Survey Results

Acceptance of Synthetic Turf Playing Fields at Permitted Disposal Facilities in Maryland

Maryland Sierra Club Zero Waste Team[1]

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Background

The Maryland Sierra Club Zero Waste Team has been maintaining an inventory of synthetic turf playing fields in Maryland since 2022, in an attempt to document the number and location of the fields and disposition of their waste when they are removed. According to the Synthetic Turf Council, a typical field is 80,000 square feet, comprising 20 tons of mixed-plastic carpet and 200 tons of infill (in most cases, shredded tires).[2] As of June 1, 2025, there were at least 456 fields, which, depending on use, need to be replaced every 8-10 years. There is no required chain of custody to track the waste that will be generated by these 456 fields in perpetuity. Despite its best efforts, the Team has been able to document in only one case what happened to the components of a field after it was removed.

Objectives

The objective of this survey is to assess whether and which licensed disposal facilities in Maryland actually accept or would accept used synthetic turf playing fields that are replaced. The results are intended to inform the study of disposal of synthetic turf playing fields under preparation by the Maryland Department of the Environment (MDE), as mandated by HB 457, passed by the General Assembly in 2024.

Methodology

The Team obtained the list of permitted solid waste acceptance facilities in Maryland from Appendix B of the 2024 Maryland Solid Waste Management and Diversion Report. All of the active municipal solid waste (MSW) landfills, rubble landfills, and MSW incinerators were selected for the survey. This amounted to a total of 25 facilities -- 18 MSW landfills,[3] five rubble landfills, and

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[1] This report was prepared by Martha Ainsworth, Chair of the Maryland Sierra Club Zero Waste Team, based on interviews conducted by Team members Bente Cooney, Holly Hoglund, Marie LaPorte, Kathleen Michels, Carolyn Parsa, Bernie Robinson, Terry Stakem, Carrie Witkop, and Joanne Zoller. We apologize for any errors or omissions. Questions, comments, and corrections can be addressed to martha.ainsworth@mdsierra.org.

[2] Synthetic Turf Council. 2017 “A Guideline to Recycle, Reuse, Repurpose, and Remove Synthetic Turf Systems.”

[3] Appendix B, table 1, identifies a total of 25 permitted MSW landfills, however seven of them were not surveyed because they were operating as transfer stations, expansions of an existing landfill, or the landfill for Ft. Detrick. This left 18 functioning MSW landfills to be surveyed.

two MSW incinerators (Table 1). *None of these facilities indicated on their websites whether they accept synthetic turf playing fields or components*.

Respondents for the facilities were identified from the MDE Permitted Solid Waste Acceptance Facilities Contact List from 2024. Both publicly- and privately-owned facilities were surveyed. The list of surveyed facilities is in Appendix 1. The team was able to reach 23 of the 25 facilities. Two of the facilities declined to participate.[4]

Table 1: Distribution of Permitted Disposal Facilities Surveyed, by Type and Ownership

Type of facility	Ownership		Total
	Public	Private	
MSW Landfill	17	1	18
Construction & Demolition Debris Landfill/Rubblefill	0	5	5
MSW Incinerator	1	1	2
Total	**17**	**7**	**25**

The survey provided each respondent with information on the volume and tonnage of synthetic turf fields and the components, then asked two basic questions:

(1) Does the facility currently accept synthetic turf playing field waste for disposal? (entire fields, mixed-plastic carpet, or infill (often shredded tires))
(2) Are you aware of any other waste disposal facilities in Maryland that would accept synthetic turf playing fields and their components? If so, which ones and where?

Responses were obtained by trained volunteers in a phone interview, although in some cases the respondent was unavailable and the questions were sent by email.

Results

<u>Acceptance of synthetic turf playing field waste</u>

Municipal Solid Waste Landfills *(results for 16 of the 18 facilities)*

- <u>Three of the 16 MSW landfills reported that they accept or would accept synthetic turf playing field waste without conditions</u>, though two of the three mentioned that to their knowledge they'd never been asked to dispose of a field. This includes the Mountainview landfill in Allegany County (a private landfill), Beulah landfill in Dorchester County, and

[4] The respondent at the Eastern MSW Landfill (Baltimore County) asked that MDE contact them directly for the information; the respondent at the Midshore II Regional MSW Landfill (Caroline County) replied in writing that we would have to submit a PIA request to learn whether they accept synthetic turf playing field waste.

Fairmount landfill in Somerset County. The latter two counties have no synthetic turf playing fields. *In fact, none of the respondents in the survey mentioned that the landfill had ever accepted synthetic turf playing field waste.*

- Five of the MSW landfills reported that they would accept synthetic turf playing field waste under certain conditions:
    - If the field was generated from the County (Millersville MSW landfill in Anne Arundel County; Garrett County MSW landfill; Cecil County Central MSW landfill)
    - The respondent would want to review the MSDS (Material Safety Data Sheets) for the crumb rubber infill and confirm that the plastic carpet is not considered hazardous waste by the EPA. (Northern MSW Landfill, Carroll County)
    - The volume of the material was mentioned as a potential problem; they might have to ask the contractor to chop up the carpet into smaller pieces, e.g. 6' x 6', and the facility would limit the amount accepted per day (Cecil County Central MSW Landfill)
    - The facility would want to test the material to make sure no oil or gas spilled on it (Forty West MSW Landfill, Washington Couty)
    - The facility would accept it only after checking with an MDE inspector (Central MSW Landfill, Worcester County)
- Eight of the MSW landfills said that they do not accept synthetic turf playing field waste: Quarantine Landfill (Baltimore City); Appeal Landfill (Calvert County); Charles County Landfill; Harford Waste Disposal Center; Alpha Ridge Landfill (Howard County); Brown Station Road Landfill (Prince George's County); Newland Park Landfill (Wicomico County); Central MSW Landfill[5] (Worcester County).

Rubblefills and Incinerators

- None of the rubblefills or incinerators accept synthetic turf playing field waste. Among the comments from respondents:
    - Synthetic turf playing fields aren't accepted because they don't decompose. When approached about acceptance of synthetic turf, the facility advises the customer to contact MDE.
    - One of the rubblefills reported that they weren't certain that synthetic turf was part of their permit.
- Respondents from the two incinerators explained issues that the acceptance of synthetic turf playing field waste would impose.
    - "If we can accept this material, it would need to come in smaller dimensions, such as 2 feet long rolls 1 foot in diameter. We would also need to spread out the

[5] The facility does not accept it but if it did, would do so only after checking with an MDE inspector.

deliveries to 10 tons every two days. A test run of this sizing and volume would be necessary to ensure we don't incur problems with our emissions and combustion process." The respondent further clarified that if they did accept it, it would be classified as "special waste" and would be 3-4 times more expensive.

- It would have to be cut up into very small pieces, so as to be unrecognizable as synthetic turf. They do not want mixed plastic with the crumb tire still in it, even in small pieces. They will not accept tire waste; perhaps the crumb rubber could be sold to cement kilns.

Knowledge of other disposal facilities in Maryland that accept synthetic turf playing fields

Only two of the 23 respondents claimed to have knowledge of other disposal facilities in Maryland that accept synthetic turf playing field waste, and the facilities cited are already among the facilities surveyed. The respondent from a third landfill speculated that an incinerator might take it, and a fourth provided the contacts for a shredding service that might accept infill.[6]

A few pointed to out-of-state landfills that might accept the material:

- Tucker County Landfill, Davis, West Viginia (304-259-5580)
- King George County landfill, King George, Virginia (owned by the County, run by Waste Management).
- Middle Peninsula Landfill, Saluda, Virginia (also operated by Waste Management)

Conclusions

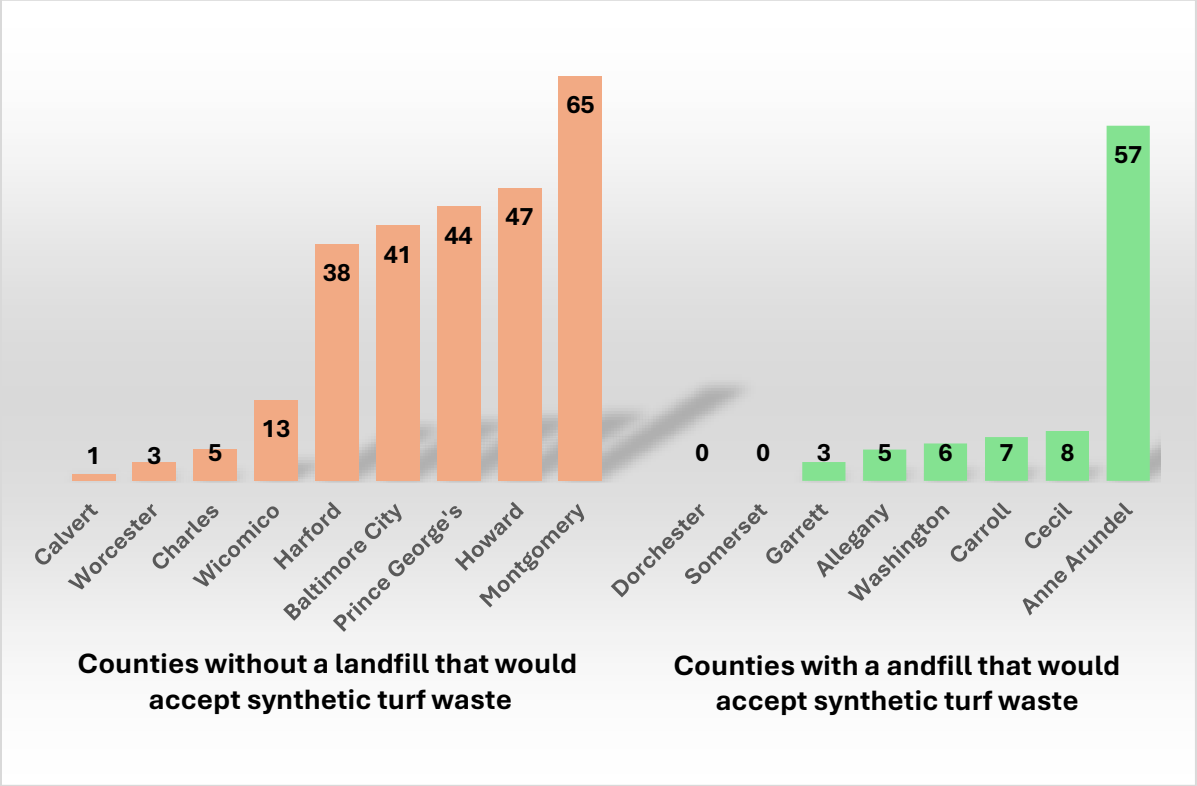
As of June 1, 2025 there were at least 456 synthetic turf playing fields in Maryland. Among the 370 fields for which an installation date was available, 59 (16%) had been replaced at least once and 75 (20%) were installed before 2015 and likely have been replaced, since the lifetime of a synthetic turf playing field is 8-10 years. Fourteen of the known replaced fields were replaced in 2024 or 2025.[7] This is surely a low estimate of the number of synthetic turf fields actually replaced at least once. There is usually a lot of fanfare and media coverage when a new synthetic turf field is installed, but very little when it is replaced. Suffice it to say, that in the next decade, nearly all of the 456 fields already installed, likely will be replaced and recycled, reused, repurposed, stockpiled, or disposed.

[6] Auston Contracting (shredding service). 410-671-6133

[7] https://www.sierraclub.org/sites/default/files/2025-06/methodology-and-results-inventory-of-synthetic-turf-fields-in-maryland-6-7-2025_final.pdf

Based on this quick survey of 23 permitted landfills, rubblefills, and incinerators, it appears that these facilities are unlikely to be a main destination for disposal of Maryland's synthetic turf waste. None of the rubblefills or incinerators accept it, and respondents at landfills that reported that the waste would be accepted often qualified the statement with the fact that they hadn't received any yet and only those generated from within the county would be accepted. The landfills that report that they would accept synthetic turf waste are located in counties with very few fields (Figure 1). It would still be worthwhile to find out whether the landfills in this survey keep records of the materials brought into the facilities and, if so, whether synthetic turf is one of the categories.

Figure 1. Number of synthetic turf playing fields in counties with or without a landfill that accepts synthetic turf waste



Note: Includes only counties with disposal facilities that responded to the survey. (Baltimore County has the largest number of fields – 73 – but has not responded.) The number of synthetic turf fields in each county is from the Maryland Sierra Club's inventory of synthetic turf playing fields as of June 1, 2025.
https://www.sierraclub.org/sites/default/files/2025-06/summary-table-synthetic-turf-fields-and-estimated-waste-in-maryland-by-county-6-7-2025_final.pdf

Many counties with dwindling or no landfill space have transfer stations that could be transporting synthetic turf waste out of Maryland to landfills in adjacent states, if the material were sufficiently reduced in volume. In the short period of time for this review, we were not able to investigate that issue, but it deserves to be explored, given that the counties with the most fields do not have

landfills that would accept them. Lack of space was frequently mentioned as an issue by the landfill respondents that would discourage uptake of synthetic turf field waste. A requirement that the carpet be chopped into relatively small pieces would seem to be a major deterrent to the owner of a field from putting it in a landfill.

It's no small feat to track what happens to used synthetic turf because there's usually a contractor hired to take it away, and the owner is not always sure where it ends up. Without a chain of custody for each field, it would be very difficult and time consuming to identify where the hundreds of synthetic turf fields are actually disposed. We need to know where and how they are disposed to evaluate any environmental and public health risks.

Finally, the comments from respondents reveal some uncertainty about whether synthetic turf field waste is allowed to be disposed in their facility, which MDE could clarify. In particular, respondents weren't certain that landfilling crumb rubber from tires used as infill is authorized under their permit. The shredded crumb rubber would seem to pose the same (or more) environmental hazards as would whole used tires, which are not permitted in a landfill.

Appendix: Permitted Disposal Facilities Surveyed, by County

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County	# of fields	Facility	Type	Owner-ship	Respondent	Title	Does the facility accept synthetic turf?
Allegany	5	Mountainview MSW Landfill	Landfill	Private	Dusty Hibert	Regional Landfill, Operations Manager	Yes
Anne Arundel	57	Millersville MSW Landfill	Landfill	Public	Michael Porath	Landfill Manager, Waste Management Services	Yes, if generated in the county (from park or school)
		Tolson & Associates Rubblefill	Rubblefill	Private	Mike Ensor	Senior Vice President	No. They don't decompose.
Baltimore City	41	Quarantine Road MSW Landfill	Landfill	Public	Antwan Byrd	Chief, Solid Waste Disposal Services	No. Volume is an issue. Will not accept anything with tire waste of any kind mixed in it.
		Southwest Resource Recovery Facility/ Wheelabrator Baltimore	Incinerator	Private	Jim Robertson	Plant Manager, Baltimore WTE	No. Would need to cut carpet in smaller dimensions, spread out deliveries to 10 tons every two days. Test run of the sizing and volume would be necessary to ensure no problems with emissions and combustion process. Would be classified as "special waste" and be 3-4 times more expensive
Baltimore County	73	Days Cove Rubble Landfill	Rubblefill	Private	Person who answered the phone	Unknown	No
		Honeygo Run Rubble Landfill	Rubblefill	Private	Zach Smith	Environmental Manager	No. Doesn't think synthetic turf is part of their permit.
		Eastern MSW Landfill	Landfill	Public	Nick Rodricks	Bureau Chief, Solid Waste Management	Declined to participate; wants MDE to call him directly
Calvert	1	Appeal MSW Landfill	Landfill	Public	Mariia Liubarskaia	Division Chief, Calvert County Solid Waste Division	No
Caroline	0	Midshore II Regional MSW Landfill	Landfill	Public	Gary Lasako	Senior Project Manager, MES	Declined to participate; must submit a PIA request.
Carroll	7	Northern MSW Landfill	Landfill	Public	Cliff Engle	Bureau of Solid Waste	Yes. Would want to consult the MSDS (Material Safety Data Sheets) for the crumb rubber infill. Might ask the contractor to cut down the rolls.
Cecil	8	Cecil County Central MSW Landfill	Landfill	Public	Elizabeth Osbourne	Chief, Solid Waste Management Division	Yes, but only a Cecil County field. Would limit the amount per day

County	# of fields	Facility	Type	Owner-ship	Respondent	Title	Does the facility accept synthetic turf?
							that could be accepted and require that the turf be cut into 6'x 6' pieces.
Charles	5	Charles County No. 2 MSW Landfill	Landfill	Public	Meg Romero	Assistant Chief, Environmental Resources	No. Not sure that they 've ever been asked to accept it.
Dorchester	0	Beulah MSW Landfill	Landfill	Public	John Cooney	Landfill Manager	Yes. To his knowledge they have never accepted any.
Garrett	3	Garrett County Solid Waste Disposal & Recycling Facility	Landfill	Public	Carrie Winters	Weighmaster Assistant, Dept. of Solid Waste & Recycling	Yes. If generated in Garrett County.
Harford	38	Harford Waste Disposal Center	Landfill	Public	David Bostomski	Project Manager, MES	No. Facility only accepts residential, self-haul waste. Commercial waste is sent to Baltimore County.
Howard	47	Alpha Ridge MSW Landfill	Landfill	Public	Joshua Gilptis	Operations Division Chief	No. Would only be received if it could be cut up and put on the transfer. The landfill has 1 active cell that they reserve for emergency use. All trash goes to King George, VA.
Montgomery	65	Montgomery County Resource Recovery Facility	Incinerator	Publicly owned, operated by ReWorld	Sam Prevratil	Facility Manager	No. It would have to be cut up into very small pieces so as to be unrecognizable, and they don't want mixed plastic with the crumb rubber. The latter could be sold to a cement kiln.
Prince George's	44	Brown Station Road Landfill	Landfill	Public	Marilyn Naumann	Sustainable Waste Management Division, Department of the Environment	No
		Ritchie Land Reclamation, LLC	Rubblefill	Private	Mike Ensor	Senior Vice President	No. "They don't decompose". When approached by someone with a field, the facility refers them to MDE.

County	# of fields	Facility	Type	Owner-ship	Respondent	Title	Does the facility accept synthetic turf?
Queen Anne's	4	Baker Rubble Landfill	Rubblefill	Private	BJ Cop	Unknown	No
Somerset	0	Fairmount Road MSW Landfill	Landfill	Public	Gary Kitching	Director, Solid Waste Department	Yes. There aren't any synthetic turf fields in the County, but if there were, they would accept them.
Washington	6	Forty West MSW Landfill	Landfill	Public	David Mason	Deputy Director, Department of Solid Waste and Watershed Programs (Interim Director)	Yes. They would require testing the material to make sure no oil or gas spilled on it.
Wicomico	13	Newland Park MSW Landfill	Landfill	Public	Adam Corry	Acting Director, DPW	No. To his knowledge, they have never had anyone arriving with such. However, they would take the rubber material from the field if they had a vendor lined up and the material was separated from the field. (They would sell it to a vendor, not dispose of it.)
Worcester	3	Central MSW Landfill	Landfill	Public	David Candy	Superintendent, Landfill Manager	No. To his knowledge, they have never had one disposed of at this facility. If one arrived, he would accept it, but only after checking with the MDE inspector.