Artificial Turf Ban Investigation

Climate Action Subcommittee

September 4, 2024

City Objectives and Drivers

Council Work Plan FY 2024/25: Directs city staff to investigate of the feasibility of additional city-wide restrictions of artificial turf installations

Background

- October 4, 2023 – Staff provided an overview of synthetic turf, the regulatory environment, and other local considerations
    - The Climate Action Subcommittee provided direction to staff and requested more information

- Staff are returning today with requested information, staff recommendation, and seeking additional direction

Presentation Agenda

1. Regulations, Enforcement, Funding
2. Environmental Effects
3. City-Owned Parks
4. Other Jurisdiction's Actions
5. Direction and Next Steps

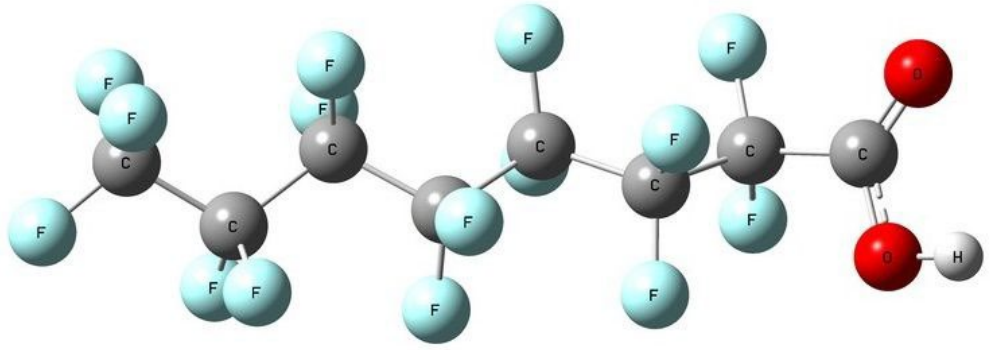
Regulations, Enforcement and Funding

State Legislation - Regulations

- **AB 1164 (Gatto) - Effective October 9, 2015**
- Prohibited local jurisdictions from enacting (or enforcing existing) ordinances or regulations prohibiting the installation of drought tolerant landscaping, including artificial turf, on residential properties
- **SB 676 (Allen) - Effective January 1, 2024**
- Rescinded the blanket prohibition on local jurisdictions enforcing drought tolerant or artificial turf installations on residential properties

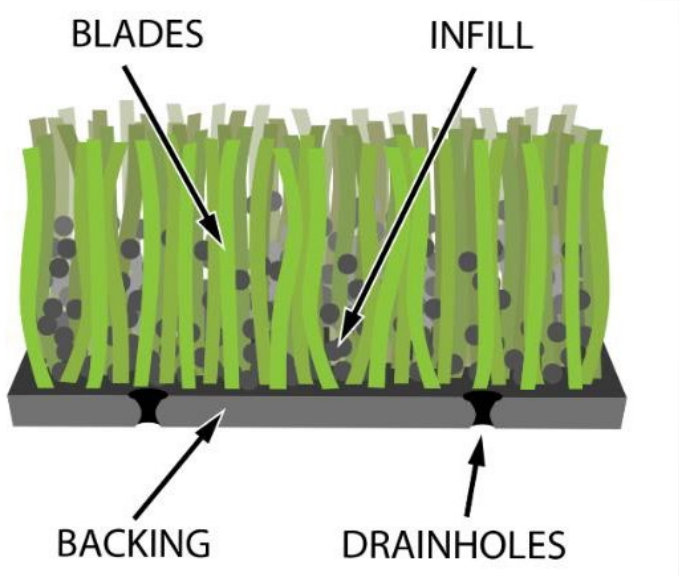
State Legislation – Vetoed PFAS Regulation

- **AB 1423 (Schiavo)** - supported by City, vetoed by Governor
  - Would have prohibited a public entity, including a charter city, charter county, city, or county, and any public or private school from purchasing or installing a covered surface containing regulated PFAS
- **SB 903 (Skinner)** - supported by City, died in appropriations
  - Would have prohibited the distribution, sale or offering for sale a product that contains PFAS beginning January 1, 2032



State Regulations – Department of Toxic Substances Control (DTSC)

- 2024 – DTSC Initiated Safer Consumer Products Regulations Rulemaking Investigation
  - Investigation will decide whether to further regulate this product-chemical combination
- DTSC candidate chemicals are present in artificial turf
- Turf additives already on DTSC candidate chemicals list include:
  - PFAS and Ortho-phtalates



Local Jurisdiction – Zoning Codes

- Zoning code chapter 20-34 G.3.d and e, “Artificial groundcover or shrubs shall not be allowed.”
- CAO - Not enforceable. The definition of artificial ground covering is elusive and code was incompatible with AB 1164 (2015)
- Per new legislation, city can enact ordinance banning artificial turf beginning in 2024

Potential Enforcement Options

Reactive - Responding to citizen complaints through the typical code enforcement process under current staffing model

- Limits the number of violations addressed

Proactive: Assign our current code enforcement officers to research artificial turf installations

- Requires additional staffing or a redirection of existing staffing resources to perform initial investigation and associated enforcement

Enforcement Challenges

- Staffing resources
  - May shift attention away from health and life safety issues
- Permits are not required for the installation of turf
- Turf installation dates are difficult to determine
- Proactive enforcement on backyard installations requires updated aerial photographs
- Inconsistent enforcement authority on similar uses
  - Artificial turf ban may apply to private schools, but not public schools governed by State Architect

Is there state or federal funding to convert artificial turf to natural turf?

- RPPG - There are no grant opportunities that support the conversion of these installations, large or small
- The city has not incentivized the installation of artificial turf in our “Cash for Grass” programs

Environmental Impacts

Is there a disposal option available for recycling artificial turf?

- No local options available for recycling
  - Requires specialized facilities
  - Wide variety of materials in manufacture
  - Efforts have yet to materialize
- Some manufacturers claim to take back, depends on condition

Greenhouse Gas Comparisons

- The manufacturing process to produce artificial turf requires large amounts of water, energy, and non-renewable materials
- CO^2 emissions from artificial turf occurs during manufacturing, production, transportation, installation, maintenance and at end of life.
- Total CO^2 emissions vary significantly depending on the infill materials
- One study* found that the carbon footprint of a 9000 sq meter artificial turf installation with a 10-year lifetime is estimated to be 55.6 t/CO^2, around three times that of a natural turf installation of the same size

*Environmental and Health Impacts of Artificial Turf: A Review (Cheng et al 2014) https://pubs.acs.org/doi/abs/10.1021/es4044193

Heat Island Effect

- University of Massachusetts Toxics Use Reduction Institute (TURI)
- “Outdoor synthetic turf reaches higher temperatures than natural grass, regardless of the infill materials or carpet fiber type”
- There have been advancements in heat-reflective technologies
  - Alternative infill materials play a crucial role in heat retention

https://www.uml.edu/research/lowell-center/athletic-playing-fields/

Water Quality and Human Health

Questions From Subcommittee

- Can PFAS and other chemicals can leach from artificial turf?
- Are there human health effects to interacting with artificial turf (playing, walking, etc.)?

What is Known

- PFAS and other pollutants is known to be present in the manufacture of artificial turf.
- These chemicals are known to be harmful to the environment and humans and are prevalent in our environment.
- The specific impacts to water quality and human toxicity directly attributable to a point source from artificial turf are hard to define.

Education -Water Efficient Landscapes

- Santa Rosa promotes Russian River-Friendly Landscaping
- Artificial turf is not consistent with RRFL best practices
- Discouraged in available water department guidance for low-water use landscapes
- No peer-reviewed research could be found on impacts of artificial turf related to soil microbiome

City Owned Parks

Grant Funded Parks Projects

A Place to Play

- $1,000,000 received through the SCAPOSD Matching Grant Program to fund the next phase of development including at least two new artificial turf fields
- Outreach and design anticipated to begin in the next six months

MLK Jr. Neighborhood Park

- Artificial turf field included in the significant renovation program for this well-used neighborhood park. Fully funded through CA Housing & Community Development's Infill Infrastructure Grant program.
- Outreach and master planning / design kicked off in May 2024

Cost Comparisons

	Artificial Turf	Natural Grass
Cost of installation (per SF, typical full size soccer field)	$25 - $30 / SF $1,080,000	$15 - $20 / SF $1,620,000
Annual maintenance cost (per field)	$8,000	$40,000
Life expectancy	10 – 15 years (cost of replacement less than original)	Depends on quality of installation, level of play and maintenance
Capacity for play	Doubles the number of playable hours compared to natural turf	Seasonal and maintenance / rehabilitation closures

Cost Comparisons

- Artificial Turf Installation costs about $540,000 more to install but realizes a savings in maintenance and operations of approximately $32,000 per year.
- Any calculation of when an artificial field will have “paid for itself” must factor in the increase in playable hours (between 50% and 100%) which could cut the cost recovery time in half or more.

Artificial Turf Maintenance Requirements

Daily Maintenance: Inspect, Groom and monitor surface temps

Semi-weekly Maintenance: Irrigate as required

Weekly Maintenance: Sweep, remove any foreign objects, redistribute infill, make minor repairs and clean

Monthly Maintenance: Replenish the infill and control weeds

Yearly Maintenance: Perform deep grooming and replenish infill. Test to measure field hardness

Best Management Practices for the Sports Field Manager: A Professional Guide for Environmental Sports Field Management April 2021, Sports Field Management Association

Natural Turf Maintenance Requirements

Daily Maintenance
- Litter removal
- Fill gopher holes
- Safety inspections

Monthly Maintenance
- Over-seeding damaged areas
- Paint/Line fields
- Aerate field 4-8 times during season
- Topdress field with soil and sand

Semi-weekly Maintenance
- Irrigation
- Mowing (2x per week)

Annual Maintenance
- Fertilization (bi-annual)
- Adding soil amendments (biosolids)
- Reseed and/or replace sod
- Overhaul irrigation
- Soil testing
- Measure soil compaction
- Measure infiltration rate

Weekly Maintenance
- Weed removal (mechanical and chemical)
- Pest management (herbicide)

As-needed Maintenance
- Repair irrigation
- Pest management
- Fill holes
- Paint / Line Fields
- Over-seed
- Grading
- Surface drainage
- Fertilize damaged areas

Can we meet the needs of our community with natural turf fields alone?

- More fields are needed to meet demand whether they are natural turf or artificial turf.
- There is a communicated demand for year-round sports – which cannot be met regardless of the number of natural turf fields.
  - Fields are unusable between November and March.
- Renovated and new natural turf fields could help satisfy the need, and maintenance is supplemented by the organizations, but seasonal closures and high levels of maintenance are a persistent and ongoing burden

Can we partner with schools to use their fields when needed?

- School fields have very limited availability because they are already so heavily programmed by the schools.
- The City would need agreements with each school district with field use schedules worked out annually.
- Safety is now a major concern for schools and they are less inclined to open their campuses on nights and weekends to outside user groups.
- School districts also struggle with funding and staffing for operations and maintenance of their fields.

Public Comments on Artificial Turf in Parks

Measure M Outreach to Santa Rosa Sports Clubs & Leagues:

- More athletic fields are needed throughout the city
- Artificial / all weather turf is important to accommodate the demand for athletic fields
- Soccer community was most well represented and advocated for the need, but also baseball and softball communities

Public Comments on Artificial Turf in Parks

Survey Questions:

How many more athletic fields and sports courts does Santa Rosa need?

- <5 10%
- **5-10 38%**
- **11-20 20%**
- 21-30 9%
- >30 5%
- Unsure 21%

What kind of surfacing should new athletic fields be made of?

- Natural Turf 7%
- **All Weather/Artificial Turf 34%**
- **Both types of surfacing are important to have 49%**
- Unsure 10%

Would you prefer the City spend money to convert current fields to all-weather, lit fields OR to build new all-weather, lit fields?

- **Convert current fields to all-weather and lit 32%**
- Build new fields that are all-weather and lit 12%
- **Doing both is beneficial 51%**
- No opinion 6%

Other Jurisdictions Actions

Other Jurisdiction Actions

City of San Marino (October 2023) - Instituted a temporary moratorium until September 12, 2024, to allow time for a study

City of Millbrae (January 2024) - A 2021 temporary moratorium became permanent: "The use and installation of synthetic grass and artificial turf landscaping material is prohibited."

- Primary goal to limit stormwater runoff as City is located on hillside.
- Existing installs must allow rainwater permeability and be well maintained.
  - When damaged, existing installations must be removed.

Santa Clara County (April 2024) - Proceeded with a study for a potential ban on artificial turf on county-owned property

City of Los Angeles (July 2024) – Committee of the Council approved a feasibility study to look into the health effects of artificial turf and the feasibility of a potential ban

Direction and Next Steps

Staff Recommendation – Turf Ban

If CAS Direction is to recommend Council consider a ban on artificial turf installations in Santa Rosa, staff recommends the following:

- Apply to artificial turf installations once adopted by Council and not retroactive
- Exempt sports fields
- Exempt installations that currently have grant funding secured or are currently in the process of applying for grant funding
- Code enforcement would be reactive to complaints*
- Provide Information and outreach on ban

**Pending staff capacity and resources available*

Staff Recommendation – Education

If CAS Direction is not to recommend Council consider a ban on artificial turf installations in Santa Rosa, staff recommends the following:

- Continue to not rebate artificial turf installations
- Continue to promote Russian River Friendly Landscaping Guidelines
- Provide education and information on concerns with artificial turf

Next Steps

- Based on direction provided, staff will bring a study session to a future City Council meeting for direction from the City Council