

August 5, 2024

Dear Honorable Mayor and Council:

The City of Chula Vista's Sustainability Commission would respectfully like to bring your attention to the use of artificial turf throughout the City of Chula Vista. Artificial turf is being marketed as a panacea to issues concerning the residential landscape, mainly by reducing reliance on irrigation water in a time of drought. Facts that fail to be mentioned are its contribution to local temperature rise, increasing pollution in the form of microplastics, and habitat loss.

As a petrochemical product, artificial turf is derived from oil. The heat it generates is detrimental on a widespread scale, as well as to the health of our community. Studies show the temperature of artificial turf can be around 50°F hotter than natural grass and can be 70°F hotter than air temperatures.<sup>1</sup> Artificial turf causes the temperature to rise even at the residential scale, and this increase necessitates the use of even more water to keep adjacent trees and plants alive. Assuming artificial turf requires no irrigation, reduces water availability to nearby existing shade providing trees, negatively affecting them and further reducing the shade, and again increasing temperatures. With increased temperatures comes a heavier reliance and strain on air conditioning, electricity, and the electric grid.

Artificial turf is made using a variety of plastics which when combined look like natural grass. It's usually a mixture of nylon, polypropylene, and polyethylene, with crumb rubber making the plastic "grasses" stand vertically. Crumb rubber is typically derived from used tires and is a source of pollution in the form of microplastics, also known as PFAS, or forever chemicals, which according to the Environmental Protection Agency have been "linked to cancers, impacts to the liver and heart, and immune and developmental damage to infants and children."<sup>2</sup> At a time when we are becoming more informed on the unknown detriment of microplastics in our environment, it seems contradictory that we should allow untold amounts to be actively put in residential, school, and storefront gardens just for aesthetic convenience. Additionally, because artificial turf has a 10 – 15-year lifespan, and is not recyclable and does not fully biodegrade, it will ultimately take up space in our Otay landfill and potentially reduce its life expectancy.

Bees, butterflies, moths, and other insects and animals provide pollination across the globe in addition to other ecosystem services. As Chula Vista is becoming increasingly urbanized, the City is losing acres of open space to development and housing. This reduces habitat opportunities for pollinators that we rely on. Recent focus on the Monarch butterfly and increased awareness of bee decline has made more people aware of the fragility of natural systems. Dedicating land to artificial turf which provides negative environmental support to pollinators suggests this product has a greater value than the myriad services nature provides.

During the 2015 drought, Governor Brown signed a law prohibiting cities from preventing homeowners from installing low water landscapes, and this included artificial turf. However, in October 2023, Governor Newsom amended that law so it only applies to "living plant material", specifically excluding artificial turf.<sup>3</sup> Senator Ben Allen who authored the bill said "Emerging research is making it clear that artificial turf poses an environmental threat due to its lack of recyclability and presence of toxins such as lead and PFAS."<sup>4</sup> Since that time, the city of Millbrae in San Mateo County has already prohibited the use of artificial turf,<sup>5</sup> and San Marino in LA County has reportedly begun taking steps to follow suit. On an even larger scale, just last year the European Union banned the sale of items that add microplastics,

thereby banning artificial turf made with crumb rubber due to concerns on the “potential effects of human exposure.”<sup>6</sup>

It is in our City’s best interest to recognize that artificial turf is inconsistent with our immediate and long-term Climate Action Plan goals. The aesthetic benefits of artificial turf should not be prioritized over temperature rise, plastic pollution, or habitat loss. On behalf of the Sustainability Commission, we would like the opportunity to address City Council directly with a presentation at your earliest convenience.

Sincerely,

Jeanine Sharkey, Sustainability Commissioner, City of Chula Vista

Hayley Salazar, Sustainability Commissioner, City of Chula Vista

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1. Abraham, J. (2019). Heat risks associated with synthetic athletic fields. *International Journal of Hyperthermia*, 36(1), 515–516. <https://doi.org/10.1080/02656736.2019.1605096>
  2. EPA Press Office. (2024, April 19). *Biden-Harris Administration Finalizes Critical Rule to Clean up PFAS Contamination to Protect Public Health*. EPA. <https://www.epa.gov/newsreleases/biden-harris-administration-finalizes-critical-rule-clean-pfas-contamination-protect>
  3. Allen, B. (2023, October 10). *California Legislative Information, SB-676 Local ordinances and regulations: drought-tolerant landscaping*. Bill Text - SB-676 Local ordinances and regulations: drought-tolerant landscaping. [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=202320240SB676](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=202320240SB676)
  4. *Calmatters: Once hailed as a drought fix, California moves to restrict synthetic turf over health concerns*. Senator Ben Allen. (2023, October 18). <https://sd24.senate.ca.gov/news/media/calmatters-once-hailed-drought-fix-california-moves-restrict-synthetic-turf-over-health>
  5. *Prohibition of artificial turf*. Prohibition of Artificial Turf | Millbrae, CA. (2023, October 24). <https://www.ci.millbrae.ca.us/276/Prohibition-of-Artificial-Turf>
  6. Zuccaro, P., Thompson, D. C., de Boer, J., Llompert, M., Watterson, A., Bilott, R., Birnbaum, L. S., & Vasiliou, V. (2024, February 1). *The European Union Ban on Microplastics Includes Artificial Turf Crumb Rubber Infill: Other Nations Should Follow Suit*. ACS Publications, Environmental Science and Technology. <https://pubs.acs.org/doi/10.1021/acs.est.4c00047>