



SIERRA CLUB

NEW JERSEY CHAPTER

Artificial Turf Toolkit

Table of Contents

[Summary of Harms](#)

[Petitions](#)

[Sample Letters to Government Officials](#)

[Sports Field Managers Info/Resources](#)

[Social Media Graphics & Guidance](#)

[Published Studies](#)

[Recorded Webinars](#)

[Additional Resources](#)

Summary of the Harms of Artificial Turf Development

Plastics & Waste: A single artificial turf field contains about **40,000 pounds of plastic** that sheds microplastics into air, water, and soil. A regular sized artificial turf field contains 150,000 pounds of crumb rubber infill, often tire crumb, meets the EU definition of microplastics, and 1–4% migrates off-site each year. Turf blades also degrade and escape into the environment.

Artificial fields last only 8–10 years, after which thousands of pounds of infill and plastic carpet must be discarded. With roughly 30,000 fields in the U.S., this adds up to **12 billion pounds of infill** and **1.2 billion pounds of plastic carpet**—waste that cannot be conventionally recycled and often ends up in landfills or is improperly dumped.

Toxic Chemicals: Synthetic turf contains and **leaches harmful chemicals**, including PFAS, which are linked to serious health risks and have been found in water near turf fields. Tire-crumb infill contains PAHs, lead, and 6-PPD, a chemical with ecotoxic effects, including impacts on salmon.



SIERRA CLUB

NEW JERSEY CHAPTER

While safer mineral or plant-based infills exist, many installations still rely on tire-derived materials.

Extreme Heat & Safety Risk: Artificial turf also creates extreme heat. On a warm day, artificial turf radiates more heat than grass, leading to extreme temperatures and contributing to the heat island effect. **Artificial turf can be 20–70° F hotter** than natural grass. This increases the risk of heat-related illness—football players are 11 times more likely to suffer heat illness on synthetic fields. Climate change will worsen these risks. Converting natural areas to turf also destroys habitat, increases impervious cover, and worsens flooding.

Costly: Although natural grass requires maintenance, artificial fields cost **\$450,000 to \$1.5 million** each and must be replaced regularly, making natural grass cheaper long term and far better for the environment ([Cost comparison](#)).

Petitions

- [Support S3254 \(Mukherji\)/A4908\(Collazos-Gill\) Prohibiting Green Acres Funds for Toxic Artificial Turf!](#) The Green Acres Program is funding environmentally harmful artificial turf instead of preserving land and supporting sustainable recreation! **Join us to tell your legislator to support S3254/A4908 to ensure Green Acres funds are not spent on more plastic, toxic carpets across NJ!**
- [Tell Your Municipalities to Support Natural Grass over Artificial Turf!](#) Help us promote safe, natural grass for playing fields in New Jersey.

Sample Letters to Government Officials

[Artificial Turf Sample Letter | Municipalities](#)

Sports Field Managers Info/ Resources

- [Best Management Practices for the Sports Field Manager: A Professional Guide for Sports Field Management](#) (SFMA, 2021)
- [The Importance of Sports Turf Managers for Schools and Municipalities](#) (Brad Park, 2019)
- [The role of turfgrasses in environmental protection and their benefits to humans: Thirty years later](#) (Braun, Mandal, et. al., 2024)



SIERRA CLUB

NEW JERSEY CHAPTER

Upcoming Events & Learning Opportunities

- Rutgers Turfgrass Research Golf Classic | May 4 | Fiddler's Elbow Country Club, Bedminster, NJ | (973) 812-6467 | www.njturfgrass.org
- Rutgers Turfgrass Research Field Days (Golf & Fine Turf) | July 28 | Rutgers Hort Farm No. 2, North Brunswick, NJ
- Lawn, Landscape, and Sports Turf + SFMANJ Trade Show & Equipment Demonstrations | July 29 | Rutgers Adelphia Research Farm, Freehold, NJ | (973) 812-6467 | www.njturfgrass.org

Social Media Posts

General

- [Support Natural Grass. Not Toxic Turf](#)

Explainers

- [Heat and Safety explainer](#)
- [Micro-Plastic Runoff explainer](#)

Action Oriented

- [Tell Your Legislator: Support Green Acres Bill](#)

Published Studies

- [Verona Study](#) (2024)
- [Marblehead, MA Case Study](#) (2020)
- [Athletic Playing Fields: Choosing Safer Options for Health and the Environment](#) (2019)

Recorded Webinars

- [Back to Grass Webinar with Dr. Sarah Evans](#)
- [Back to Grass Webinar with Natural Grass Expert Zack Holm](#)
- [Back to Grass Webinar with Keith Fisher](#)
- [Back to Grass Webinar: Artificial Turf 101](#)

Additional Resources

- [Cost Comparison](#)
- [Artificial Turf Factsheet](#)
- Town Ordinances



SIERRA CLUB

NEW JERSEY CHAPTER

- [Roadmap to Natural Grass Toolkit](#)