

# GCS ATHLETICS

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Transforming Game Fields with Artificial Turf





# STAYING COMPETITIVE

## Strategic Plan Goal Area 3:

Caring Culture and Environment

**Guiding Statement:** Provide a safe and healthy environment that promotes learning and respectful relationships.



# CURRENT FIELD DIMENSIONS

NFHS/SCHSL recognized field dimensions (Width x Length, feet)

## Football

160' W x 360' L

## Soccer

165'-240' W x 300'-360' L

(180' W preferred)

## Lacrosse

160'-180' W x 360' L

(180' W preferred)

School	Football	Soccer	Lacrosse	Max Safe Dimensions
Berea	160 x 360	181 x 352	NA	181 x 360
Blue Ridge	160 x 360	161 x 330	NA	161 x 360
Carolina	160 x 360	180 x 353	NA	181 x 360
Eastside	160 x 360	174 x 343	174 x 360	174 x 360
Fountain Inn	160 x 360	174 x 344	165 x 330	176 x 360
Greenville	160 x 360	180 x 330	181 x 358	181 x 360
Greer	160 x 360	171 x 344	NA	172 x 360
Hillcrest	160 x 360	177 x 342	177 x 342	176 x 360
JL Mann	160 x 360	160 x 351	160 x 360	180 x 360
Mauldin	160 x 360	180 x 349	180 x 322	180 x 360
Riverside	160 x 360	169 x 347	169 x 347	170 x 360
Southside	160 x 360	171 x 300	NA	171 x 360
Travelers Rest	160 x 360	199 x 335	NA	199 x 360
Wade Hampton	160 x 360	160 x 356	160 x 346	160 x 360
Woodmont	160 x 360	187 x 359	187 x 330	187 x 360

# ATHLETIC FIELDS ACROSS THE STATE

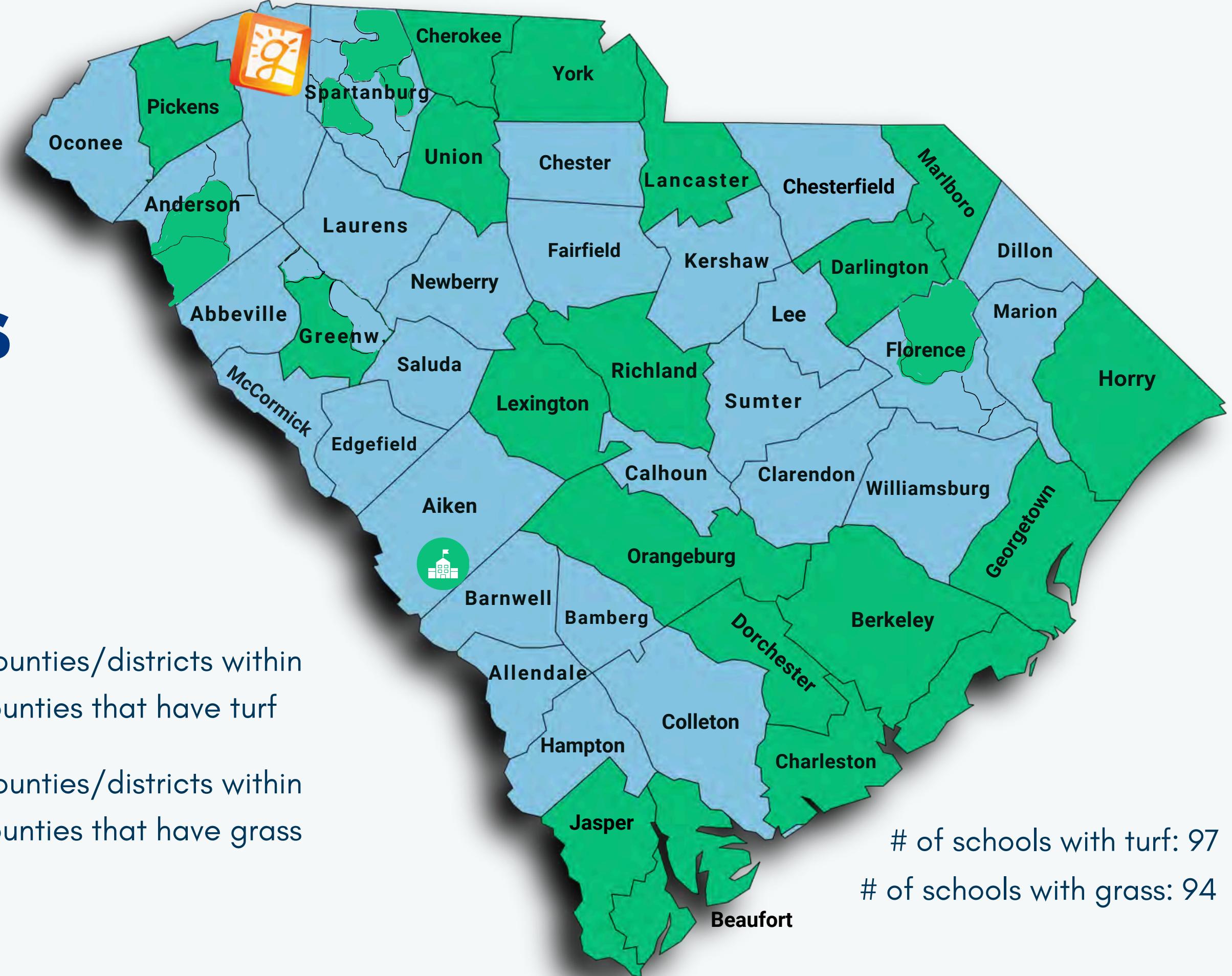
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Counties/districts within  
counties that have turf



Counties/districts within  
counties that have grass



# SEASON PERSPECTIVE

Consistent field conditions and size can impact success and help in preparing for state championship games.

## Region 1 AAAAA

\*\*Easley  
Greenville  
\*\*Greenwood  
Hillcrest  
JL Mann  
Mauldin  
TL Hanna  
Woodmont

## Region 2 AAAAA

Boiling Springs  
\*Dorman  
Eastside  
\*\*Gaffney  
Byrnes  
Riverside  
Spartanburg  
Wade Hampton

## Region 1 AAAA

\*\*Emerald  
Fountain Inn  
\*\*Laurens  
\*\*Southside  
Westside  
\*\*Wren

## Region 2 AAAA

\*\*Berea  
\*\*Blue Ridge  
\*\*Daniel  
\*\*Greer  
\*\*Pickens  
\*\*Seneca  
\*\*Travelers Rest

## Region 1 AAA

\*\*Carolina  
\*Christ Church  
\*\*Palmetto  
\*\*Powdersville  
\*\*Southside Christian  
St. Josephs

## Football State Championship (2014 - present)

SC State University - Turf  
1 championship, 1 runner-up

## Lacrosse State Championship Games (2014 - present)

Irmo High School - Turf  
Boys: 2 (1 champion, 1 runner-up)  
Girls: 8 (6 championships, 2 runner-ups)

## Soccer State Championship Games (2014 - present)

Memorial Stadium (USC) - Turf  
Boys: 14 (8 championships, 6 runner-ups)  
Girls: 14 (9 championships, 5 runner-ups)

Green denotes Turf Field  
Gold denotes GCS School

\*denotes Multiple Game Fields  
\*\*denotes No Lacrosse



# WEEKLY IMPACT AT THE SCHOOL LEVEL

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## NATURAL GRASS

- ▶ **Limits potential for adding student activities**
- ▶ **Paint Labor & Cost**  
2 to 3 hrs \$500-\$800
- ▶ **Weather dependency**  
Avg revenue loss per game:  
Football: **\$5000 - \$8000**  
Lacrosse & Soccer: **\$500**
- ▶ **Playability**

## ARTIFICIAL TURF

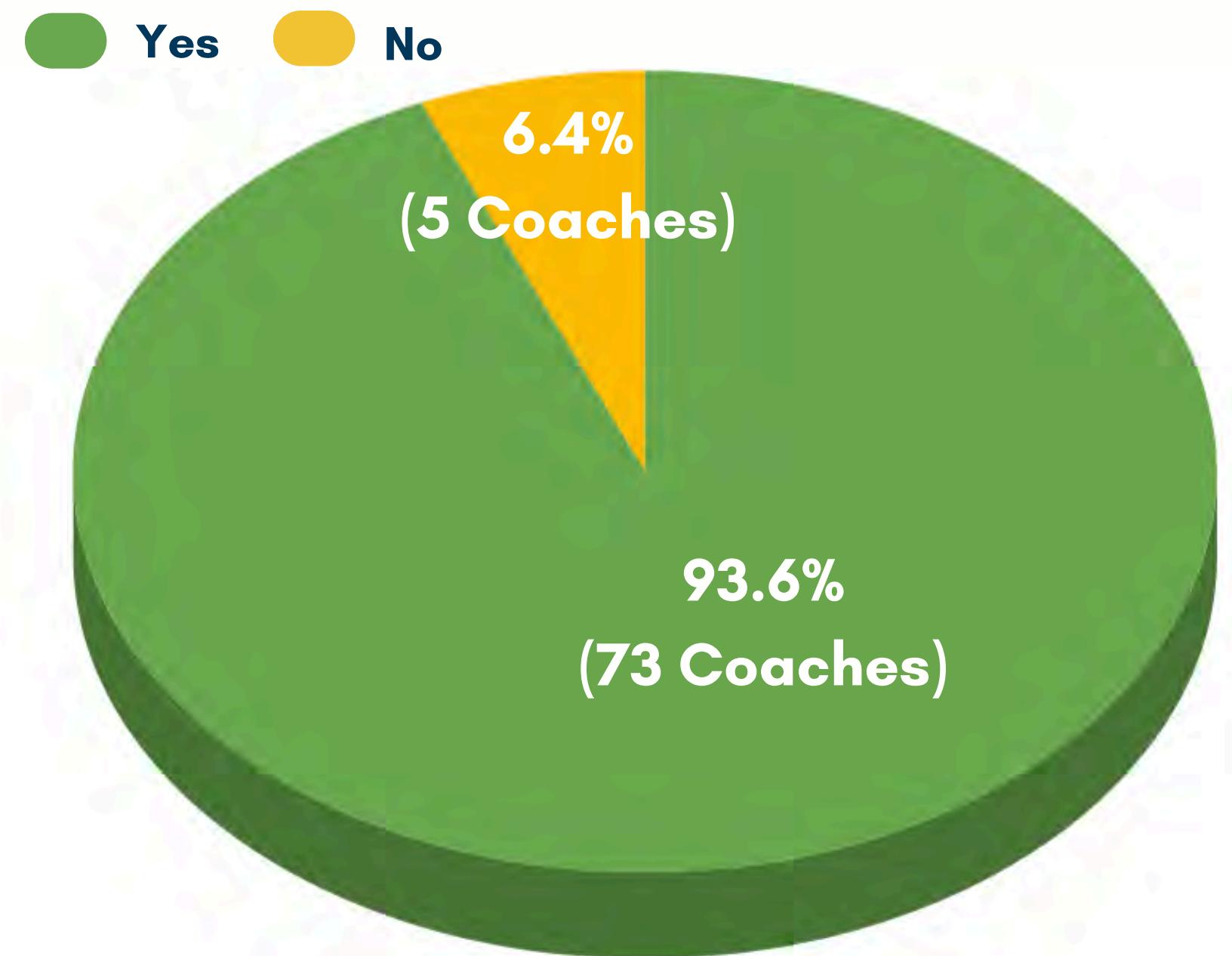
- ▶ **Added Lighted Practice Field**
- ▶ **Opportunity to add events**  
Sports (MS LX, Girls Flag Football)  
Band Competitions  
Community events
- ▶ **More reliable schedule**  
Scheduled games/events  
Evacuation drills
- ▶ **Maintenance free**
- ▶ **No paint cost or labor**



## WOULD YOU SUPPORT REPLACING THE CURRENT GRASS WITH ARTIFICIAL TURF?

### GCS COACHES SURVEY

<b>Athletic Directors</b>	15
<b>Football Head Coaches</b>	15
<b>Boys Soccer Head Coaches</b>	15
<b>Girls Soccer Head Coaches</b>	15
<b>Boys Lacrosse Head Coaches</b>	9
<b>Girls Lacrosse Head Coaches</b>	9
No B/G teams at Berea, Blue Ridge, Carolina, Greer, Southside, TRHS	
<b>Total Coaches Surveyed</b>	<b>78</b>



# ARTIFICIAL TURF

## PROS

### Durability

Can withstand heavy use and is less susceptible to wear and tear compared to natural grass



### Low Maintenance

Unlike natural grass, which demands regular mowing, watering, fertilizing, and painting

### All-Weather Play

Can be used in various weather conditions without becoming muddy or slippery, ensuring that games can proceed as scheduled



### Extended Playing Hours

Can be used for longer hours, with no concern about overuse leading to bald spots or damage





# ARTIFICIAL TURF CONS

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## Heat Retention

Turf surface temperatures can be 35-55 degrees higher than grass **during peak daytime hours**. However, teams use their grass practice fields in such cases, and games are held in the evening, minimizing the impact of peak heat.

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## Initial Cost

The initial cost of installing artificial turf can be relatively high, but the school-level maintenance cost is \$0.

# NATURAL GRASS PROS



## Long-Term Cost

Installation and maintenance of a natural grass field is less expensive than that of an artificial turf field

## Cooler Surface

Natural grass remains cooler than artificial turf during hot weather, making it more comfortable for athletes





# NATURAL GRASS CONS

## Limits Future Growth

At nine locations, we have maxed out our number of events, we can not grow/expand according to our student needs (adding sports, events, etc.) at these locations without additional property acquisition

## High Maintenance

Natural grass requires regular mowing, watering, fertilizing, and pest control, which can be labor-intensive and costly

## Weather Dependency

Natural grass fields are heavily influenced by weather conditions, leading to field closures due to rain or extreme weather

## Playability Issues

Overuse or poor weather conditions result in uneven and damaged playing surfaces, affecting the quality of gameplay and increasing the risk of injuries

# RESEARCH FINDINGS

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*There is no comprehensive research within the grass and turf industry that definitively establishes a link between artificial turf and increased injury rates or toxin exposure.*

## ANECDOTALLY

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*None of the SC school district personnel we contacted regret having turf fields. They report no increase in athlete injury rates and highlight the added benefit of extended use for games and practices, even during inclement weather.*

## HEALTH CONCERNS

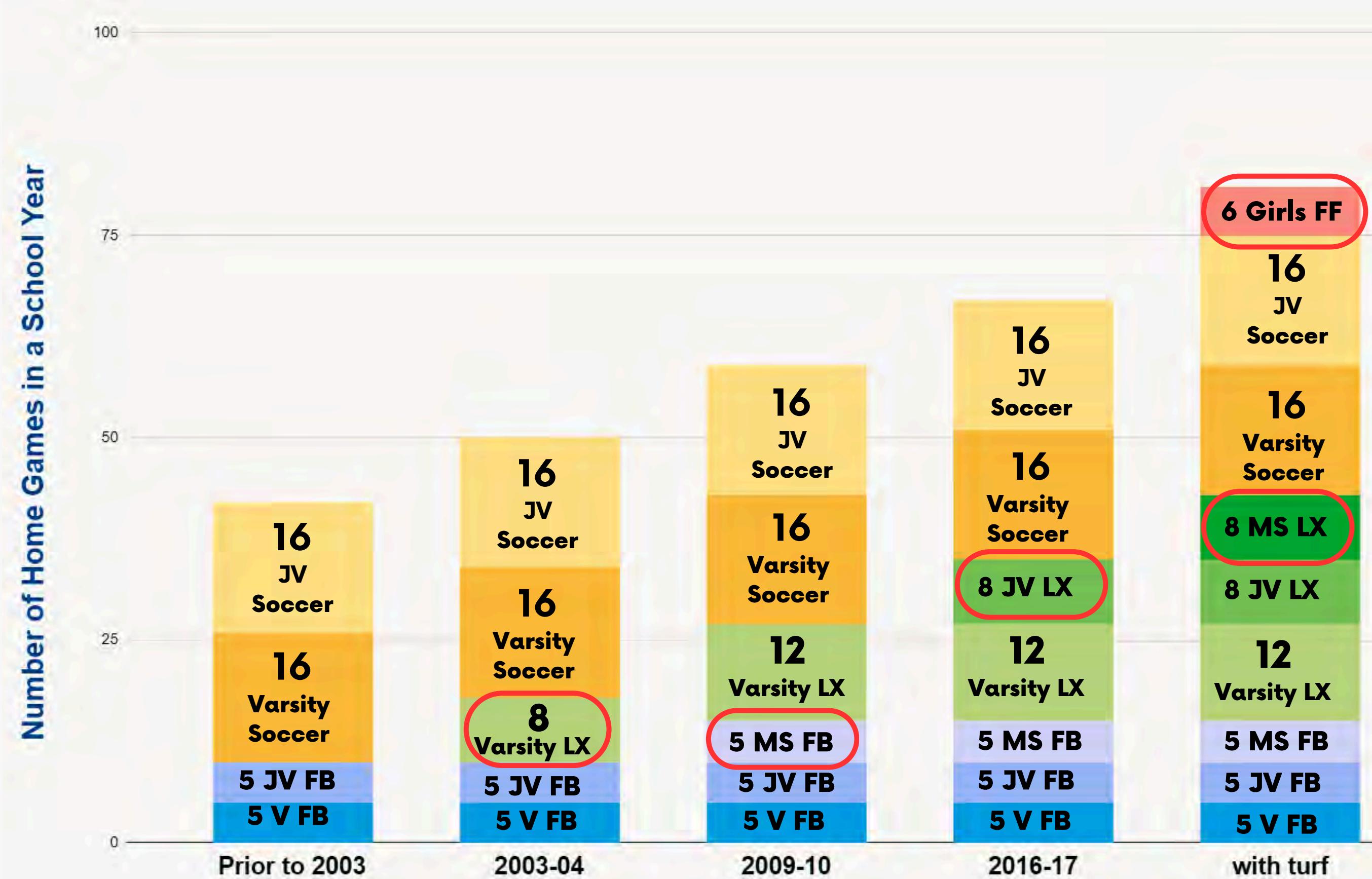
- ▶ **Limited Health Risks:** Current research generally indicates low levels of hazardous substances in drainage and air from artificial turf fields.
- ▶ **Tire Crumb Concerns:** The use of recycled tire crumb rubber as infill has been a concern for many years due to potential health risks.
- ▶ **Hofstra University Study:** A study by Hofstra University concluded that there is not a significant health risk to football players from exposure to rubber crumb infill through swallowing, inhalation, and skin contact.
- ▶ **Alternative Infill:** Ongoing research and development are focused on creating non-toxic and organic alternatives to tire crumb rubber infill.  
**\*GCS is proposing a wood infill that is non-toxic**

## INJURY PREVALENCE

- ▶ **Mixed Expert Opinions:** Views on vary depending on factors like gender, level of play, and the increasing prevalence of year-round sports.
- ▶ **Significant Advancements:** Modern artificial turf exhibits notable improvements in comfort and safety. Innovations such as enhanced infill and shock pad technology have contributed to a decrease in injury rates.
- ▶ **Concussion Severity:** Studies suggest that concussion symptoms may be less severe on artificial turf. Turf fields undergo regular safety testing, including G-Max and HIC criteria.
- ▶ **Heat Retention:** Turf can retain heat, potentially increasing the risk of heat-related illnesses. This concern can be mitigated through appropriate selection of infill materials and effective irrigation systems.

# ADDRESSING STUDENT INTERESTS

- Varsity Football
- JV Football
- MS Football
- Varsity B & G Lacrosse
- JV B & G Lacrosse
- **MS B & G Lacrosse**
- Varsity B & G Soccer
- JV B & G Soccer
- **Girls Flag Football**



# COST OF OWNERSHIP

While there is minimal maintenance cost of turf after installation and equipment purchase, turf and infill replacement and shock-pad replacements will be included in the 2025 Capital Improvement Program (CIP)

## GRASS FIELDS

### Current Annual Cost

Fuel cost	
Soil maintenance	
Irrigation and maintenance	
Spot re-sodding	
Perennial ryegrass	

**\$167,196\***

*\*Field additions at Fountain Inn K-8, Hillcrest MS, New Bryson MS, and Riverside HS will absorb any cost savings in moving to artificial turf*

## TURF FIELDS

### Annual Investment

Turf and infill replacement (10 yrs)	
Minimal turf maintenance (yearly)	
Minimal Fuel cost (yearly)	
Grooming equipment (10 yrs)	
Shock-pad replacement (30 yrs)	
HIC/GMAX Testing (3 years)	

**\$1,095,395**

# Modifications to Current Grass Fields

<b>Eastside High</b>	<b>\$580,236</b>
<b>Hillcrest High</b>	<b>\$627,583</b>
<b>JL Mann High</b>	<b>\$646,173</b>
<b>Riverside High</b>	<b>\$294,575</b>
<b>Wade Hampton High</b>	<b>\$1,945,912</b>
Requires complete bleacher modifications on visitors side	
<b>Misc. Modifications</b>	<b>\$801,848</b>
Blue Ridge High, Ft. Inn High, Greer High, Southside High	
	<b><u>\$4,896,327</u></b>



# Artificial Installation

School	Install Date	Install Cost
Wade Hampton	Winter 25-26	\$1,459,865
Greenville	Winter 25-26	\$1,387,733
Riverside	Summer 26	\$1,777,841
Woodmont	Summer 26	\$1,744,503
Eastside	Summer 26	\$1,678,224
Fountain Inn	Summer 26	\$1,626,797
Hillcrest	Summer 26	\$1,554,004
JL Mann	Winter 26-27	\$1,437,962
Mauldin	Winter 26-27	\$1,341,674
Berea	Summer 27	\$1,850,425
Travelers Rest	Summer 27	\$1,814,283
Southside	Summer 27	\$1,756,188
Blue Ridge	Summer 27	\$1,676,178
Carolina	Winter 27-28	\$1,437,593
Greer	Winter 27-28	\$1,516,741

**\$24,060,010**

# SUMMARY

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## Meeting Athletic Program Demands

Artificial turf can stand up to the current and future requirements for competitive play providing high-quality competition fields throughout the year

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## Remaining Competitive

There's a growing trend towards artificial turf installations on school competition fields statewide

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## Current Field Problems

8 of 15 stadium fields require modifications in order to meet lacrosse and soccer play dimensions (180 ft. wide field)

**Cost to Correct - \$4,896,327**

**Annual Maintenance Cost - \$167,196**

# RECOMMENDATION

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To approve the transfer of **\$24,060,010** of Unassigned General Fund-Fund Balance to Building Fund to offset the cost for the conversion of grass stadium fields to artificial turf

**Cost to Convert to Artificial Turf - \$24,060,010**

**Annual Maintenance Cost - \$1,095,395**

# QUESTIONS

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