

CleanEarth4Kids is opposed to the use of synthetic turf. We urge you to educate people and work to stop the installation of synthetic turf in the state of California.

Synthetic turf is a health risk. Doctors, nurses, health professionals, university professors, and children's health organizations are deeply concerned about the toxic and cancer causing chemicals that have been found in the infill and plastic grass of synthetic turf, including lead, benzene, vinyl chloride, PFAS, etc.

Research has identified over 300 chemicals in crumb rubber infill. Of these, 52 are classified as known carcinogens and another 6 are considered suspected or presumed carcinogenic. An additional 197 are considered likely carcinogenic. Keep in mind, the EPA has studied less than 1% of the 80,000 identified chemicals in the US.

Synthetic turf has been known to contain PFAS. PFAS are a health hazard that contaminate our water, landfills, etc. Used artificial turf is expected to produce 1-4 million tons of waste in the next ten years. There is no actual recycling of synthetic turf in the United States. Synthetic fields are replaced every 7-10 years. There are 12,000-13,000 synthetic turf sports fields currently in the U.S. with 1,200-1,500 new installations each year. The average synthetic turf field adds 40,000 pounds of plastic carpet and 400,000 pounds of infill to landfills. No synthetic turf manufacturer has yet to state they are stopping the use of PFAS.

<https://www.documentcloud.org/documents/6434596-Kulikov2005.html>

<https://theintercept.com/2019/10/08/pfas-chemicals-artificial-turf-soccer/>

<https://www.peer.org/industry-in-a-dither-about-pfas-in-synthetic-turf/>

<https://www.fairwarning.org/2019/12/fields-of-waste-artificial-turf-mess/>

https://www.syntheticurfscouncil.org/page/About_Synthetic_Turf

<https://www.ydr.com/in-depth/news/2019/11/18/old-artificial-turf-fields-pose-huge-waste-problem-environmental-concerns-across-nation/2314353001/>

PFAS are hazardous. The EU lists “developmental toxicity, effects on lipid metabolism, development of tumors of one or several organs and immunotoxicity as observed effects in laboratory animals after exposure to several PFAS.” The European Union classifies PFAS as a group and PFAS must be classified as a group in the United States.

PFAS contaminate our food, our water and our land. PFAS are made of carbon-fluorine bonds which are very stable and resistant to “environmental degradation.” PFAS are called “forever chemicals” for a reason. Once in the body, they accumulate in the kidneys and liver with a biological half-life of 3-8 years. PFAS have been used for over 50 years and public exposure is widespread. In California, 3,000 water suppliers and 600 systems have detected PFAS. PFAS are found in the blood of 97% of Americans.

<https://news.bloomberglaw.com/environment-and-energy/california-increases-scrutiny-of-forever-chemicals-in-water>

<https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>

With children's cancer rates increasing significantly from 1975 to 2015, with about 43 children diagnosed with cancer every day, we must reduce their exposure to toxic chemicals. We must protect the places where they run and play.

Synthetic turf can be 20°-50° degrees hotter than natural grass and have burned children's feet. Athletes have reported cleats on their shoes and other equipment melting because of synthetic turf.

No one can claim that synthetic turf is safe as it contains numerous chemicals that have never been studied. We are learning more and more about toxic chemicals and their effects. Why make our kids sit, play, run, fall, and wipe their hands and faces on toxic chemicals?

Crumb rubber is toxic to salmon. 6PPD-quinone comes from tire particles and is shown to cause mortality in coho salmon. <https://science.sciencemag.org/content/371/6525/185> The average synthetic turf field contains 400,000 pounds of pulverized tires, representing a massive source of quinone.

Synthetic turf is dangerous to athletes. Turf burns, caused by falling on synthetic turf, can become infected. In an EPA study, 70% of synthetic fields had MRSA, an antibiotic resistant life threatening infection. Synthetic turf fields are ripe for disease and must be regularly cleaned with chemicals. The rubber in synthetic turf can also trigger asthma attacks.

Synthetic turf has a higher injury rate according to a 2019 study by the American Journal of Sports Medicine. <https://pubmed.ncbi.nlm.nih.gov/30452873/>
The US Men's Professional Soccer Team and top athletes choose to play on grass for a reason. The US Women's Soccer Team sued FIFA to not play on synthetic turf.
Please protect our children and stop the use of synthetic turf. Attached is a poem written by a youth about synthetic turf.

Synthetic turf harms our water, air, land and climate. Plastic emits methane.

<https://www.mvtimes.com/2019/02/20/synthetic-turf-will-contribute-greenhouse-gas-problems/> Also, synthetic turf increases reliance on fossil fuels. The making and burning of plastics create toxic pollution and GHGs. Also, synthetic turf creates heat islands and disrupts ecosystems. We look forward to sharing more information later.

Additional Resources

Videos:

[Tire Particulate Matter in Synthetic Turf and Children](#)

[Stop Synthetic Turf](#)

[Athletes Against Synthetic Turf](#)

[Stop Synthetic Turf in Our Community](#)

[Artificial Turf Fields are Failing Across Southern California, Costing Millions](#)

[Failing Synthetic Turf Fields](#)

[Artificial Turf is Not Recycled](#)

Articles:

[Dangerous Pileup of Synthetic Turf](#)

[Analysis of Energy Use and Emissions from Synthetic Turf](#)

[Artificial Turf and Cancer Risk](#)

[Artificial Turf in NCAA Football: Increased Knee Injuries](#)

[Release of PAHs and Heavy Metals from Rubber Crumb in Synthetic Turf Fields](#)

Thank you! We are wishing you health, happiness and success in protecting public health, safety and our environment for our youth and future generations.

Suzanne

Suzanne M. Hume

Educational Director & Founder

(760)518-2776

s@CleanEarth4Kids.org

CleanEarth4Kids.org