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**Committee:** Environment and Transportation

**Testimony on:** HB 857 “Environment – Synthetic Turf and Turf Infill – Chain of Custody and Reuse”

**Position:** Support

**Hearing Date:** February 24, 2021

**The Maryland Chapter of the Sierra Club strongly supports HB 857, which addresses a serious waste problem posed by the lack of transparency and accountability for disposal of synthetic turf and turf infill.** The bill would require manufacturers and owners of current and future synthetic turf and turf infill to report to the Maryland Department of the Environment the chain of custody of the turf and infill, from installation to removal, reuse, repurposing, recycling, and disposal.

**Synthetic turf sport fields, which account for nearly two-thirds of all synthetic turf,<sup>1</sup> have an 8 year average lifetime and produce a large volume of waste, much of it toxic.** According to the Synthetic Turf Council (STC), an average field is 80,000 square feet, comprised of 40,000 pounds of mixed plastic turf and 400,000 pounds of infill (usually tire waste and silica sand but sometimes other materials). This equates in volume to 400 cubic yards, or the equivalent of almost fourteen 30-cubic-yard dumpsters of infill.<sup>2</sup>

**The number of synthetic turf fields in Maryland, the number disposed of, and the projected volume of the synthetic turf waste stream by currently installed synthetic turf are unknown.** According to the STC, there are currently 12,000-13,000 synthetic turf sports fields in the United States, and 1,200-1,500 are installed annually.<sup>3</sup> The number of synthetic turf fields deconstructed annually in the United States increased from 365 in 2013 to 750 in 2018.<sup>4</sup> While the industry continues to explore ways of recycling, reusing, or repurposing used synthetic turf, ultimately the turf and its components must be disposed of. Assuming that the number of fields deconstructed annually has risen to at least 1,000 by 2020, this represents 80 million square feet of plastic turf carpet weighing 40 million pounds and 400 million pounds of infill per year.<sup>5</sup> Disposal of the existing 12,000-13,000 sports fields nationwide amounts to as much as 260,000 tons of turf and 2.6 million tons of infill over the next decade.

**At present, the fate of this enormous amount of plastic waste and infill is difficult, if not impossible, to track.** There is currently no documentation on the extent of reuse, repurposing, recycling, and ultimately, disposal of this waste. Several Maryland county waste facilities report they do not accept the volume, weight, and mixture of synthetic turf waste.<sup>6</sup> While some may be landfilled, the millions of

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<sup>1</sup> Synthetic Turf Council (STC) website: [https://www.syntheticurfCouncil.org/page/About\\_Synthetic\\_Turf](https://www.syntheticurfCouncil.org/page/About_Synthetic_Turf)

<sup>2</sup>STC. 2017. *A Guideline to Recycle, Reuse, Repurpose, and Remove Synthetic Turf Systems*, p.3.

[https://qhi7a3oj76cn9awl3qcqrh3o-wpengine.netdna-ssl.com/wp-content/uploads/2019/11/CR-STC\\_Guideline\\_for\\_Recycle\\_Re.pdf](https://qhi7a3oj76cn9awl3qcqrh3o-wpengine.netdna-ssl.com/wp-content/uploads/2019/11/CR-STC_Guideline_for_Recycle_Re.pdf)

<sup>3</sup> STC website, *op.cit.*

<sup>4</sup> STC 2017. *op cit.*, p.3.

<sup>5</sup>*Ibid.*

<sup>6</sup>For example, Prince George’s County would not accept synthetic turf fields at its landfill, nor is such waste accepted for incineration or recycling in Montgomery County. If deposited at the Montgomery County transfer station, it would be sent to a landfill in Virginia and charged a \$70/ton tipping fee. For an average sports field, this would amount to more than \$15,000 for disposal.

square feet of removed synthetic turf more likely end up in rural and urban stockpiles and dumped in the environment, often in sensitive ecosystems or vulnerable communities.<sup>7</sup> Used synthetic turf ends up in less advantaged communities in Maryland,<sup>8</sup> the region,<sup>9</sup> the country,<sup>10</sup> and around the world.<sup>11</sup> For example, hundreds of tons of worn-out carpet and granulated tire waste from Montgomery County, Maryland, high schools ended up in landfills in rural Virginia, on Bird Creek in Baltimore County, and in Malaysia (Exhibit 1).<sup>12</sup> Synthetic turf from the University of Virginia was dumped illegally on the side of a mountain.<sup>13</sup> There is only one licensed recycling plant for end-of-life turf in Europe.<sup>14</sup>

**Jurisdictions where these plastic carpets are dumped are left to clean up the environmental and physical mess.** They also face clean-up costs and potential liabilities from the aquatic and human toxins, carcinogens, endocrine disruptors, heavy metal neurotoxins, carcinogens, and immune disruptors such as PFAS “forever chemicals” in the synthetic materials that make up artificial turf carpet systems.<sup>15</sup> The direct toxic effects of tire particles have been demonstrated in aquatic organisms in particular.<sup>16</sup>

**The Synthetic Turf Council’s guidelines for reuse, repurposing, recycling, and removal of synthetic turf fields already recommend maintaining a chain of custody,<sup>17</sup> but accountability requires that the public be informed.** The required reporting to MDE of the chain of custody for synthetic turf, as required by HB 857, will document the number of installations in Maryland; the extent to which synthetic turf is actually reused, repurposed, or recycled; and how and where it is disposed of. It will incentivize proper disposal and provide accountability for improper disposal.

**With HB 857, Maryland can be a leader in addressing the waste problem posed by synthetic turf.** It will hold those responsible for the materials accountable for proper disposal of synthetic turf through a documented chain of custody. We respectfully request a favorable report.

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Attachment: Exhibit 1

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<sup>7</sup>Lundstrom, Marjorie, and Eli Wolfe. 2019. “Fields of Waste: Artificial Turf, Touted as Recycling Fix for Millions of Scrap Tires, Becomes Mounting Disposal Mess,” *FairWarning*. December 19. <https://www.fairwarning.org/2019/12/fields-of-waste-artificial-turf-mess/> Reprinted in *The Atlantic* (12/2019), *Salon* (12/21/2019), and *Maryland Matters* (12/20/2019).

<sup>8</sup>Lundstrom and Wolfe, *op cit*.

<sup>9</sup>Meyer, Pete. 2019. “Hidden gotcha in artificial turf installation.” *Environmental Health News*, Dec. 4. <https://www.ehn.org/hidden-gotcha-in-artificial-turf-installations-2641507579.html>. Woodall, Candy. 2019. “‘Running out of room’: How old turf fields raise potential environmental, health concerns,” *York Daily Record* (Pennsylvania), November 18.

<sup>10</sup>Lundstrom and Wolfe. *op.cit*.

<sup>11</sup> *The Turf Mountain*, video by Zembla, an investigative TV program on BNNVARA, Dutch Public Television. <https://www.youtube.com/watch?v=Y5o3J7uy4Tk>

<sup>12</sup> Lundstrom and Wolfe. *op.cit*.

<sup>13</sup> Meyer, *op. cit*.

<sup>14</sup>The Re-Match company, in Denmark. Sources: Woodall, *op.cit.*; *The Turf Mountain*, *op. cit*.

<sup>15</sup> Lerner, Sharon. 2019. “Toxic PFAS Chemicals Found in Artificial Turf,” *The Intercept*. October 8. <https://theintercept.com/2019/10/08/pfas-chemicals-artificial-turf-soccer/>

<sup>16</sup>Einhorn, Catrin. 2020. “How Scientists Tracked Down a Mass Killer (of Salmon),” *The New York Times*. December 3. <https://www.nytimes.com/2020/12/03/climate/salmon-kill-washington.html>

<sup>17</sup>STC 2017. *op cit.*, pp 13-18.

**Exhibit 1**

Synthetic Turf from Richard Montgomery High School is taken to a site on Bird Creek in White Marsh, Maryland



Photos courtesy of Susan Loftus and Amanda Farber.