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**From:** Mike Swire [REDACTED]  
**Sent:** Monday, February 28, 2022 12:01 PM  
**To:** PR Commission Mailbox  
**Subject:** bike lanes in parks

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Dear SM PRC,

Thank you for your service and soliciting public input on the Central Park and other playgrounds. These look like exciting opportunities to make our kids happy and healthy!

I wanted to encourage the Commission to ensure that state-of-the-art, abundant bike parking is part of these and other designs going forward. Bike parking is important in reducing rampant bike theft, encouraging kids and families to bike instead of drive, reducing the need for more expensive auto parking infrastructure, and teaching kids the importance of reducing air pollution and greenhouse gas emissions.

Please make sure that all bike racks are indeed modern / state-of-the-art. The City has done a good job with [the colorful bike racks around downtown](#). These are highly preferable to the [less secure and ugly bike racks of the past](#).

Thanks again and keep up the good work,

Mike Swire  
[REDACTED]

**From:** Kristie Eglsaer <[REDACTED]>  
**Sent:** Monday, February 28, 2022 4:43 PM  
**To:** PR Commission Mailbox  
**Subject:** Comments on Central Park Play Area Renovation-Design Development

Dear Commissioners,

The new design of the Central Park Playground looks great! This is very exciting and wonderful to see!

- I love that it keeps with a natural theme and is integrated with the existing trees and landscape!
- I love that the sand feature of the park is being kept!
- I love that the bathrooms will be renovated!
- I love that there are many “family” restrooms available as opposed to a “women’s” and “men’s” section.
- I love that bike racks will be added.

#### **Water Feature**

It is great that you are reviewing options for a water feature, which is one of the 7 Key Elements for Good Public Places:

<https://theurbanmycelium.com/william-whyte-recipe-for-good-public-spaces/>

#### **Bathrooms**

Will the bathroom doors have footholds so that you don’t have to touch the doorknobs?

#### **Toy Lending Library**

It would be great if there could be a lending library that is created in the aesthetics of the other buildings. But instead of, or maybe in addition to a book lending library, it could be a play lending library, where sand toys, dump trucks, frisbees, balls, jump ropes, chalk and other park toys can be left, exchanged, temporarily used and reused.

#### **Find Other Options instead of Fake Grass**

In the the handout, it looks like the green areas are intended to be fake grass. Please find other options for these areas.

One of the major concerns with “alternative turf” or “fake grass” stems from the infill material that is typically derived from scrap tires. Tire rubber crumb contains a range of organic contaminants and heavy metals that could be ingested by children, volatilize into the air and/or leach into rainwater posing a potential risk to the environment and human health.

See the U.S. Environmental Protection Agency website for their, and Consumer Product Safety Commission and other government agencies’ studies: <https://www.epa.gov/chemical-research/federal-research-recycled-tire-crumb-used-playing-fields>

Millbrae is one local community that banned artificial turf, (in November 2021) due to concerns. “The ban will last at least 45 days and potentially up to two years as the city works to establish permanent rules aiming to address environmental concerns ranging from increased heat, toxic plastic runoff, harm to insects and a reduced ability for the ground to absorb stormwater.”

[https://www.smdailyjournal.com/news/local/millbrae-enacting-temporary-ban-on-new-artificial-turf/article\\_faefa35a-3ae9-11ec-87ea-4375ef038f82.html](https://www.smdailyjournal.com/news/local/millbrae-enacting-temporary-ban-on-new-artificial-turf/article_faefa35a-3ae9-11ec-87ea-4375ef038f82.html)

### **Space for Teens and Pre-teens?**

Will there be areas designed with teenagers in mind? For example:

- large communal swings
- hammocks
- high structures to climb up to sit and hang out without being seen as an “invader” of the young children’s space
- rails, balance beams, and steps
- basketball court

[https://www.bloomberg.com/news/features/2021-05-28/we-need-more-public-space-for-teen-girls?utm\\_content=citylab&utm\\_source=linkedin&utm\\_medium=social&utm\\_campaign=socialflow-organic](https://www.bloomberg.com/news/features/2021-05-28/we-need-more-public-space-for-teen-girls?utm_content=citylab&utm_source=linkedin&utm_medium=social&utm_campaign=socialflow-organic)

### **Biking Options**

I would really love to see some sort of Shorebird-esque biking option at Central Park! That's the dream! My son loves going to Beresford, even though CP is much closer, to do biking at the skate park. But it makes me so nervous with all the concrete.

The community is in need of places and spaces for kids to have fun on their bikes.

It would be wonderful if there was a separate area specifically intended for bike, scooter, strider use with routes like a mini dirt/gravel pump track with bumps and maybe boardwalk-style ramps, in keeping with the style of the other areas in the plan. The community LOVED the area at “Shells”/“Shorebird” in Foster city, but it is closed indefinitely due to levy construction and was never a publicly owned space to begin with. And a dirt/gravel series of bumps and routes and loop to keep with the natural aesthetic would be safer than being on a boardwalk and safer than the hard concrete of the skate park at Beresford 🙏 And it would not have to be a huge sq-ft of space, but worth it to have whatever space can be allotted for this purpose.

One of the statements in the PRC Comments is to “explore ways to deal with bikes on boardwalk” so that bikes don’t ride on the boardwalk, which could conflict with safe play.

Let’s build spaces for the kids to be on their bikes safely at CP so that we don’t have to worry about biking on the boardwalk, since we’ll have created a safe alternative to meet their biking needs. I know my child very much wants that kind of space and I very much want it to be in walking/biking distance from our home :)

Pictures of Shorebird bike area:

<https://www.mtbr.com/attachments/shells-berm-jpg.1282343/>

<https://www.mtbr.com/attachments/shells-rollers-jpg.1282349/>

### **Community Garden**

Will there be space or opportunity for a community garden or planting of some sort? Maybe something smaller and more unique than what is at Beresford. Perhaps a small plot that can be used as an educational space for a “class” sort of like a library storytime weekly drop in, where some basics of gardening and hands on opportunities are available, with times for different age groups.

### **Deconstruction**

Please do deconstruction gently so that the materials may be reused and to minimize dust and other externalities of the process. Material reuse is climate action, waste reduction, equity, job creating, workforce development, traditional trades revival, and more! Deconstruct, not demolish.

<https://www-wired-com.cdn.ampproject.org/c/s/www.wired.com/story/why-cities-want-old-buildings-taken-down-gently/amp>

<https://climateheritage.org/building-reuse-is-climate-action/?fbclid=IwAR0pfz1BWDt0gZYR6p8OZ1vbxe2TY6NAYp0G6ftFTTVAPsom81fkubT94E>

**Timing**

What is the timing for this? Will there be spaces open to the public while construction is going on?

**Thank you**

I really appreciate the previous opportunities for comment and thank you very much for the opportunity to provide comments as the design elements get further along in the process.

Sincerely,

Kristie Eglsaer  
Baywood neighborhood of San Mateo

**From:** D Woelke [REDACTED]

**Sent:** Tuesday, March 1, 2022 9:11 PM

**To:** Sheila Canzian <canzian@cityofsanmateo.org>; Chris Massey <cmassey@cityofsanmateo.org>; Lindsey Held <lheld@cityofsanmateo.org>; Sarah Fields <sfields@cityofsanmateo.org>; Eric Holm <eholm@cityofsanmateo.org>; Heather Wolnick <hwolnick@cityofsanmateo.org>

**Subject:** Please choose to support human and environmental health for your city

Dear Director Canzian and Commissioners:

Attached please find a letter drafted by Safe Healthy Playing Fields, Inc., a non-profit 501-c-3 all volunteer organization with national membership.

We support open green spaces, natural grass playing fields and natural parks as the best option to support human physical & mental health and the environment.

In addition to the information you will find embedded in the attached letter, we can also provide information on the used tire crumb Pour-in-Place (PIP) playground surfaces you are planning. As with synthetic plastic grass turf carpets, these surfaces also contain many dangerous chemicals that can impact the health and well being of your community and pose a significant liability in terms of thermal burns.

In regards to your concern for "goose poop," natural grass field managers have found an extremely cost effective, simple solution: <https://www.lowes.com/pd/Bird-X-Coyote-Predator-Bird-Repellent/3773599>.

We hope you find the attached informative and thought provoking. Please do not hesitate to request additional information.

Respectfully,

Dianne Woelke MSN

Retired Advanced Practice Nurse & Public Health Nurse Member of BOD

SHPFI



**Kevin White, CSFM**

@ATurfMan

Geese have been a constant problem on our p  
Willamette River this year and now they totally  
tape, so I introduced a new ally...haven't had g  
the morning and again when I leave.



# **Why Your Community Should Reject Plastic Synthetic Turf Fields**

SHPFI -- February 2022

## **Who are we?**

Safe Healthy Playing Fields Inc. is an all-volunteer non-profit 501-c-3. We are committed to educating communities and policy-makers about the realities of plastic fields versus grass fields for their parks, schools, etc. SHPFI urges you and your community to have an informed conversation with all stakeholders on this issue. We hope the points made below are helpful and we would be glad to provide more information.

## **Why plastic synthetic fields are not a solution:**

There are five categories of reasons for rejecting plastic, synthetic fields in your community: cost, toxicity, heat, injury and disposal. Below is a very brief look at each of those five points. SHPFI can help you find the voluminous research on these and many other aspects of this issue.

**Cost:** Many communities are looking at plastic fields as a money-saver. The reality is that with a cost of up to 4.3 times more than natural grass [over the 8 years](#) of a typical warranty, it's a very poor financial investment for those looking beyond the ribbon-cutting. Maintenance and replacement costs are often minimized. Disposal costs are frequently omitted altogether, and concerns about liability for many of the issues below is an unsettled area of law.

**Toxicity:** Plastic turf fields are a petrochemically derived product with an [enormous carbon footprint](#), extending from fossil fuel extraction and processing to the carpet's manufacturing and transport, to its finite use as a field, to its unregulated and highly uncertain disposal.

The toxicity of plastic fields is not in doubt, regardless of brand or "recipe." The components in any synthetic turf include highly variable and undisclosed combinations of toxins like: per- and polyfluoroalkyl substances (PFAS), heavy metals, carcinogens, endocrine disruptors, phthalates, volatile and semi-volatile organic compounds, as well as the leachate from the plastic carpet 'blades' and the backing, plus the full-field shockpad, infill blend, and the hundreds of gallons of glue needed for installation and ongoing repair. The synthetic turf industry concedes it uses PFAS in manufacturing. This is significant because PFAS, a class of over 12,000 chemicals dubbed "forever chemicals," persist in the environment. and bioaccumulate in everything: humans, wildlife, soil, water and aquatic organisms. They threaten biodiversity, our food chain and our health. [They never leave](#).

**Heat:** Plastic fields can also get unbearably -even lethally- hot. Regardless of infill type these fields are reliably hotter than adjoining asphalt. Even Brock USA admits their pine-based infill [only reduces surface temperature by 20F](#). Some plastic fields have clocked in as high as



200°F in the west and mid-west. Excessive heat is a particular risk for young children. In contrast, grass fields typically remain a few degrees above or below ambient temperatures. Heat can lead to burns – separate from the notorious, limb-shaving turf burns created by friction. Thermal burns on plastic turf have even required hospitalization. At a surface temperature of 118°F a first-degree burn occurs in 15 minutes, becoming a 3rd degree burn (full skin-thickness) at in 20 minutes. Even a young child would be able to call for help in that time. But at a surface temperature of [140°F, 1st degree burns occur in 3 seconds, and 3rd degree burns in 5 seconds.](#)

Some claim plastic turf fields can be cooled with occasional water-spraying. While proper irrigation or water-cannon system can lower the temperatures for 20+ minutes, plastic fields rapidly return to the high temperatures. [According to recent research:](#)

*“... 480,000 L of water at 25°C are required to decrease the surface temperature from 60°C [140°F] to 30°C [86°F]...the amount of water required to maintain [artificial turf] temperatures at levels comparable to irrigated [natural turf] over a 24-h period exceed the water requirements of Bermuda grass in the same environment.”*

Also, an irrigation system can run into [hundreds of thousands of dollars](#)— a cost that should be part of any realistic comparison. Irrigating a plastic field before play doesn't keep it cool enough to last through a soccer game. Rather, it requires interruption of play for 20+ minutes while also changing conditions of play, becoming more slippery, causing some infills float or have clumping problems. With the increased humidity comes increased risk of exertional [heat stroke](#).

Not only will synthetic turf not conserve water, it will pack the earth and bake it, kill all living organisms below it and increase runoff. While runoff from any kind of field must be managed, the extra challenge with plastic fields is its super-heated runoff with an unquantified toxic load of mixed, undisclosed chemicals, including PFAS and heavy metals. None of these issues are addressed in field plans, which typically focus on maximizing the field's performance- not on the impacts on water quality or stormwater management. Also, the Best Management Practices (BMPs) cannot begin capture all of the microplastic infill and blades, and will capture virtually none of the chemical leachate. These materials have widely varying sizes, buoyancies and densities, making their capture unrealistic, overly expensive, or both.

Adding to the list, plastic grass carpet generate massive heat islands larger than their actual size. A regulation sized field is about 80k square feet, or 2 acres, comprising approximately 800,000,000 plastic blades per field. Both the field surface and the surface of each blade reflect heat, triggering visible waves of heat rising and spilling into adjoining areas like schools or spectator stands. The entire surface area of heated plastic constantly [off-gasses both methane and ethylene](#). These greenhouse-gases are highly toxic chemicals that everyone on and near the field -children, athletes and bystanders- will constantly inhale. They are released in increasing volume as the blades break down from UV light, weather, age and grinding action during play. The off gassing continues even at night and will continue for the hundreds of years it takes for these materials to decompose. Choosing to install plastic synthetic turf is choosing to promote climate change.



In contrast, living natural grass provides multiple un-monetized functions: Grass fields actively sequester carbon dioxide and provide a cooling function that is especially dramatic when compared to the heat generated by synthetic turf. Grass fields naturally filter toxins, perform important eco-services for the soil beneath, and provide widely dispersed rainwater infiltration allowing absorption and recharging of the water table. [Natural grass fields](#) can even be maintained [pesticide free](#), and have been in existence for many years. Most 'failing' natural turf fields were inexpensively installed, for example without soil amendment or engineered drainage. They typically receive inadequate aeration, over-seeding etc., use an off-the-shelf seed mix that doesn't optimize performance for climate, soil and use, and are not supported by trained professionals. These steps will produce a robust, high-traffic grass field that is safer, softer and cooler than plastic turf.

**Disposal:** There should be no confusion: There is [NO recycling](#) anywhere in the US. Repurposing is not recycling. Incineration is not recycling. Even the industry acknowledges this. The only approximation is in Europe at two plants that appear to be shredding, separating and downcycling the small number of fields they can handle. The owner of one plant has declared he will not accept fields from more than a few hundred kilometers away.

The plastic waste problem posed by these fields has multiple aspects, both during its "useful" life and after removal. The industry itself estimates that *each* field loses one to five tons of infill, per year. Where is it going?

Additionally, [increasing amounts of blades come loose or break off](#). The International Association for Sports and Leisure Facilities states (27 Aug 2019) the *"mechanical wear from high tread loads – as arising during football or rugby – causes tiny particles or blades of artificial grass to break off. This amounts to 250 to 300 kg per year for modern sports pitches."* That is 551-661 pounds of PFAS laden microplastics readily lofted into the air by field activity or weather- per field, per year. Together with the 1,000-10,000 pounds of migrating infill, they are lost to soil, water tables, waterways and [storm drains](#). Drainage systems on a plastic fields are geared to maximizing the field's performance, not protecting water quality from contaminated runoff. There is concern that stormwater runoff from fields may violate the [Federal Clean Water Act](#), potentially triggering fines of \$10,000 per day. Choosing to install synthetic turf is choosing to increase legal liability and the plastic waste burden to your community and the planet.

As the synthetic turf industry has worked to address these issues, many have turned to alternative infills including "bio" or plant-based infill (PBI). The materials are often sourced outside the US from countries that have abysmal pesticide and toxicity regulations. Additionally, plant-based indicates there are other materials, typically silica sand –not beach sand but silica sand, a cancer causing chemical on the [CA Proposition 65 list](#) since 1988. Further, just because something is plant-based does not make it safe to roll in or breathe the dust from. Nor does it mean the materials are pesticide, chemical or PFAS-free. For example, Brockfill, sourced from US grown knotty yellow pine, has tested very high for Total Organic Fluorine, an indicator for [PFAS](#).

Similarly, just because an infill is plant-based does not mean it is sustainable. The harvested components are often sent across the globe for processing, then shipped back and transported across the country for sale. This is unsustainable. Many plastic turf companies make claims of carbon neutrality without verifiable evidence. For example, Brock USA claims its PBI captures carbon dioxide-- without disclosing the carbon dioxide released by harvesting 7-9 year-old trees, or the GHG emissions from transporting, processing and delivering the product.

The cost to landfill a regulation sized field (80k square feet) is variable, but we approximate it at \$65,000. That's 400,000 pounds of infill and 40,000 pounds of plastic carpet. Most US fields are 120k square feet, or larger. These plastic carpets are made by companies that manufacture household carpets. As with PFAS-containing household carpets, synthetic turf is rapidly headed toward regulation in [California](#) (pg 14) and other states. The cost to dispose of a used synthetic turf field may increase dramatically if regulated as hazardous waste.

These plastic fields impose [numerous other uncalculated costs](#), such as hidden maintenance and safety testing requirements that most non-professional venues don't even know about -much less perform. The cost of perpetually replacing one to five tons of lost infill -per field, per year, on top of replacing 40,000 tons of mixed plastic carpet each 8 or so years, will also increase. Choosing synthetic turf is choosing to increase taxpayers' burden.

**Injury:** Near the top of parents' list of concerns is the matter of injury rates. Athlete concussions are of particular concern. Plastic fields are notorious for getting dangerously hard, even among elite athletes on premium fields. The Concussion Legacy Foundation estimates that between [315,000 and 850,000 concussions](#) occur among US high school athletes each year from impact with a playing surface, not another player. Five- to 12-year-olds are especially vulnerable to concussion, both developmentally and biomechanically. They are more likely to sustain a concussion, due to head-to-body mass ratio and less developed neck musculature, making them less able advert a head-to-surface impact in a fall. At age six, a child's head is 90% of adult size while their body is about 20%.

Newer synthetic fields (3rd and 4th generation) [require a greater fall distance](#) in order to attenuate head to surface impact. This puts children at a higher risk for concussion when playing on synthetic turf. Natural grass is shown to attenuate head-to-surface impacts better.

Field hardness also affects joints with repeated impacts. Joint injuries, especially to lower extremities with twisting and cutting as athletes change direction at speed, are higher on synthetic grass fields. Independent, peer reviewed research --the gold standard for scientific evidence-- clearly shows a dramatic increase in **non-contact injuries** on synthetic turf over natural grass. Multiple studies by the NFL and NCAA have confirmed the dramatic increase in lower-extremity injuries on plastic fields. Be alert to [special-interest or industry-funded research](#) which does not meet this rigorous standard of scientific integrity. These 'studies' even go so far as cherry-picking data from the published research to reach their preferred, inaccurate conclusion. This distorts credible, proven evidence, in service of a global, multi-billion-dollar industry. The reality is beyond dispute: Even at the NFL where money is no object, choosing

synthetic turf is guaranteeing [more injuries](#). What are the chances a school or park can solve what even the NFL cannot?

Finally, children are not short adults when it comes to toxicity: they are always impacted to a higher degree than adults when exposed to chemicals, due to their size and [developmental windows](#). Low dose exposure, especially to [mixed chemicals, can lead to cancers](#) that may take years to develop. Patents reveal manufacturers use a variety of PFAS and dozens of other chemical of concern. Ninety percent of cancers are environmentally linked. Childhood cancers have increased 57% since 1975. Choosing synthetic turf may add to that risk.

### **Proceed thoughtfully**

SHPFI urges you to weigh your decision carefully. The impact of this choice on [human](#) and [environmental](#) health should be of paramount interest. How does an ongoing cycle of adding this volume of toxic plastic to your environment, landfill and budget help you meet the goals of your municipality's [Climate Action Plan](#)? Zero Waste Plan? Newly passed recycling laws? Choosing synthetic turf is promoting more investment in the fossil fuel and plastic industries. What message do you hope to impart to students about environmental stewardship? Once you choose plastic turf, the cost of returning to natural grass can be prohibitively expensive.

With plastic pollution expected to double by 2030. Our children and their grandchildren's grandchildren, will inherit the consequences of decisions made today. Protect their health, the [environment](#) and their future. Please let [common sense](#) rule. Say NO to plastic grass, and support carbon-sequestering, cooling and naturally cleansing natural grass playing fields.

We would be glad to address any questions you may have.

Respectfully,

Diana Conway, President

Dianne Woelke MSN, Board Member

Safe Healthy Playing Fields, Inc. [www.safehealthyplayingfields.org](http://www.safehealthyplayingfields.org)

SHPFI is an all-volunteer nonprofit 501-c-3

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