

Lucchesi Turf Field

RECREATION, MUSIC, AND PARKS COMMISSION

MAY 17, 2023





Agenda

- Why We're Here Tonight
- Lucchesi Turf Field Overview
- Considerations for Field Replacement
- Natural Grass Athletic Fields
- All-Weather Synthetic Turf
- Petaluma Playing Fields Overview
- Community Engagement
- Next Steps

Why We're Here Tonight

- To share information about options for replacing Lucchesi Field and maintaining sports fields in Petaluma.
- To understand and incorporate the needs and preferences of the community as we approach these replacements.

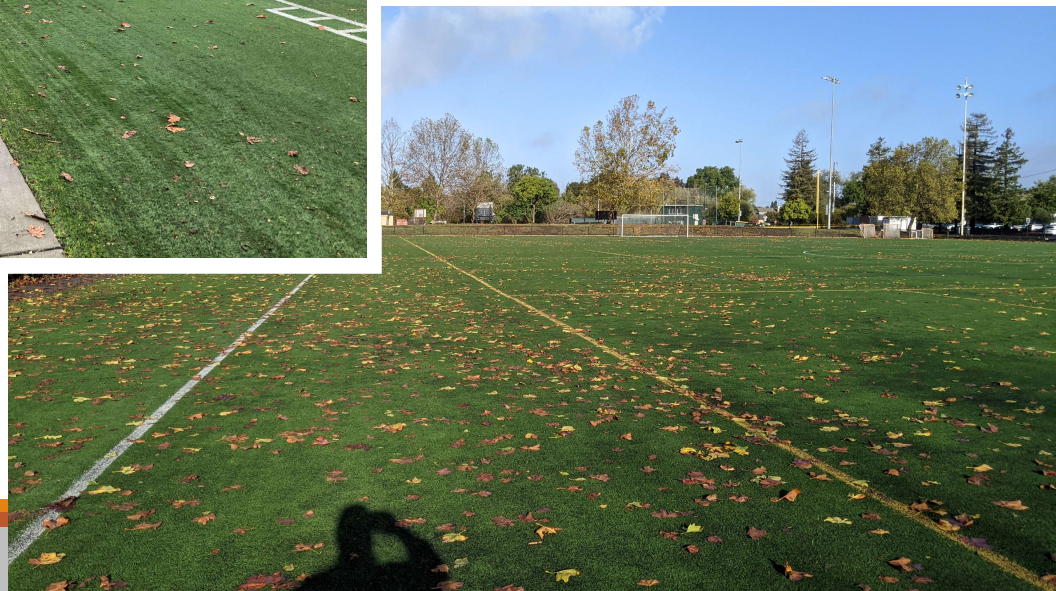


Lucchesi Multi-Use Field



Challenges at Lucchesi





Considerations for Field Replacement

- Safety
- Equity
- Use
- Environment
- Maintenance



Natural Grass Athletic Field



Anatomy of Natural Grass Athletic Fields





Natural Grass Maintenance Scope and Scheduling

Maintenance of Natural Grass Turf

- Field Closures - Maintenance & weather
- Mowing frequency
- Fertilization
- Aeration
- Top soil dressing
- Gopher abatement
- Irrigation sprinkler adjustments
- Dog related considerations
- Field lining coordination



All-Weather Synthetic Turf Fields





1960s

- 1st Generation
- AstroTurf (no infill)



1970s - 1980s

- 2nd Generation
- Sand infill, foam pad



1990s – 2010s

- 3rd Generation
- Sand, crumb rubber infill

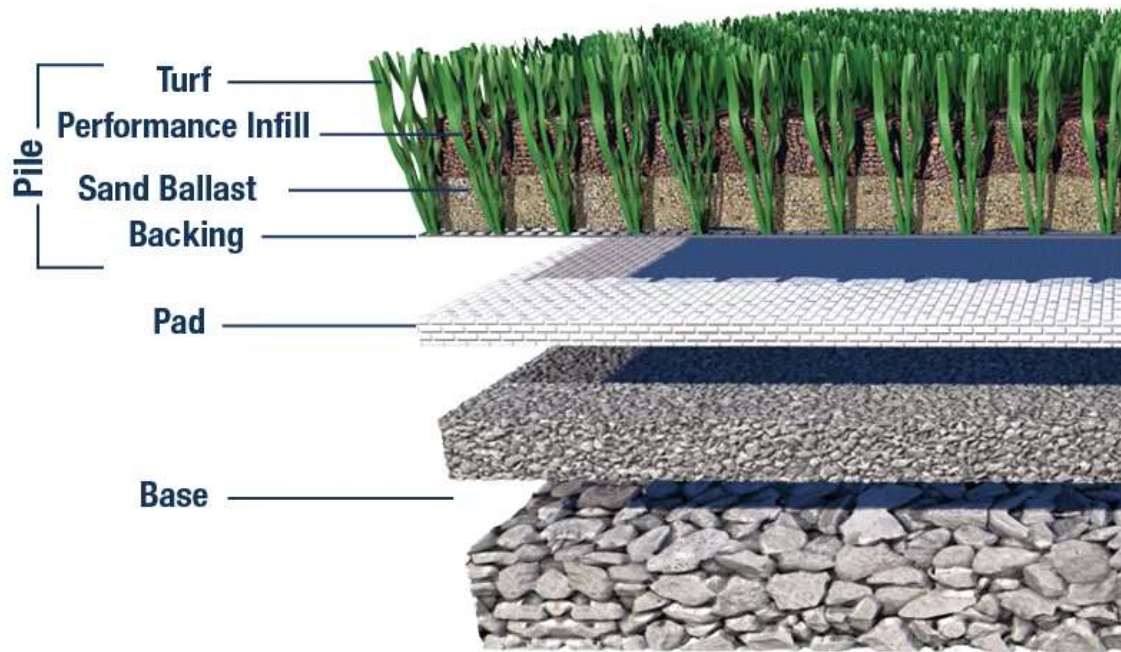


2020s

- 4th Generation
- Natural infill, drainage/shock pad

All Weather Fields Through the Years

Anatomy of an All-Weather Field



All-Weather Synthetic Turf Field Products

- Alternate Infills – natural products available (cork, olive, walnut, wood)
- Shock Pads – provide drainage and safety features
- Recycling is now available in the US along with re-use programs
- Player equipment has also improved and can enhance both performance and safety
- New safety studies are needed that include the latest improvements

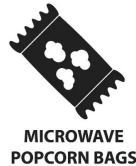
Compatible footwear examples

		
SHORT CARPET TURF	LUSH ARTIFICIAL GRASS	NATURAL GRASS
		
ARTIFICIAL TURF SHOE (TF)	ARTIFICIAL GRASS CLEAT (AG, FG/AG, MG)	FIRM GROUND CLEAT WITH BLADED STUDS (FG)

Source: Soccer.com



PFAS



PFAS Defined

- PFAS or Poly-fluoroalkyl substances
- The Environmental Protection Agency (EPA) describes PFAS as:
 - Widely used, long lasting chemicals, components of which break down very slowly over time.
 - There are thousands of different PFAS, some of which have been more widely used and studied than others.
 - Current scientific research suggests that exposure to high levels of certain PFAS may lead to adverse health outcomes.
 - Scientists in academia and industry are continuing to conduct and review the growing body of research about PFAS.

Natural Grass Playing Fields

BENEFITS

- Biodegradable components, compostable byproduct (i.e. clippings)
- Most prevalent playing surface
- Potentially lower installation costs
- An irrigated field stays cooler during heat events
- Expanded use could include pets

LIMITATIONS

- Higher cost of maintenance in labor and materials
- Expansive native soils cause uneven surfaces
- Gopher abatement and field repair
- Less available days of use, cancelations
- Challenges securing field when closed
- Requires frequent field liner for multiple sports
- Vulnerable to drought restrictions, limiting water use

All-Weather Synthetic Turf Field

BENEFITS

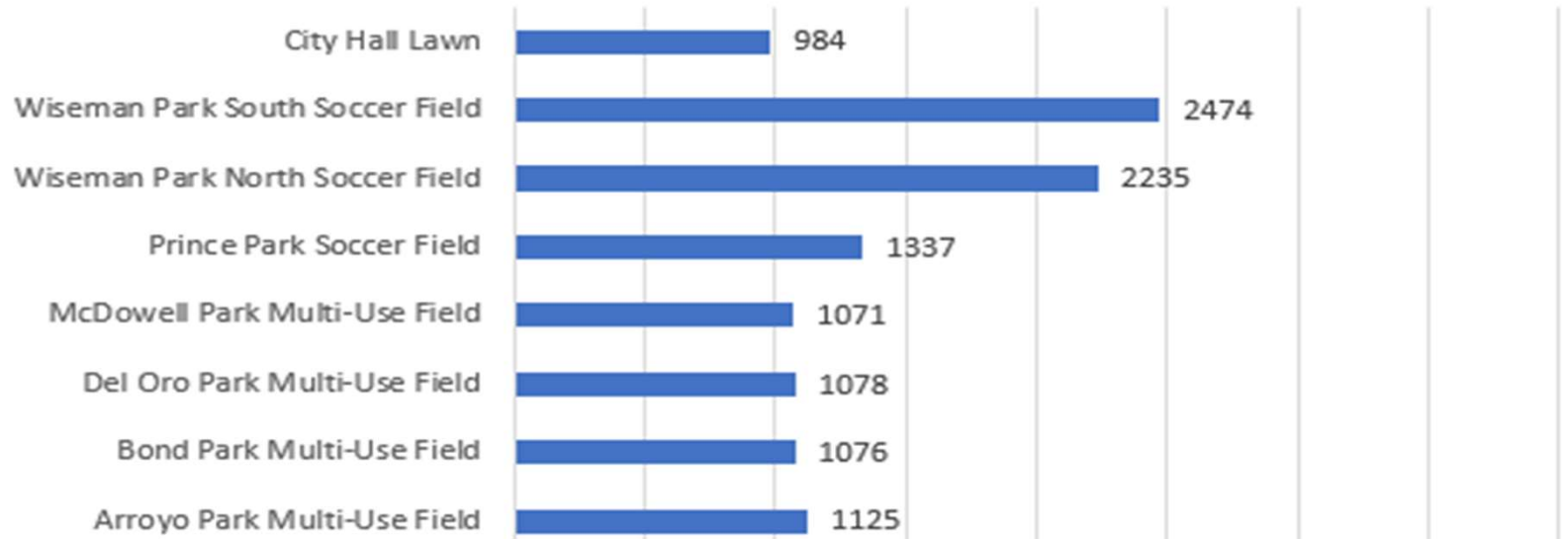
- Offers year-round organized and drop in play
- Increases ability to host local tournaments
- Water conservation
- Provides consistent playing surface
- Improves drainage
- Field lined during installation

LIMITATIONS

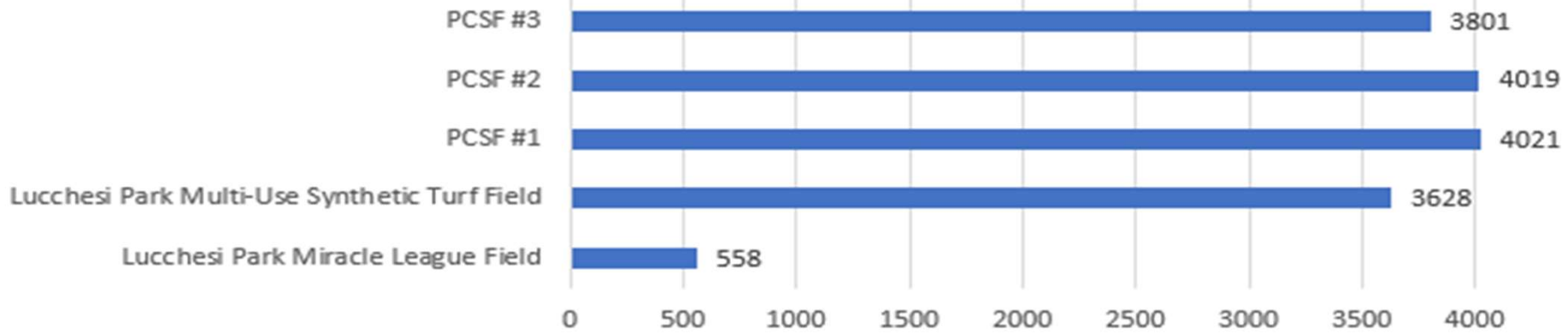
- Turf fibers made from synthetic (petroleum based) materials
- More peer reviewed, long term scientific studies are needed on synthetic turf field usage
- Higher heat absorption than irrigated fields
- Recycling facilities in US are in early phases
- Has a 10-year lifespan on turf fibers, 25-year shock pad/drainage

Hours Booked Per Field 2022

Natural Grass



Synthetic Turf



Construction				Units	Native Soil Natural Grass	Synthetic Turf	
Area to be Constructed (Based on a full size 86,000 SF field area)				Sq Ft	86,000	86,000	
Hard cost for Construction				\$/Sq Ft	\$9.50	\$20.00	
Estimated Cost Hard Cost of Construction:					\$817,000	\$1,720,000	
Annual Maintenance			Freq.	Units	Unit Cost	Nat Grass	Synthetic
Mowing (freq, ac/hr, wage & equipt/hr)			96	0.75	\$100.00	\$25,271	\$0
Irrigation Repair			2	\$/Sq Ft	\$0.02	\$2,958	\$0
Turf Repair (Natural Grass)			4	\$/Sq Ft	\$0.04	\$13,760	
Turf Repair (Synthetic Turf)			4	\$/Sq Ft	\$0.002		\$2,000
Overseed - applications			2	\$/Sq Ft	\$0.03	\$5,160	\$0
Aeration			12	\$/Sq Ft	\$0.02	\$20,640	\$0
Top Dressing			2	\$/Sq Ft	\$0.04	\$6,880	\$0
Fertilization			1	\$/Sq Ft	\$0.05	\$4,300	\$0
Watering Use			Units/ac	1,200	\$4.79	\$11,348	\$750
			Units/ac (1 unit = 100 Cu Ft = 748 gallons)	1,250			
				1,850			
Grooming			(freq,ac/hr,wage,equipt/hr)	4	0.50	\$100.00	\$1,579
Debris/Trash Pick Up						\$2,580	\$5,590
Estimated Annual Maintenance Cost						\$92,898	\$9,919

Life Cost Comparison				Unit Cost	Nat Grass	Synthetic
Maintenance		Estimated Annual Maintenance Cost			\$92,898	\$9,919
Annual Increase		2.00%				
Maintenance for year 1 through year 5					\$483,442	\$51,621
Maintenance for year 6 through year 10					\$533,759	\$56,994
Maintenance for year 11 through year 15					\$589,313	\$62,926
Maintenance for year 16 through year 20					\$650,650	\$69,475
20 years cost of maintenance					\$2,257,165	\$241,016
Field Renovation	(current year cost)	Increase	\$/Sq Ft	2.00%	\$1.85	\$9.00
	Year 5	Cost	\$2.00		\$172,215	
Replace Synthetic Turf	Year 10	Cost	\$2.21		\$190,139	\$925,002
	Year 15	Cost	\$2.44		\$209,929	
Replace Synthetic Turf	Year 20	Cost	\$2.70		\$231,779	\$1,105,463
Renovation and Replacement Cost					\$804,062	\$2,030,464
Total 20 Year Life Cost					\$3,878,227	\$3,991,480

Cost per hour of available play	Units	Nat Grass	Synthetic
Days of annual use		365	365
Maintenance shut down		45	5
Rain days		30	
Wet days after rain		15	
Total days available for use		275	360
Maximum daily use for PE & Outside UserActivities		8.0	12.0
Annual available hours for sustained growth		2,200	4,320
Cost per day of play		\$2,115	\$1,109
Cost per hour of play		\$88	\$46




LUCCHESI TURF FIELD REPLACEMENT PROJECT

PROYECTO DE REEMPLAZO DEL CAMPO DE CÉSPED SINTÉTICO EN LUCCHESI


[CITYOFPETALUMA.ORG/LUCCHESIFIELD](https://cityofpetaluma.org/lucchesifield)




Lucchesi Survey Questions

Thank you for participating in our survey.

We want to hear your feedback so we can keep improving our fields for everyone in the community. Please fill out this quick survey and let us know your thoughts.

petalumacomms@gmail.com [Switch account](#)

Not shared

* Indicates required question

How many times a week do you or your players use the Lucchesi multi-use field? *



HELP SHAPE THE FUTURE OF PLAYING FIELDS IN PETALUMA

Lucchesi Park is home to a regulation-sized, all-weather, synthetic multiuse soccer/lacrosse field that is a popular destination for community sports groups due to its year-round access and lighting. The field has gone beyond its 10-year lifecycle and is in need of replacement.

Want to learn more about this project and help shape the future of playing fields in Petaluma? Please join us at the upcoming Recreation, Music, and Parks Commission meeting where we'll be discussing the differences between all-weather, synthetic turf fields and natural grass fields.

WHEN: May 17, 2023, 6pm
WHERE: City Council Chambers at City Hall, 11 English Street, Petaluma

 **Live Spanish translation will be available.**
La traducción en vivo al español estará disponible.

DURING THE MEETING WE WILL:

- Discuss the project
- Explore options for field replacement
- Receive input from the Commission
- Listen to community feedback (we want to hear from you!)

Visit cityofpetaluma.org/lucchesifield to learn more about the project and how to make your voice heard. Thank you for helping us make Petaluma playing fields the best they can be!


[CITYOFPETALUMA.ORG/LUCCHESIFIELD](https://cityofpetaluma.org/lucchesifield)


Community Engagement

Project Webpage

Tabling Event

Printed Materials

Community Update

Social Media

Stakeholder Outreach

Argus Ad

Dedicated Email

Focus to
Date:
Survey &
RMPC Invite

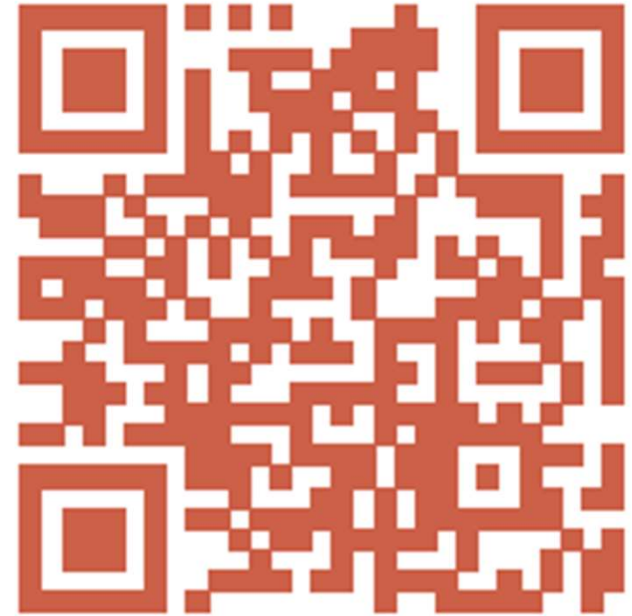
Next Steps

- Continue Community Engagement
- Incorporate Feedback into Recommendations
- Present to Commission for Review and Input
- Stay engaged:
cityofpetaluma.org/lucchesifield



SURVEY LINK

CITYOFPETALUMA.ORG/LUCCHESIFIELD



Thank You!

COMMISSION Q&A

