aware of (and sourced on the SHPFC website, unless otherwise noted) includes the following:

- **Costs** (<http://synturf.org/maintenancereplacement.html>):
  - Synthetic (artificial) turf costs more than natural turf both to install and to maintain.
    - Synthetic turf requires costly maintenance equipment to sanitize and groom fields;
    - It requires removal & replacement (\$600,000 to \$1,000,000 per field) every six to eight years.
    - Field replacement costs require disposal costs for the old tire crumb. Vulcanized rubber contains dozens of hazardous compounds that may complicate disposal options for municipalities. These also complicate the material's recyclability.
    - Once synthetic turf is installed, it's expensive to return the native soil to its natural state.
  - For reference: A guide to Synthetic and Natural Turfgrass for Sports Fields: Selection, Construction and Maintenance Considerations ([www.cgmaterials.com/pdf/stmafield.pdf](http://www.cgmaterials.com/pdf/stmafield.pdf))
  
- **Health and Science:**
  - To summarize concerns related to synthetic surfaces used on playgrounds and playing fields, a synthetic turf field using tire crumb infill can on average be expected to:
    - **Contain roughly 120 tons of pulverized tires;**
    - **Create a mix of toxic gases and carbon black** for young players to breathe, and add heavy metals, tire crumb and plastic shards to storm water run-off ;
    - **Leach known carcinogens and heavy metals** like lead, cadmium, zinc, arsenic, selenium and more. Tire manufacture is proprietary. Hence the complete contents are unknown. This data gap underscores the need to test tire crumb as a children's product.
    - **Require decontamination** to remove blood, sweat, mucous, animal droppings and food from plastic and tire crumb materials; contaminants lead to higher risk of MRSA;
    - **Create a higher injury rate** for players such as ACL injuries and skin abrasions.
  - Scientists question the continued use of these playing surfaces without complete analysis and full disclosure of the infill contents ([www.safehealthyplayingfields.org/#!tire-crumb-science/cmt2](http://www.safehealthyplayingfields.org/#!tire-crumb-science/cmt2)).
  - **Third-grader Claire Dworsky** partnered with scientists in 2009 to study pollutants visible to her naked eye in field water runoff. Her study: "Runoff water from grass and artificial turf soccer fields: Which is better for the soccer player, the city and the environment?" <http://dig.abclocal.go.com/kg0/PDF/2009%20AGU%20Poster%20-%20Claire%20Dworsky-final.pdf>
  
- **Incomplete analyses** – SHPFC is concerned about the reliance on incomplete and questionable study results used by municipalities, counties and states that lead to faulty decisions regarding

the health and environmental risks associated with synthetic turf playing fields. These sources include:

- Consumer Product Safety Commission (CPSC):
    - CPSC [Press release](#) ignores the findings and concludes these fields are safe. The CPSC has ignored numerous requests to publicly revise/remove references to this misinformation.
    - Maryland (District 20) Senator Jamie Raskin, a constitutional law professor at American University College of Law, wrote to CPSC Chair Tenenbaum noting his own concerns as well as those of Connecticut Attorney General Blumenthal (now Connecticut State Senator) ([www.ct.gov/ag/cwp/view.asp?Q=421480&A=2795](http://www.ct.gov/ag/cwp/view.asp?Q=421480&A=2795)) and of Connecticut (District 3) Congresswoman DeLauro ([www.synturf.org/images/DeLauroCPSCLetter-http\\_www.house.pdf](http://www.synturf.org/images/DeLauroCPSCLetter-http_www.house.pdf)) as well as the analysis of Dr. David Brown, Director of Public Health Toxicology, EHHI, a Doctor of Science in Physiology and Toxicology from Harvard School of Public Health and a former supervisor of superfund sites with the National Centers for Disease Control.
  - Montgomery County:
    - DRAFT Artificial turf draft report – requests and observations from Montgomery County (MoCo) Councilmember Marc Elrich to the Turf Report Response Task Force regarding the draft report (June 3, 2011) REMAIN unanswered.
    - Montgomery County FINAL Artificial Turf Report (2011) includes public comments questioning the report conclusions: [www6.montgomerycountymd.gov/csltmpl.asp?url=/content/council/ATworkgroup/AT\\_workgroup.asp](http://www6.montgomerycountymd.gov/csltmpl.asp?url=/content/council/ATworkgroup/AT_workgroup.asp)
    - The MoCo report (not a scientific study) relied upon the erroneous CPSC press release, lacking funds to perform its own scientific and health impact studies.
  - The FieldTurf company markets synthetic turf to children and their parents via their website (<http://web.archive.org/web/20100724014903/http://fieldturf.com>). They are not constrained by the CPSC, which did not classify the fields as “children’s” products, in part because adults use them too. The SHPFC seeks to have these fields regulated as children’s products and stop organizations relying on faulty data for future AT installation decisions.
- **Warning signs:**
    - Chemical – California Proposition 65 warning signs identify areas or facilities containing chemicals known to the State of California to cause cancer, birth defects or other respiratory harm. (<http://oehha.ca.gov/prop65/background/p65plain.html>)
    - Countless videos and recorded testimonies document the risks that beg to be resolved. Go to <http://www.safehealthyplayingfields.org/#!videos/c23os> to see what all the fuss is about.

**The SHPFC subscribes to the precautionary principle:**

*"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action."*

- Wingspread Statement on the Precautionary Principle, January 1998.