

# Synthetic Turf Task Force Overview, Findings, and Recommendations

July 2013

## CONTENTS

---

Task Force Creation and Purpose	3
Task Force Actions and Process	3
Synthetic Turf Development and Financing History	4
Development—Analysis and Findings	9
Task Force Analysis—Background Questions and Answers	10
Synthetic Turf Field Development Recommendations	21
Synthetic Turf Field Development Funding Options	24
Replacement of Synthetic Turf Fields	26
Maintenance of Synthetic Turf Fields	28
Appendix I – Task Force Members	31
Appendix II – Board Actions/Resolutions	32
Appendix III – FCPS High School Free Reduced Lunch Percentages	37
Appendix IV—Synthetic Turf Fact Sheet	38
Appendix V—FCPA Synthetic Turf Operation/Maintenance Cost	42
Appendix VI—Synthetic Turf Financing Chart	43
Appendix VII—Natural Grass v. Synthetic Turf on FCPS Sites	44

*Cover Photo: Oak Marr Park Synthetic Turf Field and Robinson Secondary School Stadium Field*

### Task Force Creation and Purpose

---

At the request of the Fairfax County School Board (School Board), in partnership with the Fairfax County Board of Supervisors (BOS) and the Fairfax County Park Authority Board (Park Board)<sup>1</sup>, a joint Synthetic Turf Task Force was formed to develop recommendations on:

- The development of new synthetic turf fields, to include location recommendations for rectangular and diamond fields
- The funding of new synthetic turf fields, to include private and corporate partnership opportunities
- The planned replacement of existing and any new synthetic turf fields
- The regular on-going maintenance of existing synthetic turf fields

The task force was comprised of community leaders and county staff who had a direct connection to the current and future synthetic turf field efforts. (*Members are listed in Appendix I.*) The task force was charged with:

- Proposing recommendations that focus on ensuring fair and equitable access for all geographic areas of the county
- Providing a formal report on its findings and recommendations to the Fairfax County School Board, the Fairfax County Park Authority Board and Fairfax County Board of Supervisors for their collective review and action

### Task Force Actions and Process

---

The Department of Neighborhood and Community Services (NCS) was designated as the lead agency for this effort. Staff members from the Park Authority and the Public Schools were appointed by their respective appointing authorities. School Board, BOS members, Park Authority Board members, and Athletic Council members were participated on the task force. Staff from the Department of Administration for Human Services was designated to provide project management support.

The task force met bi-weekly from August 2012 through June 2013. The task force conducted a review of existing fields, analyzed the financial support associated with the existing synthetic turf fields, and compiled an inventory. Policies and procedures from the participating organizations were reviewed. Data regarding funding sources, partnership agreements, project costs and other relevant information were gathered and reviewed. Supplemental research on other jurisdictions and relevant industry information was analyzed and discussed for its relevance to the Fairfax County community. The findings and recommendations included in this report reflect the combined efforts and consensus of all task force participants.

---

<sup>1</sup> Reference: Fairfax County School Board resolution, December 15, 2011; Letter from School Board Chair to Board of Supervisors Chairman Sharon Bulova, February 2012; and April 10, 2012 Board of Supervisors action. (*see Appendix II*)

### Synthetic Turf Development and Financing History

Over the last decade, as youth and adults sports participation steadily increased, the inventory of athletic fields was recognized as insufficient to meet the increasing demand. A Needs Assessment commissioned by the Fairfax County Park Authority (Park Authority) in 2004 ([http://www.fairfaxcounty.gov/parks/needs2004/pdf/needsassessment\\_final.pdf](http://www.fairfaxcounty.gov/parks/needs2004/pdf/needsassessment_final.pdf)) identified a rectangular field shortage of 95 fields needed to accommodate requirements for adult and youth rectangular field users.

Both the cost of new field development and availability of locations were identified as challenges. In 2003, the Fairfax County Athletic Council (Athletic Council) advocated for the resurfacing of existing fields to a synthetic turf surface to increase the playability of fields. During this same period, the Park Authority analyzed possible benefits of synthetic turf fields on park lands; a study conducted by county staff reported that conversion of an existing lighted natural grass field to synthetic turf would increase capacity by an additional 62 percent of playable time, as a synthetic turf surface can be utilized year round and in inclement weather, both during and immediately following rain or other weather events.

In the succeeding decade, the Park Authority and Fairfax County Public Schools (FCPS), in cooperation with a variety of community partners, embarked on an ambitious effort to build additional synthetic turf fields by leveraging various funding partnership models. These included public-private partnerships that utilized private donations, public bond financing and development proffer funds to pay for synthetic turf field development. Public land was identified on both FCPS- and Park Authority-owned properties. The majority of private cash donations were provided through community sports organizations and school booster clubs.

In 2003, the Park Authority oversaw the construction of the first synthetic turf field playing surface in Fairfax County: Lewinsville Park in McLean. This was followed the next year by the construction of a synthetic turf field at EC Lawrence Park in Centreville. Construction of additional synthetic turf fields continued over the next five years at park and school sites. Portions of the community funding came through a combination of sources, including user fees, fundraising and donations.

**\* A summary of all synthetic turf locations, funding sources, and costs can be found in Appendix VI.**

### New Resources Increased Capacity

In 2005, additional funding was required to complete planned development of synthetic turf fields. In recognition of the overall community benefit for the resulting increased capacity, the Athletic Council advocated for, and the County Board of Supervisors adopted, the creation of a Turf Field Development Fund. This program utilized a portion of revenues from the Athletic Services Application Fee (commonly referred to as the "\$5.50" fee) to offer annual mini-grants to spur development partnerships with community sports organizations. Of the current synthetic turf field inventory, 19 (28 percent) were partially funded by the Athletic Services Application Fee. The creation of the new Turf Field Development Fund and the concurrent financial support from the community helped to sustain the momentum of the synthetic turf field development effort until passage of the 2006 Park Bond referendum. That referendum specifically targeted synthetic turf field development and provided full funding for an additional 12 fields.

### Implementation of the Two-Field Model at FCPS High School Sites

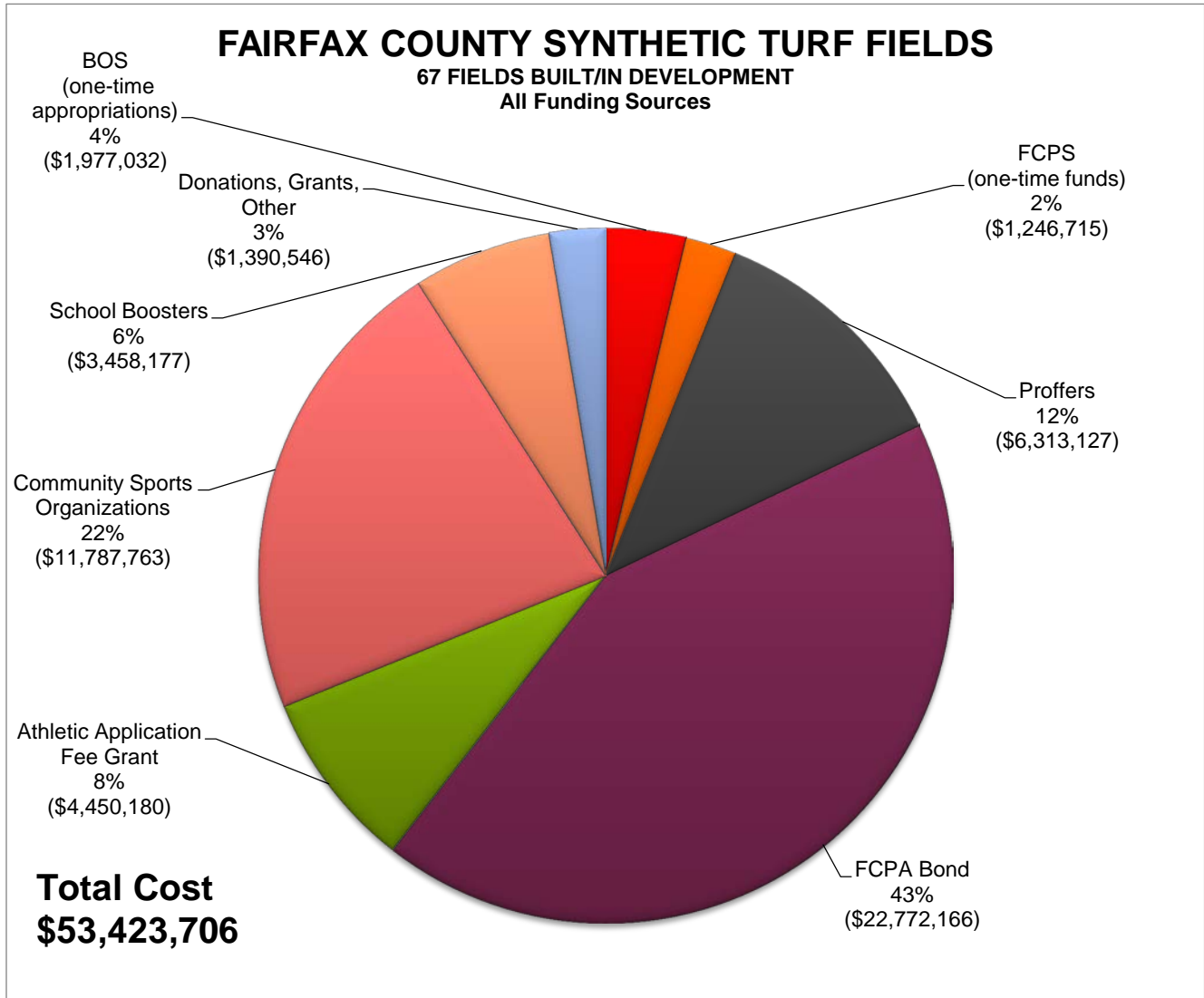
In 2009, Marshall High School became the first FCPS site that created a “two-field model.” The development was funded through proffer funds and contributions from community sports organizations. This became the new design model for synthetic turf field development at high schools, which included installation of synthetic turf surfaces on both the main stadium field and on a lighted auxiliary field on the school campus. The physical configuration of the two-field model increased the availability for field use by school athletic and physical education programs, as well as the surrounding community.

In 2010, Herndon High School became the first high school to successfully apply for mini-grant funds through the grant program administered by NCS, resulting in the county’s second two-field model. Nine of the county’s high schools have two-field models in place.

### Partnership Efforts Accelerated Synthetic Field Turf Development

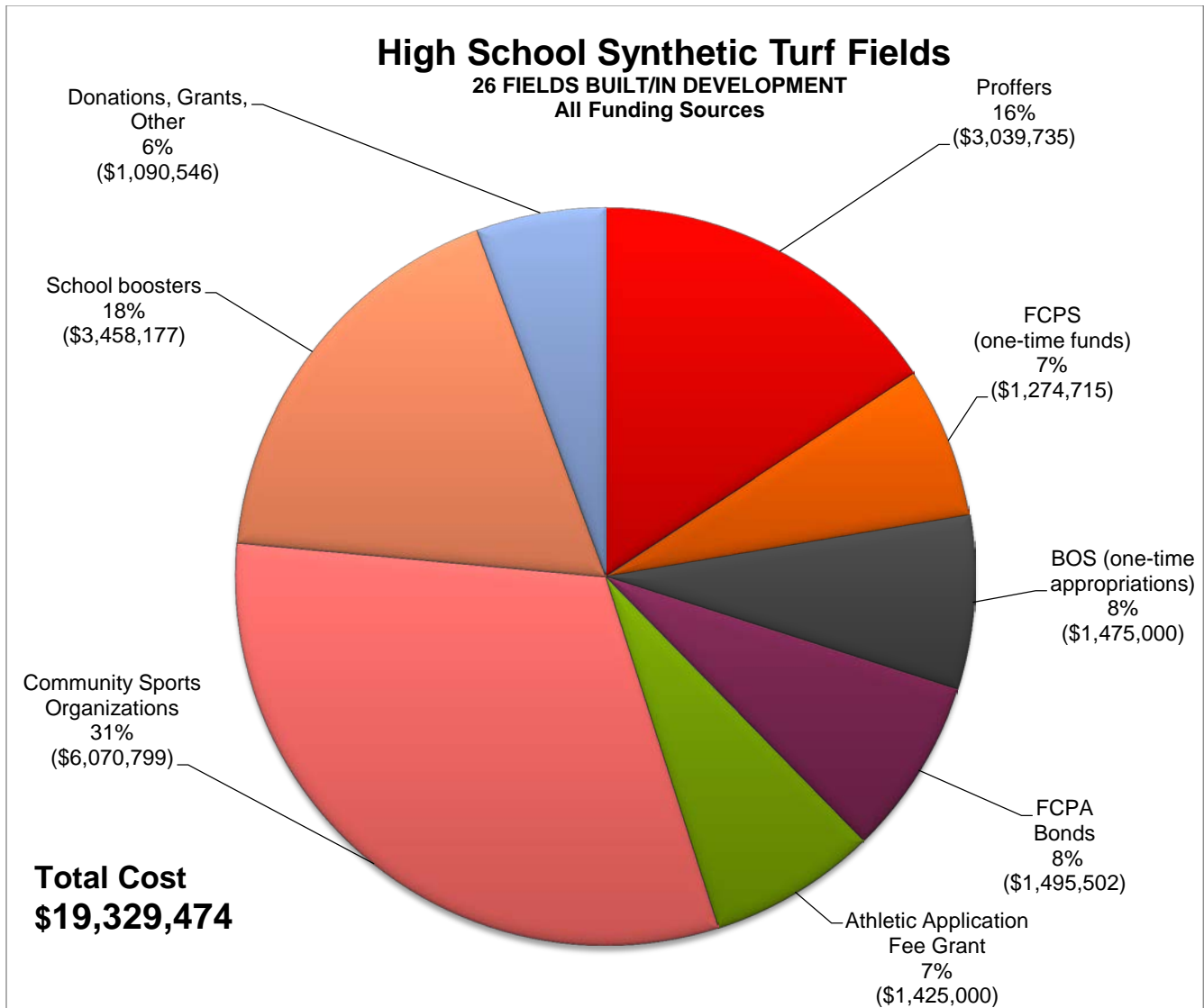
The current synthetic turf field inventory would not have been developed without the significant contributions in both leadership of and investment by members of community sports organizations, school booster clubs and community leaders. Identification of public land created opportunities to increase capacity for sports participation, for both community level and public schools programs. Development of synthetic turf fields on school properties for both community and school use, along with shared arrangements on county-owned park lands, has increased overall capacity.

As of spring 2013, Fairfax County has 67 synthetic turf fields of which 47 are currently in use and 20 are pending construction. County rectangular fields continue to be used by more than 130,000 sports participants (*duplicated count*) in athletic events and programs for cricket, field hockey, football, lacrosse, rugby and soccer. When the latest development phase is complete, Fairfax County will have the largest inventory of synthetic turf fields of all jurisdictions in the Washington, D.C., metropolitan area.



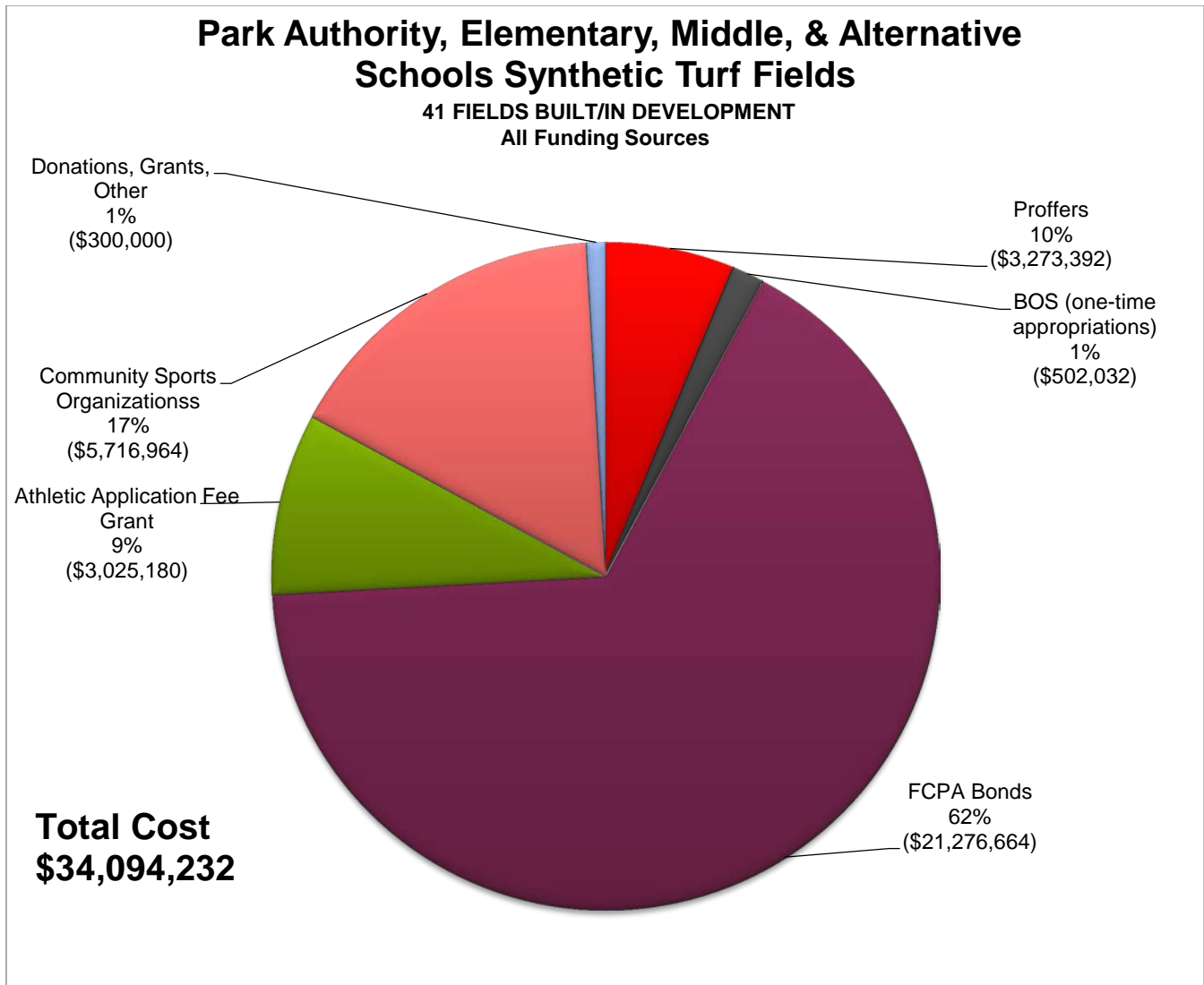
*Significant funding from the community was leveraged to create the 67 synthetic turf fields built and in development.*

**\* A summary of all synthetic turf locations, funding sources, and costs can be found in Appendix VI.**



*Community sports organizations and school booster clubs funded almost half of the cost for high school synthetic turf fields.*

\* A summary of all synthetic turf locations, funding sources, and costs can be found in Appendix VI.



*Park Authority Bond Funds funded the majority of the cost for park and other school synthetic turf field sites.*

\* A summary of all synthetic turf locations, funding sources, and costs can be found in Appendix VI.

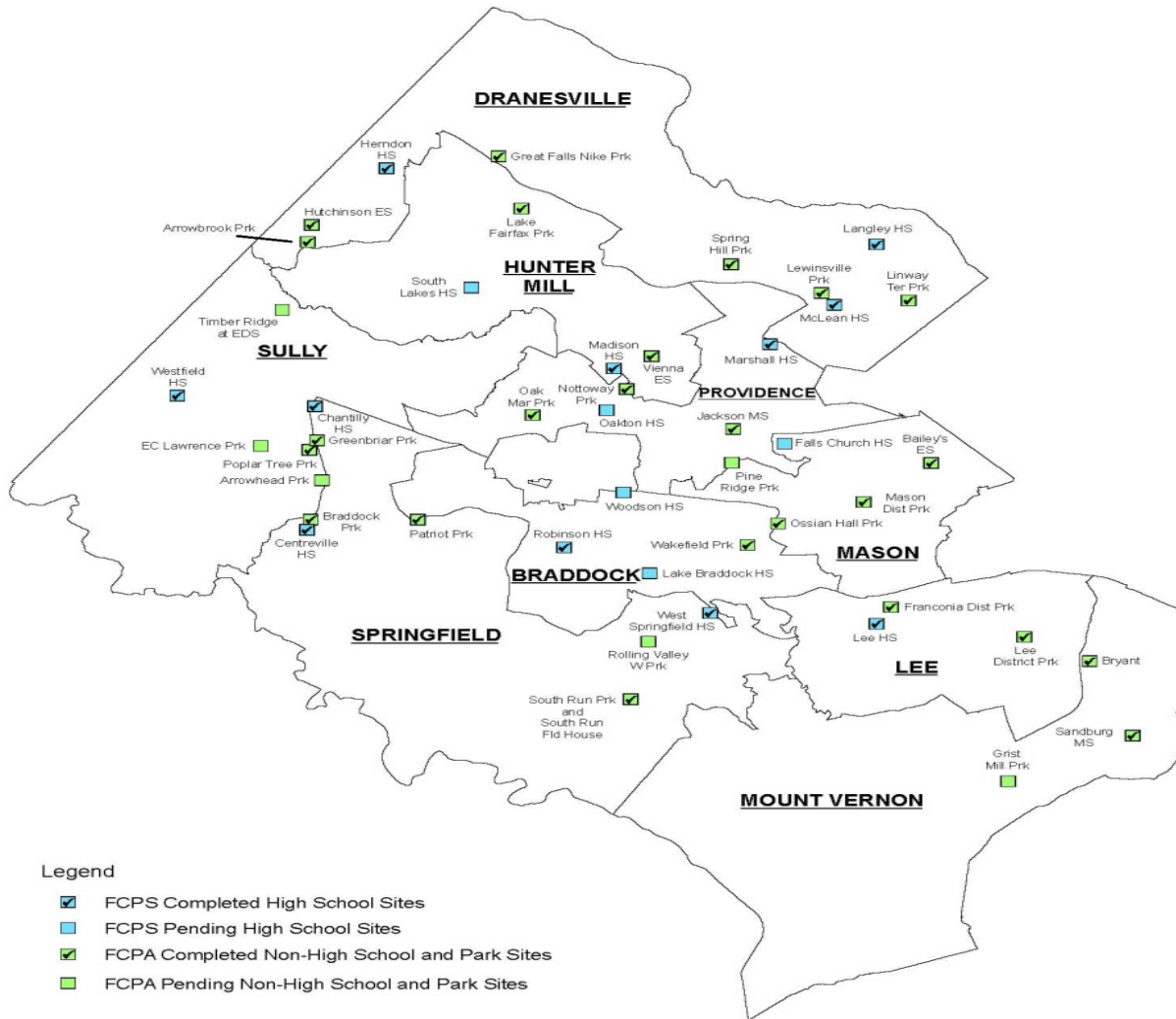


## Development – Analysis and Findings

### Where are the fields located?

Park and School synthetic turf fields are scattered throughout Fairfax County. The task force analyzed location by supervisory district. The following map identifies exact locations of the county’s inventory of 67 synthetic turf fields built and in development:

Fairfax County Public Schools and Fairfax County Park Authority Turf Fields Completed and Pending



---

## Task Force Analysis – Background Questions and Responses

---

The following section provides information resulting from the analysis of the current environment on the history of the synthetic turf movement within the County and a summary of Task force findings.

### Why build synthetic turf fields?

**FINDING 1: Converting natural grass fields to synthetic turf fields provides a solution to the increased countywide demand for use of outdoor fields.** As the Park Authority Needs Assessment pointed out in 2004, Fairfax County had a significant rectangular field shortage of 95 fields needed to accommodate requirements for adult and youth rectangular field users. The conversion to synthetic surfaces allows for year-round play and in most weather conditions which significantly increases the amount of playable time and thus affords the opportunity to help address the shortage of available field space.

*2004 Park Authority Needs Assessment identified a rectangular field shortage of 95 fields. Conversion of natural grass fields to synthetic surfaces helps address that shortage.*

### What is the best field configuration? How can the county maximize community sports organizations' use and school's use for physical education instruction and high school athletic and other school program use?

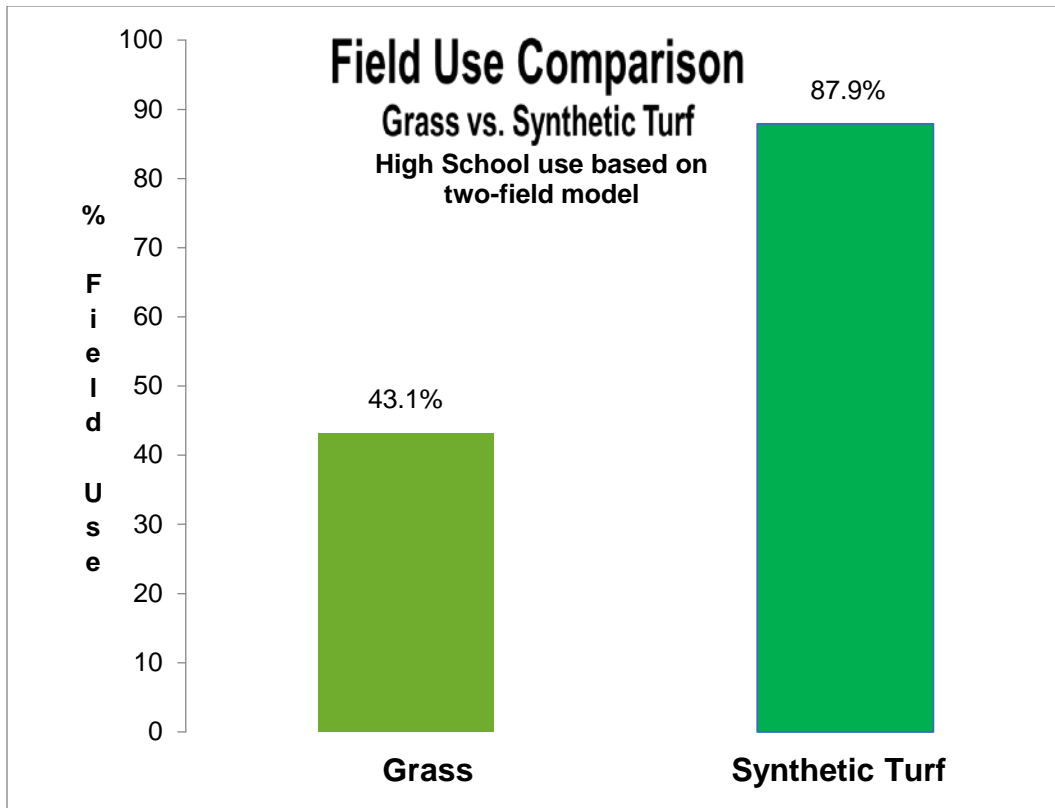
**FINDING 2: The optimal use of resources in the creation of synthetic turf fields on all sites (parks and schools) is a minimum two-field rectangular, or more, model.** Including a diamond field (where physically possible), the following financial benefits exist for establishing a standard minimum two-field rectangular model at all sites:

- Land purchases are costly, and limited opportunities exist for stand-alone development throughout the county
- There is some flexibility with land at middle and elementary schools to leverage existing resources to maximize use
- Cost savings can be achieved through economy of scale of field construction and operations

- Opportunities exist for two-field models on park-owned properties at sites throughout the county, thereby increasing accessibility to more users

**FINDING 3: In a two-field rectangular synthetic turf model at high schools, overall usage capacity is significantly increased, with both FCPS programs and community use equally benefitting.** This provides community access to FCPS athletic fields that were previously not scheduled to the public through the field allocation process/system. A two-field model has the following benefits:

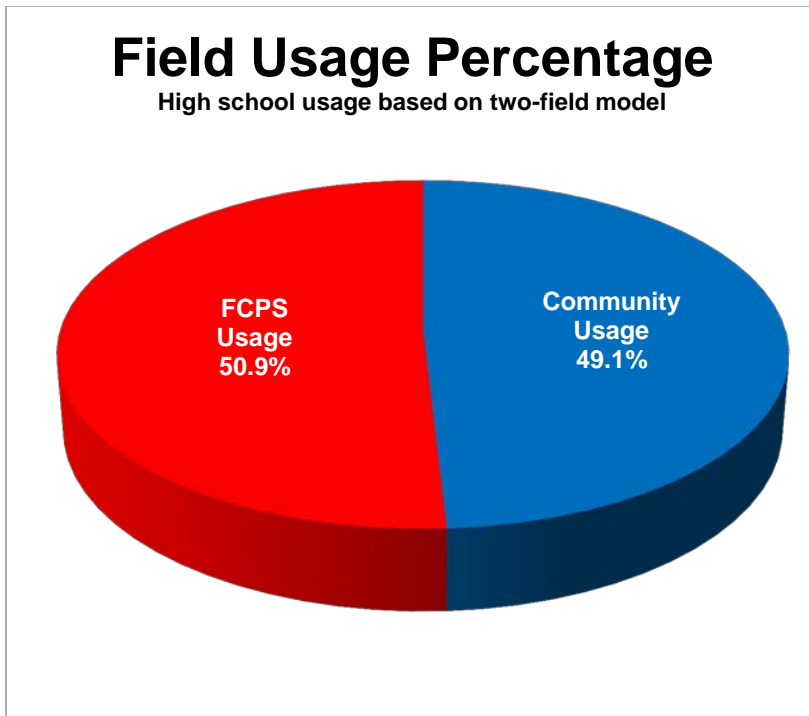
- Allows for increased use during the school day for physical education classes
- Avoids transportation issues for after-school practices to nearby middle and elementary schools and parks
- Increases field use time for community sports organizations during peak community use hours
- Best utilizes land available at school sites for community use
- Benefits the community sports organizations by the existence of a second, non-stadium field on school campus sites. The stadium field is heavily used by the FCPS sports teams and as such has a much more limited use for the community.
- Adds new fields to the public access inventory which were previously not available for scheduling
- Affords greater opportunity for community programs to use school fields
- Affords FCPS high school teams earlier practice times, makes more time available for community use of high school synthetic turf fields, and allows FCPS year-round use of FCPS synthetic turf fields from 3 – 5 p.m. on weekdays for practice



\* A summary of grass versus synthetic turf usage can be found in Appendix VII.

*Available field-use time is doubled, benefiting both school and community users.*

*Capacity is significantly increased at school sites using a two-field model and lighted fields.*



- Who benefits in a two-field model:
- Public Schools instructional programs
  - Physical education
  - Interscholastic athletics
  - Intramural and after school programs
  - Community sports organizations

\* A detailed breakdown on usage analysis can be found in Appendix VII.

#### Are synthetic turf fields safe?

**FINDING 4: Synthetic turf fields have been installed and used throughout the region, the nation and internationally.** The health and safety aspects of synthetic turf have been reviewed and addressed by many national and state organizations, including the U.S. Environmental Protection Agency, the Centers for Disease Control and Prevention, and numerous state agencies in California, Connecticut, New Jersey, and New York. They generally conclude that these fields do not pose a serious public health concern. A fact sheet was prepared and publicly published in consultation with the Fairfax County Health Department, Fairfax County Risk Management Division, Fairfax County Public Schools and Fairfax County Park Authority to provide information on research conducted by numerous state and national organizations who have studied these issues. (See Appendix IV.)

**What is the average cost to build a synthetic turf field?**

**FINDING 5: Synthetic turf field and natural grass field development requirements are site specific.** Development costs for full and oversized rectangular turf fields have ranged from approximately \$600,000 to \$900,000. Cost variances are attributed to the varying sizes of the fields, specific site design requirements, and incorporation of project-related amenities required for each project. Examples of site specific design features include those that address environmental factors, geotechnical findings, engineering layout, onsite/offsite storm water drainage/best management practice requirements, earthwork balancing, and related infrastructure improvements. Project-specific ADA accommodations and amenities may include creation of accessible trails, parking spaces, bleacher/players bench accessible pads, purchase and assembly of bleachers/benches, side-field goals for youth soccer, protection fencing, and community-requested landscape buffer enhancements. Any combination of these site-specific design features may contribute to the variances between the overall total costs of individual projects.

**Are the Park Authority and FCPS methodologies for project development similar? Are there any efficiencies or cost savings that can be applied to future development?**

**FINDING 6: Project Definition:** FCPS and Park Authority total project costs commonly include professional design service fees, permitting fees, and construction development costs. There are, however, significant variances in project related amenities incorporated into FCPS and Park Authority development projects. Additionally, Park Authority total project development costs include a standard staff salary recovery expense, calculated at 8 percent of the design and construction development cost for capital improvement projects. FCPS previously did not charge staff salaries to project development costs, but will implement a \$35,000 per-site fee for field development administrative costs in the summer of 2013.

**FINDING 7: Competitive Pricing:** Both the Park Authority and FCPS use the Fairfax County and Virginia State Procurement Regulations/guidelines, which include provisions for the use of National Cooperative State, Local and Municipal Contracts offering nationwide competitive pricing and competitive sealed bidding processes for the procurement of construction services.

**FINDING 8: Contracting Efficiencies and Purchasing Practices:** The Park Authority and FCPS have in the past identified opportunities for joint cooperative contract arrangements when in the best interest of the county. In 2008, staff partnered on joint contracting through U.S. Communities, a nationwide cooperative procurement program. Standards for the industry, price comparisons and other information sharing is routine and will continue on future synthetic turf field development efforts to maximize purchasing power and oversight of synthetic turf field development.

**What is the capital investment for a synthetic turf field? Can bond funds be used?**

**FINDING 9: Synthetic turf field installations are permanent infrastructure investments.**

The capitalized investment for a synthetic turf field could be considered as permanent infrastructure, with components requiring replacement on an 8- to 10-year life cycle, assuming conformance to regular maintenance consistent with manufacturing product warranties. Similar to other capital construction investments, fields must be scheduled for routine, ongoing maintenance, and complete component replacement, each effort designed to prolong its use life cycle. Renovations will typically include carpet and fill materials replacement.

Park Authority bond funds have been utilized to finance development projects at 29 sites. To date, FCPS school bond funds have not been used for the development of synthetic turf fields.

**Are the county's synthetic turf fields in the right locations? Do some communities have fewer than needed?**

The task force analyzed the location of the 67 synthetic turf fields in existence or in development to assess whether the distribution and location allows for equal access and fair usage across the county for public schools athletic and community sports organizations. The Task force examined this information on three levels:

- **Utilization by major youth group participants**
- **Total population**
- **Location of high schools without synthetic turf fields (16 have turf; 8 do not)**

Shortages of synthetic turf fields exist in some parts of the county, in large part as a result of reliance on community funding for development of synthetic turf fields.

**FINDING 10: Based on its review of synthetic turf field location and utilization, the task force identified significant comparative shortfalls in available synthetic turf fields in the Mount Vernon and Lee Supervisory Districts. These areas of the county should be considered for the next opportunities for development of rectangular synthetic turf fields to address the shortfalls.** Shortfalls were identified through analysis of several different data sources: overall numbers of sports participants in youth leagues and high school athletic programs, total population, and placement of synthetic turf fields at high schools within each respective supervisory district. The analysis revealed community shortfalls in available synthetic turf fields, as well as comparative uneven distribution at high school sites across the county. (See detailed analysis on page 16 and comparison used to assess adequacy of field distribution across the county.)

The task force concludes that the shortfalls in these districts are not the result of a conscious or deliberate plan; the history of the development of the synthetic turf fields across the county clearly shows that fields were developed when a combination of opportunities met with:

## Synthetic Turf Task Force

- Community interest
- Site availability (with full size field and lighting infrastructure in place)
- Funding availability (through large community or private sector financial donations and/or development proffer funds)

Typically, it was only **after one or more of these opportunities were under consideration** that public financing to supplement community resources was even considered to support the development projects. The ultimate allocation of public funding also was influenced by the stated need for a particular community. Were there unmet field requests experienced as part of the county's management of countywide field scheduling and use policies? Did communities applying for grant funding to partially support synthetic turf field development provide justification for the placement of the field? In most of the synthetic turf fields developed in the county, funding sources (including those appropriated or recommended by the Park Authority, the Athletic Council and/or the Board of Supervisors) were leveraging significant investments for specific identified sites and completed the financing package to allow the projects to move forward.

CURRENT SYNTHETIC TURF FIELD INVENTORY								
	Synthetic Turf Field (STF) Inventory				2010 Census Total Population - Fairfax County		Rectangular Field Major Youth Group Sports-Community Use and High School Participants	
	FCPA & Non-HS School fields	FCPS High School Fields	Total Turf Fields	% of turf fields *	% of Total Population *	Differential from STF Inventory	% of Sports Participants *	Differential from STF Inventory
Braddock	1	6	7	10.4%	10.6%	-0.2	9.9%	0.5
Dranesville	9	4	13	19.4%	11.1%	8.3	16.3%	3.1
Hunter Mill	3	3	6	9.0%	11.4%	-2.4	11.3%	-2.3
Lee	2	1	3	4.5%	11.1%	-6.6	9.7%	-5.2
Mason	5	2	7	10.4%	10.8%	-0.4	10.6%	-0.2
Mount Vernon	3	0	3	4.5%	11.2%	-6.7	9.0%	-4.5
Providence	4	5	9	13.4%	11.2%	2.2	10.3%	3.1
Springfield	6	4	10	14.9%	11.0%	3.9	11.2%	3.7
Sully	8	1	9	13.4%	11.6%	1.8	11.6%	1.8
	41	26	67	100.0%	100.0%		100.0%	

*\*Totals may not equal 100% due to rounding*



### What were the original guidelines regarding placement of synthetic turf fields?

**FINDING 11: The Park Authority adopted criteria to identify fields that would be priority candidates for conversion to synthetic turf.** The fields to be selected would be those that most closely meet the program criteria. The approved criteria, adopted by the Park Board on July 26, 2006, are:

- Existing rectangular field\*\*
- Minimum playing surface size of 370' X 190'
- Currently lighted or master plan approval for lights exists
- Conversions that would require minimal site work and/or amenity improvements
- Permit approval by Department of Public Works and Environmental Services through a minor site plan or rough grading permit (RGP)
- Fields geographically distributed throughout the county
- Reduction of rectangular field deficiencies identified in the 2004 Park Authority Needs Assessment

\*\*Any construction of synthetic turf fields on property owned by Fairfax County Public Schools will require a long-term agreement that addresses the construction, community use, maintenance and eventual replacement of the field.

### Are other types of synthetic turf fields needed in the community for other sports?

**FINDING 12: The 2004 Park Authority Needs Assessment identified a diamond field shortage of 13 fields.** Diamond-configured synthetic turf fields are in the development stages for Fairfax Countywide use. Two current synthetic turf fields exist (Nottoway Park and Waters Field) and two future sites are identified in the Park Authority Master Plan for the Laurel Hill Sports Plex and Patriot Park. In 2005, when the Board of Supervisors directed the use of Athletic Services Application Fee revenue into specific sports-related projects (such as rectangular synthetic turf field development), the diamond field community advocated for the use of available funds to significantly enhance the maintenance program on their existing natural grass diamond fields. The Park Authority is currently conducting an updated needs assessment that will be completed in 2014, the results of which should be used to guide community engagement for future diamond synthetic turf field needs.

### How should synthetic turf fields be funded in the future?

**FINDING 13: Community sports organizations provided significant funding and leadership to create the inventory in place today.** However, the success of the synthetic turf field development program did not come without some unintended consequences. As the economy dipped into recession in 2008, increased reliance upon an already significantly leveraged program caused some disparity in development opportunities. For instance, on high school sites where synthetic turf fields were successfully completed, over half of the funding was

raised by community sports organizations and school booster clubs in those communities. Geographic areas of the county without groups able to contribute at similar levels were left (and remain) without synthetic turf fields.

An additional issue identified by the task force is the capacity for some community sports organizations that borrowed funds to finance construction of synthetic turf fields. This has allowed their community to obtain such facilities in a timeframe that would not otherwise have been possible. However, this arrangement is reported to have left some of the organizations with significant loan debt. It will be important to assure that future arrangements forecast capacity to also contribute to maintenance and/or replacement needs on the field in question and the other natural grass fields on which they play.

**FINDING 14: Community sports organizations have continued, and should continue, to play a significant role in the development of synthetic turf fields.** To date, community sports organizations have contributed approximately 30 percent (\$16 million) of all funds for development through direct financial contributions and payment of the “\$5.50” fee. These contributions both leverage and reduce the county taxpayer funding investment for school children playing sports, physical education classes and community use for athletic league play for both children and adults.

**FINDING 15: Reliance upon leveraged partnerships helped to create the inventory that exists today.** Some communities will continue to have limited access to funding sources that other neighborhoods have had available. New strategies will need to be employed to overcome these challenges to ensure access for all county residents.

**FINDING 16: Each school site has unique site capacity, a variety of community sports organizations and funding opportunities.** Many contributing factors require individualized field development plans; for example, some sites are limited in size and could only be developed with a one-field model. A completely uniform development approach is not advantageous if community sports organizations’ opportunities can be leveraged to reduce taxpayer costs.

### **Are development proffer funds available to support synthetic turf field development?**

**FINDING 17: Development proffer funds have been used in specific past efforts, contributing approximately 12 percent of the total cost of all synthetic turf field development to date. However, proffer funds cannot be relied upon as an assumed “standard” source of funding for development or replacement of synthetic turf fields.** Availability of proffers is dependent on land use patterns. Proffers will be variable and should not be factored into a standard formula for development of synthetic turf fields as they may or may not be available for a particular development effort. Development proffer funds were made available to support 7 of 16 high schools for synthetic turf field development (Madison, Marshall, Lee, Westfield, McLean, Oakton and Woodson High Schools). Funds totaled \$3.04 million for

11 synthetic turf fields, and represented approximately 16 percent of total high school sites development costs of \$19.3 million; however, 9 high schools were built through other funds sources. Timing of synthetic turf field construction, location and development activity in the community were all factors in determining applicability and appropriateness for use.

### **What is the justification for use of school general fund or bond financing for synthetic turf fields on school property?**

**FINDING 18: Synthetic turf fields are not included in the existing FCPS school construction education specifications, thereby excluding the development of synthetic turf fields in new school construction or renovation projects.** To date, no FCPS bond funds have been used to pay for installation of synthetic turf fields, as the fields were not included in the school education specifications. However, should the School Board choose to do so, bond funding, including new or undesignated funds, as well as use of general FCPS operating funds, appear to be viable funding sources.

### **How have other jurisdictions financed synthetic turf fields?**

**FINDING 19:** The task force reviewed various development and maintenance strategies of localities throughout the nation. A select listing of these jurisdictions is shown on the next page. In reviewing the data, it is clear that Fairfax County residents have created one of the largest synthetic turf field inventories and are at the forefront of communities addressing the sharing of public resources, long-term capacity and need, maintenance, and financing strategies for synthetic turf fields.

<b>Other Locality Practices for Development, Maintenance and Replacement of Synthetic Turf Fields</b>				
<b>Jurisdiction</b>	<b># of Fields</b>	<b>Development</b>	<b>Maintenance</b>	<b>Replacement</b>
<b>Fairfax County, VA</b>	67 (41 parks and non-HS, 26 HS)	Bond financing BOS FCPS one-time funds Donations, grants, other Athletic application fee grant Proffers School boosters Community sports organizations	FCPA: General maintenance fund  FCPS: Local school responsibility	Athletic booster clubs (15k/year), community field use agreements, turf field replacement fund (\$150k/year), FCPA Tournaments for Turf, County general fund appropriations (\$350k/year)
<b>Montgomery County, MD</b>	4 (2 schools, 2 parks)	Inclusion on high school renovation capital improvement plans New Construction: booster club, private donations Parks: tax, grant reimbursement, program open space grant	G-max testing done by manufacturers  Annual cleaning of infill	Revenue replacement fund – user fee based
<b>Loudoun County, VA</b>	5 schools	School bond funds  Private funding from athletic groups	Contracted project management and construction	Private funds through user fees
<b>Arlington County, VA</b>	10 (3 schools, 7 parks)	Included in capital expenditure budget	Weekly inspection. G-max tested by contract. General Operating Budget	General Obligation bonds, pay-as-you-go, rental fees, possible partnerships
<b>Prince William County, VA</b>	9 parks	Public-private partnerships – government and sports leagues	Maintained by Parks as part of regular operating. Weekly clearing, monthly sweeping and grooming. Done by public/private partnerships	Under discussion. One field is licensed directly to a league; they carry responsibility to replace. Use fees and fund raising under consideration.
<b>Aberdeen, MD</b>	6 schools	Capital Improvement program, appropriated funds	Weekly inspection and grooming as needed. General Operating Budget	Under discussion; Money from grass maintenance re-directed to turf replacement.
<b>Miami-Dade County, FL</b>	9 parks	Public funds included in Capital Improvement Plan	Privately maintained, G-max tested twice per year. General Operating Budget	Under discussion
<b>Asheville, NC</b>	5 parks	Capital funds and partnerships	Soccer association purchased equipment; Park staff maintains and does work	Under discussion

### Synthetic Turf Field Development Recommendations

---

Two charges were given to the task force regarding the development of new synthetic turf fields: recommendations for the location of rectangular and diamond fields; and funding recommendations for development of new synthetic turf fields. In response, the Task force recommends the following actions:

**Recommendation 1: Synthetic turf fields and lights within school sites should be standard components in new school construction and future capital improvement renovation schedules. At high school sites, the two-field model should be standard for rectangular sports use.**

**Recommendation 2: The diamond sports community should be engaged to determine interest in expanding the conversion of natural grass softball and baseball fields to synthetic surfaces. The completion of the next Park Authority Needs Assessment should be used to guide that discussion to include gauging the desire of the diamond sports community to redirect a portion of the Athletic Services Application Fee (currently used for maintenance) to this effort and/or increase the fees for diamond sports participation.**

**Recommendation 3: Future synthetic turf field development should be guided by recommendations in this report for oversight, locations, development schedule and share of public funding allocations.**

**Recommendation 4: Install the two-field model at all high schools that currently do not have synthetic turf fields. Complete the 8 school sites to include 15 total synthetic turf fields within a three-year cycle—by 2016. BOS and School Board review options and adopt a variety of funding strategies to fund the development of turf fields for these 8 sites.**

Convert rectangular stadium and auxiliary natural grass fields to synthetic turf at each of the following eight high schools:

- Annandale High School
- Edison High School
- Hayfield Secondary School
- Mount Vernon High School
- South County High School
- JEB Stuart High School (1 rectangular field per space constraints)
- Thomas Jefferson High School for Science and Technology
- West Potomac High School

Rationale:

1. Conversion of these eight school sites will provide 15 rectangular fields for both community and school athletic use. The purpose of this strategy is to resolve the equity issues that now exist in schools that do not have synthetic turf fields or will not receive synthetic turf fields in 2013.
2. This strategy will further address overall community use shortages in several identified areas of the county. Building these synthetic turf fields will increase the playability of fields located in the supervisory districts where demand exceeds availability. These fields will address the significant shortages identified in the Mount Vernon and Lee Districts.
3. Targeting the high schools:
  - is a prudent utilization of existing space and amenities (parking, lighting, bleachers and other infrastructure)
  - benefits the greatest number of county residents participating in public schools and community programs

<b>Addition of 15 fields at High School Sites – Improvement by Supervisory District</b>				
	<b>FCPA &amp; Non-HS School Synthetic Turf Fields</b>	<b>FCPS High School Synthetic Turf Fields</b>	<b>Total Synthetic Turf Fields</b>	<b>Proposed New Synthetic Turf Fields</b>
Braddock	1	6	7	No change
Dranesville	9	4	13	No change
Hunter Mill	3	3	6	No change
Lee	2	5	7	+4
Mason	5	7	12	+5
Mount Vernon	3	6	9	+6
Providence	4	5	9	No change
Springfield	6	4	10	No change
Sully	8	1	9	No change
	<b>41</b>	<b>41</b>	<b>82</b>	<b>15</b>

Adding synthetic turf fields at the 8 recommended high school sites addresses the significant comparable shortages the task force identified in the southeast part of Fairfax County.

**Recommendation 5: Continue to support community partnership opportunities directed at future synthetic turf field development, maintenance, and replacement.**

**Recommendation 6: Modify construction standards to incorporate new storm water management requirements and develop consistent guidelines for promotion of the county's adoption of the use of green construction.**

**Recommendation 7: Establish an oversight committee to oversee and periodically meet to monitor joint collaborative efforts for synthetic turf field development. Members should establish procedures consistent with the findings and recommendations in this report as a guide for their analysis. Members of the committee should include representatives from the following organizations:**

- **Park Authority**
- **Fairfax County School Board**
- **Fairfax County Board of Supervisors**
- **Fairfax County Athletic Council**
- **Staff representation from the County (FCPA and NCS) and FCPS**

**Synthetic Turf Field Development Funding Options**

The task force reviewed several additional options for financing the development costs. Based on an estimated average of \$800,000 for synthetic turf field development, adding 15 synthetic turf fields to the existing inventory will cost approximately \$12.0 million. **Options to finance the development include the following:**

Funding Source Options	Funds Generated over a 3 year period
<p><b>Mini-Grants</b> - Redirect Community Services Turf Field Mini-grant Program funds for targeted development of the 8 high school sites (suspending the mini-grant program)</p>	<p>\$1,050,000</p>
<p><b>Ability to Pay Expectation</b> – Require community contribution for all eight schools from athletic booster clubs and community sports groups for field development.</p> <p>Tier 1: Require 25 percent contribution for 2 of 8 schools. (Calculation based on average field cost of \$800,000). Schools recommended for tier 1 participation: Thomas Jefferson and South County.</p> <p>Tier 2: Require 12.5 percent for Hayfield High School.</p> <p>Tier 3: Require 6.25 percent contribution (\$100,000 – or \$50,000 per field). Schools recommended for tier 3 participation: Annandale, Edison, Mount Vernon, West Potomac, JEB Stuart.</p> <p><b>(See Table 1, p. 25 for further detail)</b></p>	<p>Tier 1: \$800,000</p> <p>Tier 2: \$200,000</p> <p>Tier 3: \$450,000</p>
<p><b>Increase the Athletic Fee</b> from \$5.50 per rectangular sports participants (lacrosse, soccer, football, cricket, rugby, field hockey), per season to \$8. Increases would be dedicated to development costs for the 15 new synthetic turf fields for the three-year development period.</p>	<p>\$750,000</p>
<p><b>Subtotal: (community support)</b></p>	<p><b>\$3,250,000</b></p>
<p><b>BOS:</b> Direct all available and appropriate development proffer funding.</p>	<p>TBD</p>
<p><b>FCPS:</b> Direct FCPS bond funds.</p>	<p>TBD</p>
<p><b>BOS:</b> Development of a line item appropriation to create annual allocation or direct one-time appropriation of carryover funds in the county budget.</p>	<p>TBD</p>
<p><b>FCPS:</b> Development of a line item appropriation to create annual allocation or direct one-time appropriation of carryover funds in the FCPS budget.</p>	<p>TBD</p>
<p><b>Balance for consideration by FCPS School Board and the BOS:</b></p>	<p><b>\$8,750,000</b></p>



**Synthetic Turf Field Development: School Boosters/Adult-Youth Groups Contribution**

It is the expectation that school booster clubs and community sports organizations will, collectively and to their best ability to pay, contribute up to twenty-five percent (25%) toward the development costs of a two-field synthetic turf field project. The ability to pay criteria will include, but may not be limited to, a school’s percentage of students eligible for the FCPS High School Free and Reduced Lunch Program. This program serves as one indicator on the economic viability of the student body and community.

Currently the development costs of a two-field synthetic turf field project are estimated at \$1.6M. The following table depicts the ability to pay scale and its application to the development of a two-field turf model:

**Table 1. School Booster Clubs/Community Sports Organizations’ Ability to Pay on Development Costs of Two-Field Synthetic Turf Model**

Percent Free/Reduced Lunch Student Body	Ability to Pay Expectation for Athletic Booster Club and Athletic Groups	Estimated Two-Field Synthetic Turf Project Costs \$1.6M	Impact of Ability to Pay Scale on (8) Remaining Schools (% at F/R) to be Turfed
<b>33% or Greater</b>	6.25%	\$100,000	<ul style="list-style-type: none"> <li>▪ Stuart HS * (55.2%)</li> <li>▪ Mount Vernon HS (54.1%)</li> <li>▪ Annandale HS (44.7%)</li> <li>▪ West Potomac HS (38.1%)</li> <li>▪ Edison HS (34.3%)</li> </ul>
<b>21% - 32%</b>	12.50%	\$200,000	<ul style="list-style-type: none"> <li>▪ Hayfield Secondary (27.4%)</li> </ul>
<b>20% or Less</b>	25.00%	\$400,000	<ul style="list-style-type: none"> <li>▪ South County HS (15.9%)</li> <li>▪ Thomas Jefferson HS (2.2%)</li> </ul>

\*Stuart HS would be a one-field model (based on available space). As such, their contribution expectation would be \$50,000.

### Replacement of Synthetic Turf Fields

---

Each synthetic turf field development project increases our community's expertise and provides additional learning opportunities for improvement. Similarly, the first replacement efforts are underway in the summer of 2013 for the first two synthetic turf fields developed in Fairfax County, Lewinsville Park in McLean, and EC Lawrence Park in Centreville.

Most manufacturers provide an eight-year warranty for a properly maintained synthetic turf field; it has been a generally accepted practice to assume a life expectancy of the synthetic turf field at no longer than 10 years. For planning purposes, Fairfax County adopted a budget estimate of a little more than half the installation funding, a generally accepted practice for the industry.

Based on a projected ten-year replacement cycle, the current 67 field inventory replacement requirements are already a regular financial commitment. Planning considerations include analysis of individual field playability, based on the differing levels of use, the nature of the Northern Virginia climate, and the importance of required maintenance efforts.

### Current Funding for Synthetic Turf Field Replacement

**FINDING 20:** Preliminary planning for funding synthetic turf field replacement began in 2007. Total estimated available annual funding of \$740,000 is currently provided through the following funding sources:

- **Athletic Booster Clubs** - FCPS required booster clubs at schools where synthetic turf fields were installed to commit \$15,000 annually as a set-aside for future synthetic turf field replacement.
- **Community Field Use Agreements** – FCPA and FCPS developed community use agreements that allowed community partners to maintain their priority use benefits in exchange for contributions to replace synthetic turf fields at the end of the fields' life cycle.
- **Synthetic Turf Field Replacement Fund** – Established in FY 2012, funding for this purpose was redirected (\$150,000) from the Synthetic Turf Field Development Fund. A portion of athletic participation fees charged to rectangular field users, the "\$5.50 fee," was allocated for synthetic turf field replacement requirements.
- **Tournaments for Turf** - The Park Authority initiated a Tournaments for Turf Program, in which tournaments are held for the purpose of generating additional revenue for the Synthetic Turf Field Replacement Fund.
- **County General Fund Appropriations** – The BOS approved use of a dedicated line item totaling \$350,000. When combined with the "\$5.50" fee redirected funds, total annual replacement funding, administered by NCS, is \$500,000. Currently, this funding leverages monies provided by existing community partners continuing to participate in the priority use agreements, for all synthetic turf field replacement requirements.

## Synthetic Turf Task Force

These efforts are not sufficient to fully fund future replacement needs, for either the existing inventory or for the task force recommended expansion to 82 synthetic turf fields. Including the recommended additional 8 high schools in future development would increase this requirement by a total of **\$2.16 million** annually.

### Fairfax County – Estimated Synthetic Turf Field Replacement Needs

Total Synthetic Turf Field Replacement - By Year and Location		FCPS Stadium	FCPS Non- Stadium & Park Authority	Total Current Field Inventory	Revised Total Including Recommended 8 New HS Sites
		16	51	67	82
Total replacement	Estimated \$450k each	\$7,200,000	\$22,950,000	\$30,150,000	\$36,900,000
Replacement fund (10 yr. est.)	School athletic booster funds \$15k per HS site per year = <b>\$240k annually</b>  FXCO = <b>\$500k annually</b> (\$350k GF /\$150k app. fees)	\$2,400,000	\$5,000,000	\$7,400,000	\$8,600,000
Cumulative Shortage		\$4,800,000	\$17,950,000	\$22,750,000	\$28,300,000
10 yr. average replacement		\$480,000	\$1,795,000	\$2,275,000	\$2,830,000
Community contribution - Percentage of monies contributed to each by community group	Youth and adult community sports organizations – amounts are based upon percentages provided during synthetic turf field developmental phase	(\$223,200)	(\$390,150)	(\$613,350)	(\$669,600)
<b>Annual Shortage</b>		<b>\$256,800</b>	<b>\$1,404,850</b>	<b>\$1,661,650</b>	<b>\$2,160,400</b>

Assumptions:

- ✓ Synthetic turf field life cycle = 10 years
- ✓ Synthetic turf field replacement cost = \$450k
- ✓ Community contributions remain at least at initial percentage level of development commitments

**Recommendation 8: Identify an ongoing funding source to fund the scheduled replacement of synthetic turf fields on Park Authority and FCPS sites.**

**Options to Fund Synthetic Turf Field Replacement Shortfall:**

Option	Additional Annual Funding Generated
Annual replacement shortage	\$2,160,400
Redirect additional Synthetic Turf Field Development Program monies into the Synthetic Turf Field Replacement Fund.	\$150,000
Increase Athletic User fee charged to rectangular field users from \$5.50 to \$8 (per sport, per season).	\$250,000
Increase booster club responsibility from \$15,000 annually to \$20,000 annually	\$120,000
Tournament Field Rental User Fee - Increase field rental user fee from \$15 to \$50 for county teams and \$100 for non-county teams for post regular season rectangular field sports program tournaments. (Assumes approximately 625 teams from out of county, generating an additional \$53,000 annually and 1875 in-county teams generating an additional \$65,000 annually)	\$118,000
<b>Subtotal—community funding in support of Synthetic Turf Field Replacement</b>	<b>\$638,000</b>
Remaining annual additional funding requirement	\$1.53 million

**Recommendation 9: Continue administration of the synthetic turf field replacement fund by NCS in support of future synthetic turf field replacement projects at FCPS and FCPA sites. Utilize project funding as directed by staff membership of the oversight committee proposed for establishment in Recommendation 6.**

---

**Maintenance of Synthetic Turf Fields**

---

The task force reviewed current maintenance activities for FCPS and Park Authority natural grass and synthetic turf fields. The purpose was to determine who paid for the maintenance, analysis of the financial impact of increasing the inventory of synthetic turf fields and the implications for the community in the contributions made through boosters, community sports organizations, and other volunteers in the labor contributed to the upkeep of synthetic turf fields, as well as the financial capacity of various community sports organizations in support of the cost of maintaining synthetic turf fields. The Park Authority maintenance of the synthetic turf fields is centralized and

managed with Park Authority staff. Fairfax County Public Schools' maintenance is decentralized and conducted by a combination of high school staff and contractors. The two approaches to managing the maintenance should be further reviewed to see if efficiencies can be achieved.

What are the current practices for synthetic turf maintenance?

**FINDING 21: Park Authority staff currently maintains synthetic turf fields at county parks and fields located on elementary and middle schools, as well as other non-high school FCPS sites. With the conversion of natural grass fields to synthetic turf, the Park Authority has found that the total annual operating cost of a synthetic turf field, including maintenance and utility costs, is comparable to a lighted and irrigated natural grass field because of the nature of year-round use.**

- Natural grass field operating costs include a basic turf grass program with seeding, aerating, fertilizer and pesticides applications, soil testing and amendments.
- Synthetic turf fields operating costs include regular grooming, debris removal, minor carpet repairs and adding rubber infill to high use areas, and unique reconditioning requirements that include brushing, de-compaction, deep cleaning, repair of inlaid field lines and adding crumb rubber to low or high use areas. The synthetic turf fields are also annually G-max tested by a certified engineer to help ensure their safety.

Maintenance activities for both field types include trash collection, inspections, field lining, maintenance and repairs of lighting, bleachers, benches, goals and signage. The costs associated with these tasks are year-round or 12 months a year for synthetic turf fields and only 8 months a year for a natural grass fields. Natural grass fields have additional mowing costs.

Utility expenses are also similar for both field types. Natural grass fields require lighting and water for the 8-month playing season. While the synthetic turf fields don't require watering, savings from reduced water usage are redirected to cover the increased electricity requirements for athletic field lighting resulting from the increased use capacity to 12 months.

Park Authority synthetic turf fields are maintained to all manufacturers recommendations and recognized industry standards. The natural grass fields are maintained to a budget. The maintenance standards for the natural grass fields have been adjusted as the available funding remained constant. The adjustments were necessary as staff and utility costs increased and additional lighting and irrigations systems were added without associated increases in operating budgets.

**FINDING 22: Due to the decentralized nature of the maintenance activities at each FCPS school sites, any achieved savings from natural grass maintenance to synthetic turf maintenance should be redirected to specific site operations, to include the maintenance and replacement of the synthetic turf fields.**

Natural grass fields at high schools are maintained at various levels, depending on the use. Rectangular, stadium game fields and 90' and 60' game diamonds are maintained at a higher level than grass fields used primarily for practices. The number of fields, both game and practice, varies by campus. Additionally, athletic fields with Bermuda grass surfaces require a significantly higher level of care than cool season grasses.

The annual cost to maintain a natural grass, stadium rectangular field is between \$20,000 to \$40,000 per school. The variance is influenced by type of grass, size and configuration of the field, volume of usage, frequency of maintenance, impact of weather, cost of labor, and the use of field lights. The expenses associated with school athletic field maintenance are not covered by the operating budget. Athletic field maintenance, to include supplies, labor and materials, is paid for by athletic event gate receipts, booster donations, fundraising, and donated labor. The equipment used to maintain grass fields can include tractors, mowers, sweepers, groomers, aerators, seeders, and/or trimmers. While individual schools do have some field maintenance equipment, the inventory is often supplemented by equipment purchased by the community funding sources. There are some schools that are able to contract for athletic field maintenance; these services are paid for by the same community contributions.

**Recommendation 10: Park Authority and FCPS should adopt a consistent maintenance program for synthetic turf fields utilizing agreed upon best practices in order to maximize use of equipment, staffing and other resources.**

**Recommendation 11: Create a joint FCPS and Park Authority field maintenance work group, tasked with meeting to address ongoing maintenance needs to include recurring operating budget requirements.**

## Appendix I. Task Force Members

---

### **Fairfax County Board of Supervisors**

Michael Frey, Supervisor, Sully District  
Michael Coyle, Administrative Aide, Sully District

### **Fairfax County Public Schools**

Megan McLaughlin, Braddock District Representative, School Board  
Lee Ann Pender, Director, Administrative Services  
Bill Curran, Director, Student Activities and Athletics  
Bob Cordova, Property Management Coordinator

### **Fairfax County Athletic Council**

Harold Leff, Chairman  
Mark Meana, Vice Chairman

### **Fairfax County Park Authority**

William G. Bouie, Chairman  
Ken Quincy, Providence District Representative  
Todd Johnson, Director, Park Operations Division  
Deborah Garris, Manager, Synthetic Turf Branch

### **Neighborhood and Community Services**

Chris Leonard, Director  
Karen Avvisato, Manager, Athletic Services & Community Use Scheduling  
Paul Jansen, Branch Manager, Athletic Services & Community Use Scheduling

### **Project Team**

Brenda Gardiner, Policy and Information Manager, Department of Administration for Human Services  
Steve Groff, Analyst, Athletic Services & Community Use Scheduling  
Jason Shelton, Administrative Assistant, Athletic Services & Community Use Scheduling



Appendix II. Board Actions/Resolutions



County of Fairfax, Virginia

**MEMORANDUM**

**DATE:** JUN 22 2012  
**TO:** Board of Supervisors  
**FROM:** Edward ~~F~~ Long Jr.  
County Executive  
**SUBJECT:** County/Schools Joint Task on Synthetic Turf Athletic Fields

The Fairfax County School Board passed a resolution at its December 15, 2011, meeting recommending the creation of a County/Schools Joint Task Force on Synthetic Turf Athletic Fields. In February 2012, Fairfax County School Board Chairman Jane K. Strauss sent a letter to Board of Supervisors Chairman Sharon Bulova and Fairfax County Park Authority Board Chairman William G. Bouie requesting support for this effort. At the April 10, 2012, Board of Supervisors (BOS) meeting, Board members affirmed their collective interest in working with the School Board and Park Board in this effort and referred the issue to staff to determine task force participation.

In the past few years, and in response to increased demand for athletic playing fields, Fairfax County, Fairfax County Public Schools, and the Fairfax County Park Authority have identified funds and partnered with local community groups and each other to develop more than 30 synthetic playing surfaces. The need for more fields continues to grow, and converting natural grass fields to synthetic surfaces provides the best solution to the county's need for more playing time on outdoor surfaces.

Staff from the Department of Neighborhood and Community Services (NCS) has met with staff from the Fairfax County Park Authority (FCPA) and the Fairfax County Public Schools (FCPS) to discuss this initiative. Subsequent to those discussions, it is the recommendation of all entities that the effort to convene and direct the task force be led by NCS staff as the community use scheduler of both park and school fields.

Under the direction of NCS, the joint task force will be responsible for developing recommendations to the BOS and the School Board on:

- the development of new synthetic fields, to include location recommendations
- the funding of new synthetic fields, to include private and corporate partnership opportunities
- the regular, on-going maintenance of existing synthetic fields
- the eventual replacement of developed synthetic fields

Throughout each of these recommendations, guidelines and processes will be reviewed with a focus on ensuring fair and equitable access for all geographic areas of the county.



## Synthetic Turf Task Force

---

Board of Supervisors  
County/Schools Joint Task on Synthetic Turf Athletic Fields  
Page 2

The task force will be comprised of community leaders and staff that have a direct connection to the current and future synthetic turf field efforts, including:

- Fairfax County Public Schools  
Megan McLaughlin, Braddock District School Board Representative  
Lee Ann Pender, Director, Administrative Services  
Bill Curran, Director, Student Activities and Athletics
- Fairfax County Athletic Council  
Harold Leff, Chairman  
Mark Meana, Vice Chairman
- Fairfax County Park Authority  
William G. Bouie, Chairman, Park Board  
Ken Quincy, Providence District Park Board Representative  
John Dargle, Director, FCPA  
Todd Johnson, Director, Park Operations Division, FCPA  
Deborah Garris, Synthetic Turf Fields Branch, FCPA
- Neighborhood and Community Services  
Chris Leonard, NCS Director  
Karen Avvisato, Athletic Services Program Manager, NCS  
Paul Jansen, Athletic Services Program, NCS

It is anticipated that official reporting of the task force's findings will be presented at a future joint School Board/Board of Supervisors meeting.

For further information, please contact Chris Leonard, NCS Director, at 703-324-5501.

- c:
- Jane K. Strauss, Chairman, Fairfax County School Board
  - Jack D. Dale, Superintendent, Fairfax County Public Schools
  - William G. Bouie, Chairman, Fairfax County Park Authority
  - Harold Leff, Chairman, Fairfax County Athletic Council
  - Patricia D. Harrison, Deputy County Executive
  - Robert A. Stalzer, Deputy County Executive
  - Christopher A. Leonard, Director, Neighborhood and Community Services
  - John W. Dargle, Director, Park Authority



# THE FAIRFAX COUNTY SCHOOL BOARD

8115 GATEHOUSE ROAD, SUITE 5400, FALLS CHURCH, VA 22042

February 9, 2012

The Honorable Sharon Bulova  
Chairman

Fairfax County Board of Supervisors  
12000 Government Center Parkway, Suite 530  
Fairfax, VA 22035

Mr. William G. Bouie  
Chairman  
Fairfax County Park Authority Board  
Hemery Building - Suite 927  
12055 Government Center Parkway  
Fairfax, VA 22035

Dear Chairman Bulova and Chairman Bouie:

On December 15, 2011, the School Board approved a resolution recommending that the Board of Supervisors and the Park Authority Board create a joint task force to make recommendations on the development of turf fields in the future. All Fairfax County citizens would benefit from a multi-agency approach to the development and maintenance of turf fields across the county.

This joint task force would examine the need for additional rectangular and diamond turf fields, the requirements for ongoing field maintenance, and funding requirements for future field replacement. This joint effort between the Board of Supervisors, the Park Authority, and the School Board would be comprised of representatives from the Fairfax County Neighborhood Community Services, the Park Authority, Fairfax County Public Schools, and the Fairfax County Athletic Council. The joint task force would report on their recommendations by September 2012, to the Board of Supervisors, the School Board, and the Park Authority.

I hope the Board of Supervisors and the Park Authority will welcome this initiative to work collaboratively so that athletes and citizens across Fairfax County can equally enjoy the many benefits of turf fields.

Sincerely,

Jane K. Strauss  
Chairman  
Dranesville District

JKS/kfp

Attachment

cc: School Board Members  
Jack D. Dale

Fairfax County  
Public Schools

571.423.1075  
www.fcps.edu

Jane K. Strauss  
Chairman  
Dranesville District

Bryong Moon  
Vice Chairman  
Member At Large

Tamara Derenak Koufax  
Lee District

Sandra S. Evans  
Mason District

Pat Hynes  
Hunter Mill District

Ryan L. McElveen  
Member At Large

Megan G. McLaughlin  
Braddock District

Patricia S. Reed  
Providence District

Elizabeth L. Scholiz  
Springfield District

Kathy L. Smith  
Sully District

Daniel G. Storck  
Mount Vernon District

Theodore J. Volkoff  
Member At Large

Jack D. Dale  
Superintendent

Student Representative  
Eugene J. Coleman, III

**Agenda Item Details**

---

Meeting	Dec 15, 2011 - Regular Meeting No. 10
Category	2. Meeting Opening - 7 p.m.
Subject	2.10 Resolution Recommending Joint Task Force on Turf Fields
Type	Action

---

**RESOLUTION RECOMMENDING  
JOINT TASK FORCE ON TURF FIELDS**

**WHEREAS**, Fairfax County citizens benefit from the installation of artificial turf fields at County parks and schools through increased available playing time; and

**WHEREAS**, progress has been made in installing such fields at over 30 locations in Fairfax County to include both Park Authority and Fairfax County Public Schools fields; and

**WHEREAS**, it is important to ensure that all geographic areas of the County enjoy equal access to such fields by installing additional fields in the future, to include all Fairfax County public high schools; and

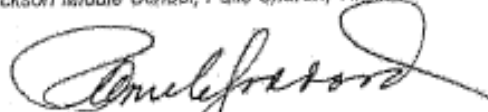
**WHEREAS**, it is important that both existing and future fields are maintained appropriately to ensure their continuing quality and maximum useful life for citizens and county high school students; and

**WHEREAS**, it is important that funds be identified to install new turf fields and replace all fields when the useful life is exhausted; and

**NOW, THEREFORE, BE IT RESOLVED** that the School Board recommends to the Board of Supervisors and the Park Authority Board the creation of a joint task force to examine and report by September 2012 to the Fairfax County School Board, the Fairfax County Park Authority Board, and the Fairfax County Board of Supervisors on the need for additional rectangular and diamond turf fields, the requirements for ongoing field maintenance, and funding requirements for future field replacement; and

**FURTHERMORE BE IT RESOLVED** that the School Board recommends that the joint task force be comprised of representatives from Fairfax County Neighborhood Community Services, Fairfax County Park Authority, Fairfax County Public Schools, and the Fairfax County Athletic Council.

*I hereby certify the above Agenda Item 2.10 was adopted by the County School Board of Fairfax County, Virginia, at a regular meeting held on December 15, 2011, at Luther Jackson Middle School, Falls Church, Virginia.*



Pamela Goddard, Clerk  
County School Board of  
Fairfax County, Virginia



# FAIRFAX COUNTY PARK AUTHORITY



12855 Government Center Parkway, Suite 927 • Fairfax, VA 22035-1118  
703-324-8700 • Fax: 703-324-3974 • [www.fairfaxcounty.gov/parks](http://www.fairfaxcounty.gov/parks)

February 22, 2012

RECEIVED

FEB 22 2012

1243  
DIRECTOR OF NEIGHBORHOOD  
AND COMMUNITY SERVICES

Ms. Jane K. Strauss, Chairman  
Fairfax County School Board  
8115 Gatehouse Road, Suite 5400  
Falls Church, VA 22042

Dear Chairman Strauss:

I am very pleased to learn of the School Board's recent recommendation for the creation of a joint task force by the Fairfax County Board of Supervisors and the Fairfax County Park Authority Board in order to make recommendations on the development of synthetic turf fields in Fairfax County. The Park Authority Board recognizes the wisdom and benefits of collaboration at all levels and has supported vital partnerships since the field turf program's inception nearly a decade ago.

We applaud this opportunity to further explore the appropriate placement of new synthetic turf fields, the challenges of funding both new and replacement turf fields and our ongoing maintenance needs for rectangular and diamond turf fields. The need for synthetic turf fields continues to grow as both youth and adult leagues, and school sports draw ever increasing participation. I believe that the Department of Neighborhood and Community Services would be another important participant in this venture. Working together, ensuring that all stakeholders have a say, I am certain we can equitably meet the needs of the community.

The Park Authority Board stands ready to begin this process and will endeavor to meet the relatively short timeframe for the drafting of recommendations. I will discuss the specifics of the initiative with Board of Supervisors Chairman Sharon Bulova to seek her consensus how best to move forward with this proposal.

Sincerely,

William G. Bouie  
Chairman

Copy: Sharon Bulova, Chairman, Board of Supervisors  
Anthony H. Griffin, County Executive  
Chris Leonard, Director, Department of Neighborhood and Community Services

Appendix III. FCPS High School Free and Reduced Lunch Percentage

October 2012		School Type	Low Grade	High Grade	SNP Membership	FREE Eligible	FREE Percentage	REDUCED Eligible	REDUCED Percentage	TOTAL F/R Eligible	TOTAL F/R Percentage	
Division #	School #											
029	1070	STUART HIGH	SCH-HIGH	9	12	1,749	811	46.37%	155	8.86%	966	55.23%
029	0420	MOUNT VERNON HIGH	SCH-HIGH	9	12	1,885	799	42.39%	221	11.72%	1,020	54.11%
029	1100	FALLS CHURCH HIGH	SCH-HIGH	9	12	1,673	687	41.06%	170	10.16%	857	51.23%
029	1020	LEE HIGH	SCH-HIGH	9	12	1,813	674	37.18%	171	9.43%	845	46.61%
029	0660	ANNANDALE HIGH	SCH-HIGH	9	12	2,414	819	33.93%	261	10.81%	1,080	44.74%
029	0900	WEST POTOMAC HIGH	SCH-HIGH	9	12	2,255	709	31.44%	151	6.70%	860	38.14%
029	1270	EDISON HIGH	SCH-HIGH	9	12	1,695	458	27.02%	123	7.26%	581	34.28%
029	0032	HERNDON HIGH	SCH-HIGH	9	12	2,168	508	23.43%	128	5.90%	636	29.34%
029	1800	HAYFIELD SECONDARY	SCH-COM	7	12	2,831	555	19.60%	221	7.81%	776	27.41%
029	1990	SOUTH LAKES HIGH	SCH-HIGH	9	12	2,321	484	20.85%	116	5.00%	600	25.85%
029	0020	FAIRFAX HIGH	SCH-HIGH	9	12	2,650	471	17.77%	184	6.94%	655	24.72%
029	0200	CENTREVILLE HIGH	SCH-HIGH	9	12	2,385	342	14.34%	162	6.79%	504	21.13%
029	2228	WESTFIELD HIGH	SCH-HIGH	9	12	2,785	430	15.44%	129	4.63%	559	20.07%
029	1290	MARSHALL HIGH	SCH-HIGH	9	12	1,654	209	12.64%	62	3.75%	271	16.38%
029	2241	SOUTH COUNTY HIGH	SCH-HIGH	9	12	2,008	227	11.30%	93	4.63%	320	15.94%
029	0131	CHANTILLY HIGH	SCH-HIGH	9	12	2,634	359	13.63%	51	1.94%	410	15.57%
029	0090	LAKE BRADDOCK SECONDARY	SCH-COM	7	12	4,000	408	10.20%	181	4.52%	589	14.72%
029	1610	WEST SPRINGFIELD HIGH	SCH-HIGH	9	12	2,279	193	8.47%	80	3.51%	273	11.98%
029	1960	ROBINSON SECONDARY	SCH-COM	7	12	3,882	286	7.37%	135	3.48%	421	10.84%
029	1710	OAKTON HIGH	SCH-HIGH	9	12	2,162	176	8.14%	43	1.99%	219	10.13%
029	1260	WOODSON HIGH	SCH-HIGH	9	12	2,224	144	6.47%	57	2.56%	201	9.04%
029	0790	MCLEAN HIGH	SCH-HIGH	9	12	2,081	121	5.81%	58	2.79%	179	8.60%
029	1060	MADISON HIGH	SCH-HIGH	9	12	1,986	114	5.74%	42	2.11%	156	7.85%
029	1371	THOMAS JEFFERSON HIGH	SCH-HIGH	9	12	1,842	24	1.30%	17	0.92%	41	2.23%
029	1460	LANGLEY HIGH	SCH-HIGH	9	12	1,949	31	1.59%	3	0.15%	34	1.74%

\*Source: VA Department of Education (2012 Data) <http://www.doe.virginia.gov/support/nutrition/statistics/index.shtml>



## Appendix IV. Synthetic Turf Fact Sheet

---

### Fact Sheet on Synthetic Turf Used in Athletic Fields

Synthetic turf fields using crumb rubber have been installed and used in many athletic and playing fields throughout Fairfax County, the United States and the world. Currently Fairfax County Public Schools and Parks have 48 rectangular athletic fields composed of synthetic turf material. Questions have been raised about potential health, safety, and environmental effects from the use of synthetic turf. This fact sheet was prepared in consultation with the Fairfax County Health Department, Fairfax County Risk Management Division, Fairfax County Public Schools and Fairfax County Park Authority to provide information on research conducted by numerous state and national organizations who have studied these issues.

**Q: Why is synthetic turf used in Fairfax County?**

**A:** Starting in the early 2000's the Park Authority along with other organizations in the County that provide athletic facilities began looking at alternatives to natural turf fields to meet the growing demand for use of athletic fields throughout the County.

Synthetic turf is a man-made product and is mostly installed in fields that are heavily used. Synthetic turf fields are used in Fairfax County because they:

- Provide even playing surfaces
- Provide similar playing conditions to natural turf fields
- Need no watering or mowing
- Use no fertilizers or pesticides
- Can be used year-round and in most weather
- Do not need to be closed to protect or re-sod grass
- Have a significant life cycle with reduced maintenance

**Q: What are synthetic turf fields made of?**

**A:** Synthetic turf fields installed in Fairfax County have been constructed using a synthetic carpet material that mimics natural grass along with a crumb rubber infill or sand/crumb rubber infill mixture and subsurface drainage systems. Synthetic turf fields are made of the following materials:

- A subsurface drainage layer composed of crushed stones with plastic tubing for drainage.
- A top layer composed of plastic mesh with soft, plastic strands that resemble blades of grass.

- Crumb rubber infill, made from recycled tires, is added to the top layer to provide padding and keep the grass upright. Sand is sometimes mixed with the crumb rubber.

**Q: What chemicals can be found in the synthetic turf crumb rubber?**

A: The crumb rubber used in synthetic turf is mainly composed of recycled tires, which contain man-made and natural rubber. Based on the review of research studies and reports, certain chemicals have been identified in crumb rubber. These include small amounts of polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) and heavy metals such as zinc, iron, manganese and lead.

**Q: Can people be exposed to the chemicals found in crumb rubber?**

A: To date, studies on the release of chemicals from crumb rubber have reported very low concentration of chemical exposure. Although the potential for health effects due to exposure to chemicals in crumb rubber is very low, there are three possible ways for people to have contact with these chemicals on artificial turf fields:

- Accidentally ingesting small amounts of crumb rubber by putting fingers in the mouth or not washing hands before eating after playing on the fields
- Breathing in dust and vapors while playing on the fields. Crumb rubber may become dust as it wears and the rubber may give off some vapors.
- Direct skin contact with the crumb rubber.

**Q: Are any health effects associated with these chemicals found in synthetic turf crumb rubber?**

A: The health and safety aspects of synthetic turf have been reviewed and addressed by many national and state organizations, including the U.S. Environmental Protection Agency, the Centers for Disease Control and Prevention, and numerous state agencies in California, Connecticut, New Jersey, and New York. They generally conclude that health effects are unlikely from exposure to the levels of chemicals found in synthetic turf and that these fields do not pose a serious public health concern. Specifically, a review of the available information on crumb rubber by the New York Department of Health indicates that ingestion, dermal, or inhalation exposures to chemicals in or released from crumb rubber do not pose a significant public health concern. A multi-agency report from the State of Connecticut concluded that the use of outdoor and indoor artificial turf fields is not associated with elevated health risk. Studies and reviews conducted by the California Office of Environmental Health Hazard Assessment found that synthetic turf fields do not represent a serious human health risk with regard to the inhalation of chemicals or particulates above these fields. These studies indicate that at much higher levels, these chemicals can cause serious health effects. Some PAHs may

pose a cancer risk for people exposed to high levels for long periods. VOCs can cause eye, nose, throat, and skin irritation. In young children, exposure to lead may cause learning and behavioral problems and lowered intelligence.

**Q: Can people be exposed to these chemicals from other sources?**

**A:** The PAHs and VOCs found in crumb rubber are very common in the urban environment. People can be exposed by breathing or eating or by getting dirt or dust on their skin. Rubber dust from car tires is a source of urban air pollution and soil pollution. PAHs are present in exhaust, smoke, soot, urban soil and char-broiled foods. VOCs are released into the air from gasoline, paint, building materials and many other sources. Lead is commonly found in soil and dust in the urban environment because, in the past, it was used in paint, gasoline and many other products.

**Q: Does the heat generated by synthetic turf pose a health risk to users?**

**A:** Like asphalt, the crumb rubber in synthetic turf fields absorbs heat from the sun and gets hotter than dirt or natural grass. On hot days, some synthetic turf fields may be too hot to play on. To protect yourself from the heat, health officials have recommended that you take the following precautions: drink lots of water, wear light and loose fitting clothes, always wear shoes, take breaks often, and exercise moderately. If you experience symptoms of heat related illness, such as dizziness, weakness, headache, nausea, vomiting or muscle cramps, move to a shaded area, drink water and rest. Seek medical attention if you do not feel better. It is especially important that adults supervising children take precautions on hot days.

**Q: Are people who play on synthetic turf fields at risk of bacterial skin infections?**

**A:** Bacterial skin infections, such as methicillin-resistant *S. aureus* (MRSA), have not been shown to be caused by synthetic turf fields. A multi-agency report to the California state legislature stated that the number of skin abrasions suffered on synthetic turf fields was greater than on natural turf fields, but the severity of the abrasions did not differ. The report found synthetic turf fields to harbor fewer bacterial species and a smaller number of live bacteria than natural turf fields.

MRSA has not been proven to be caused by synthetic turf field contact. Bacterial skin infections among athletes are due mainly to physical contact and sharing contaminated towels or sports equipment. Coaches and players should be aware of the potential for MRSA transmission and infection among athletes. All skin cuts or abrasions should be washed with soap and water and covered immediately. School athletic departments and sports leagues, should use good hygienic practices and prohibit the sharing of towels and equipment that rubs against bare skin.



**Q: Should people continue to use synthetic turf fields with crumb rubber?**

**A:** Regular physical activity is one of the most important parts of a healthy lifestyle. Synthetic turf fields allow access to open spaces for sports and physical activities. After any outdoor activity health organizations recommend that people should wash their hands before eating or drinking. On very hot days, users should limit activities, take rest breaks and drink water.

**Q: What preventive measures can be taken to further reduce potential health and safety concerns of synthetic turf fields?**

**A:** Hand-washing after using the field, especially before eating; discouraging eating while on the field; and monitoring for potential heat-related illness are recommended measures for minimizing potential risks associated with synthetic turf fields.

**Q: Where can I get more information?**

**A:** The following links provide additional information and details on the health assessment of synthetic turf fields:

- New York City Department of Health Artificial (Synthetic) Turf Fact Sheet: <http://www.nyc.gov/html/doh/html/eode/eode-turf.shtml>
- New York City Department of Health Air Quality Survey Of Synthetic Turf Fields: [http://www.nyc.gov/html/doh/downloads/pdf/eode/turf\\_aqs\\_report0409.pdf](http://www.nyc.gov/html/doh/downloads/pdf/eode/turf_aqs_report0409.pdf)
- New York City Department of Health Review of the Potential Health and Safety Risks From Synthetic Turf Fields: [www.nyc.gov/html/doh/downloads/pdf/eode/turf\\_report\\_05-08.pdf](http://www.nyc.gov/html/doh/downloads/pdf/eode/turf_report_05-08.pdf)
- Connecticut Department of Public Health Human Health Risk Assessment of Artificial Turf Fields: [www.ct.gov/dep/lib/dep/artificialturf/dph\\_artificial\\_turf\\_report.pdf](http://www.ct.gov/dep/lib/dep/artificialturf/dph_artificial_turf_report.pdf)
- New York State Health Department Crumb-Rubber Infilled Synthetic Turf Athletic Fields Fact Sheet: [http://www.health.ny.gov/environmental/outdoors/synthetic\\_turf/crumb-rubber\\_infilled/fact\\_sheet.htm](http://www.health.ny.gov/environmental/outdoors/synthetic_turf/crumb-rubber_infilled/fact_sheet.htm)
- Connecticut Academy of Science and Engineering Committee Report: Peer Review of an Evaluation of the Health and Environmental Impacts Associated with Synthetic Turf Playing Fields: [www.ct.gov/dep/lib/dep/artificialturf/case\\_artificial\\_turf\\_review\\_report.pdf](http://www.ct.gov/dep/lib/dep/artificialturf/case_artificial_turf_review_report.pdf)
- California Department of Resources Recycling and Recovery Report to the Legislature on Health Impacts of Outdoor Artificial and Natural Turf Fields: <http://www.calrecycle.ca.gov/publications/documents/tires/2011007.pdf>

**Appendix V. FCPA Synthetic Turf Operation/Maintenance Cost**

Lighted Rectangle Field Annual Operational Costs - FY2013								WORKING DRAFT As of 6/18/2013	
Level 1 Natural Grass Field									
Task Description	Frequency		Per Recurrence	Labor Hours	Hourly Shop Rate (Direct/Indirect Cost)	Labor Cost	Material Cost	Contracted Services	Total Task Cost Per Field
<b>MAINTENANCE</b>									
	3 Times Per Week (April - November)								
Remove Ground Trash and Empty Receptacles	1 Time Per Week (December - March)	116	0.2	23.20	\$52	\$1,206	\$73		\$1,279
Off Season Maintenance	Annually	1	13	13.00	\$52	\$676	\$279		\$955
Mowing	2 Times per Week (April - November)	64	0.8	51.20	\$52	\$2,662			\$2,662
Amenity Inspections, Maintenance and Repair (Benches, Bleachers, Goals, Signage)	As Needed			8.60	\$52	\$447	\$138		\$585
Field Lining	2 Times Per Year	2	2.5	5.00	\$52	\$260	\$82		\$342
Irrigation Maintenance and Repairs	2 Times Per Year	2	8	16.00	\$52	\$832	\$580	\$350	\$1,762
Lighting Inspections	Weekly	32	0.2	6.40	\$52	\$333			\$333
Lighting Maintenance and Repairs	2 Times Per Year	2	2.2	4.40	\$52	\$229		\$800	\$1,029
<b>Maintenance Total</b>									<b>\$8,947</b>
<b>Turf Program</b>									
Fertilizer Applications	4 Times Per Year	4	1.2	4.80	\$52	\$250	\$1,000		\$1,250
Aeration	2 Times Per Year	2	2.7	5.40	\$52	\$281			\$281
Pesticide Application	2 Times Per Year	2	3	6.00	\$52	\$312	\$400		\$712
Over Seeding	Annually	1	3.5	3.50	\$52	\$182	\$400		\$582
Soil Amendments	Every 3 Years	0.33	3.6	1.19	\$52	\$62	\$102		\$164
Soil Sampling	Every 3 Years	0.33	1	0.33	\$52	\$17	\$10		\$27
Field Inspections	Annually	1	1.2	1.20	\$52	\$62			\$62
<b>Turf Program Total</b>									<b>\$3,078</b>
<b>UTILITIES</b>									
Electricity	Annually								\$3,429
Water	Annually								\$2,102
<b>Utilities Total</b>									<b>\$5,531</b>
<b>Natural Grass Per Field Total</b>				<b>127.0</b>		<b>\$6,605</b>	<b>\$3,064</b>	<b>\$800</b>	<b>\$17,556</b>
(FCPA currently manages 15 lighted natural grass rectangle fields, which include 4 rectangle overlay fields.)									

\*Labor, Material, and Contracted Services costs are supported with monies from General Fund and County Construction Fund-Athletic Field Maintenance



Appendix VI. Synthetic Turf Financing Chart

Fairfax County Synthetic Turf Field Project Financing

	Site Name	District	Number of Fields	Lights	BOS <sup>1</sup> (one-time appropriation)	FCPS (one-time funds)	Donations, Grants, Other	FCPA Bond	NCS <sup>2</sup>	Proffers	School Boosters <sup>3</sup> (cash/loans)	Community Sports Organizations (cash/loans)	All Sources
Fairfax County Park Authority and Fairfax County Elementary Schools, Middle School and Alternative High Schools	Arrowbrook Park	Dranesville	1	Y						\$750,000			\$750,000
	Baileys ES	Mason	1	N				\$721,221					\$721,221
	Braddock Park	Springfield	1	Y					\$849,000				\$849,000
	Bryant Alternative HS	Mount Vernon	1	Y				\$812,310					\$812,310
	EC Lawrence Park	Sully	1	Y				\$650,000					\$650,000
	Franconia Dist. Park	Lee	1	Y				\$841,000					\$841,000
	Great Falls Nike Park	Dranesville	1	Y				\$250,000	\$150,000			\$425,000	\$825,000
	Greenbriar Park	Springfield	1	Y				\$898,000					\$898,000
	Hutchison ES	Dranesville	1	Y				\$900,000					\$900,000
	Jackson MS	Providence	1	Y				\$257,550	\$549,779	\$682,500			\$1,489,829
	Lake Fairfax Park	Hunter Mill	2	Y				\$1,596,000					\$1,596,000
	Lee District Park	Lee	1	Y				\$908,000					\$908,000
	Lewinsville Park	Dranesville	1	Y				\$267,365				\$500,000	\$767,365
	Linway Terrace Park	Dranesville	1	N					\$150,000			\$687,766	\$837,766
	Mason District Park	Mason	1	Y	\$166,533				\$324,467			\$250,000	\$741,000
	Nottoway Park	Providence	1	Y				\$200,000		\$340,892			\$540,892
	Oak Marr Park	Providence	2	Y				\$1,709,000					\$1,709,000
	Ossian Hall Park	Mason	1	N				\$600,000					\$600,000
	Patriot Park	Springfield	1	Y				\$1,100,000					\$1,100,000
	Pine Ridge Park	Mason	1	Y				\$685,000					\$685,000
	Poplar Tree Park	Sully	2	Y				\$1,520,000					\$1,520,000
	Sandburg MS	Mount Vernon	1	Y	\$2,433			\$820,718					\$823,151
	South Run Park	Springfield	2	Y				\$1,348,000					\$1,348,000
Spring Hill Park	Dranesville	1	N					\$150,000			\$761,198	\$911,198	
Spring Hill Park	Dranesville	2	N								\$1,783,000	\$1,783,000	
Wakefield Park	Braddock	1	Y	\$166,533				\$243,467			\$400,000	\$810,000	
Vienna ES	Hunter Mill	1	Y	\$166,533		\$100,000		\$258,467			\$425,000	\$950,000	
	In-Service Fields-Subtotal:		32		\$502,032	\$0	\$100,000	\$16,084,164	\$2,675,180	\$1,773,392	\$0	\$5,231,964	\$26,366,732
Pending Non-High School Projects	Arrowhead Park	Sully	2	Y				\$1,647,500					\$1,647,500
	EC Lawrence Park	Sully	1	Y				\$825,000					\$825,000
	Lewinsville Park	Dranesville	1	Y				\$150,000	\$175,000			\$485,000	\$810,000
	Grist Mill Park	Mount Vernon	1	N			\$200,000	\$950,000	\$175,000				\$1,325,000
	Timber Ridge @ EDS	Sully	2	Y						\$1,500,000			\$1,500,000
	Pine Ridge Park	Mason	1	Y				\$810,000					\$810,000
	Rolling Valley West Park	Springfield	1	Y				\$810,000					\$810,000
	Pending Fields-Subtotal:		9		\$0	\$0	\$200,000	\$5,192,500	\$350,000	\$1,500,000	\$0	\$485,000	\$7,727,500
	SUBTOTAL:		41		\$502,032	\$0	\$300,000	\$21,276,664	\$3,025,180	\$3,273,392	\$0	\$5,716,964	\$34,094,232
	CPA/FCPS NON- HS FIELDS - PERCENT SHARE OF ALL SOURCES OF FUNDING-TOTAL:				1%	0%	1%	62%	9%	10%	0%	17%	100%
Fairfax County Public High/Secondary Schools	Centreville HS	Springfield	2	Y	\$275,000		\$168,432		\$175,000		\$339,320	\$300,000	\$1,257,752
	Chantilly HS	Springfield	1	Y			\$135,000		\$150,000		\$200,000	\$200,000	\$685,000
	Herndon HS	Dranesville	2	Y				\$400,000	\$150,000		\$392,308	\$392,128	\$1,334,436
	Langley HS	Dranesville	1	Y	\$175,000						\$542,800		\$717,800
	Lee HS	Lee	1	Y						\$780,979			\$780,979
	Madison HS	Hunter Mill	1	Y						\$458,018	\$100,000	\$250,000	\$808,018
	Marshall HS	Providence	2	Y						\$991,190	\$10,476	\$608,000	\$1,609,666
	McLean HS	Dranesville	1	Y	\$175,000					\$200,000		\$186,085	\$661,085
	Robinson SS	Braddock	2	Y	\$150,000				\$175,000		\$407,188	\$498,000	\$1,230,188
	West Springfield HS	Springfield	1	Y			\$40,114				\$795,671		\$835,785
	Westfield HS	Sully	1	Y			\$42,000			\$350,000	\$75,000	\$350,000	\$817,000
	In-Service Fields-Subtotal:		15		\$775,000	\$0	\$385,546	\$400,000	\$650,000	\$2,780,187	\$2,253,177	\$3,493,799	\$10,737,709
Pending HSSS Projects	Falls Church HS	Mason	2	Y		\$1,274,715			\$260,000				\$1,534,715
	Lake Braddock SS	Braddock	2	Y	\$175,000		\$200,000		\$85,000		\$500,000	\$500,000	\$1,460,000
	Oakton HS	Providence	3	Y	\$175,000		\$250,000	\$115,387	\$260,000	\$68,878	\$250,000	\$1,400,000	\$2,519,265
	South Lakes HS	Hunter Mill	2	Y	\$175,000		\$180,000	\$849,603	\$85,000		\$115,000	\$177,000	\$1,581,603
	Woodson HS	Braddock	2	Y	\$175,000		\$75,000	\$130,512	\$85,000	\$190,670	\$340,000	\$500,000	\$1,496,182
	Pending Fields-Subtotal:		11		\$700,000	\$1,274,715	\$705,000	\$1,095,502	\$775,000	\$259,548	\$1,205,000	\$2,577,000	\$8,591,765
	SUBTOTAL:		26		\$1,475,000	\$1,274,715	\$1,090,546	\$1,495,502	\$1,425,000	\$3,039,735	\$3,458,177	\$6,070,799	\$19,329,474
	PERCENT SHARE OF ALL SOURCES OF FUNDING-TOTAL:				8%	7%	6%	8%	7%	16%	18%	31%	100%
	GRAND TOTALS		67		\$1,977,032	\$1,274,715	\$1,390,546	\$22,772,166	\$4,450,180	\$6,313,127	\$3,458,177	\$11,787,763	\$53,423,706
	PERCENT SHARE OF ALL SOURCES OF FUNDING-GRAND TOTAL:				4%	2%	3%	43%	8%	12%	6%	22%	100%

1. use of one-time funding at carryover or quarterly reviews  
 2. funding source: athletic services application fee  
 3. athletic and band boosters

## Appendix VII. Natural Grass v. Synthetic Turf on FCPS Sites

### Turf Fields: Grass vs. Synthetic Turf Usage

Legend  
 FCPS-Instructional Use  
 Fx Cnty-Community Use  
 FCPS-Practice Use

Stadium Field - Grass Field Model									Total Hrs/Wk	Total Hrs/Year*	
Hrs/Day	Time	Mon	Tue	Wed	Thr	Fri	Sat	Sun			
1	08a										
	09a										
2	10a										
3	11a										
4	12p										
5	01p										
6	02p										
7	03p										
8	04p										
9	05p										
	05:30p										
10	06p										
11	07p										
12	08p										
13	09p										
14	10p										
15	11p										
<b>Total Capacity:</b>		<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>105.0</b>	<b>2,520.0</b>

FCPS Usage:	3.0	3.0	3.0	3.0	3.0	0.0	0.0	15.0	360.0	100.0%
Cmnty Usage:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
<b>Total Usage:</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>15.0</b>	<b>360.0</b>	<b>14.3%</b>

\* Total hours per year is based on a Fall and Spring season of 12 weeks each (24 weeks total) multiplied by the total hours per week.

**% Field Capacity Usage**

Stadium Field - Synthetic Model									Total Hrs/Wk	Total Hrs/Year*	
Hrs/Day	Time	Mon	Tue	Wed	Thr	Fri	Sat	Sun			
1	08a										
	09a										
2	10a										
3	11a										
4	12p										
5	01p										
6	02p										
7	03p										
8	04p										
9	05p										
	05:30p										
10	06p										
11	07p										
12	08p										
13	09p										
14	10p										
15	11p										
<b>Total Capacity:</b>		<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>105.0</b>	<b>2,520.0</b>

FCPS Usage:	10.0	10.0	13.0	13.0	13.0	5.0	0.0	64.0	1,536.0	66.0%
Cmnty Usage:	4.0	4.0	0.0	0.0	0.0	10.0	15.0	33.0	792.0	34.0%
<b>Total Usage:</b>	<b>14.0</b>	<b>14.0</b>	<b>13.0</b>	<b>13.0</b>	<b>13.0</b>	<b>15.0</b>	<b>15.0</b>	<b>97.0</b>	<b>2,328.0</b>	<b>92.4%</b>

\* Total hours per year is based on a Fall and Spring season of 12 weeks each (24 weeks total) multiplied by the total hours per week.

**% Field Capacity Usage**

Practice Field - Grass Model									Total Hrs/Wk	Total Hrs/Year*	
Hrs/Day	Time	Mon	Tue	Wed	Thr	Fri	Sat	Sun			
1	08a										
	09a										
2	10a										
3	11a										
4	12p										
5	01p										
6	02p										
7	03p										
8	04p										
9	05p										
	05:30p										
10	06p										
11	07p										
12	08p										
13	09p										
14	10p										
15	11p										
<b>Total Capacity:</b>		<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>12.0</b>	<b>84.0</b>	<b>2,016.0</b>

FCPS Usage:	8.5	8.5	8.5	6.5	6.5	3.0	0.0	41.5	996.0	62.4%
Cmnty Usage:	0.0	0.0	0.0	2.0	2.0	9.0	12.0	25.0	600.0	37.6%
<b>Total Usage:</b>	<b>8.5</b>	<b>8.5</b>	<b>8.5</b>	<b>8.5</b>	<b>8.5</b>	<b>12.0</b>	<b>12.0</b>	<b>66.5</b>	<b>1,596.0</b>	<b>79.2%</b>

\* Total hours per year is based on a Fall and Spring season of 12 weeks each (24 weeks total) multiplied by the total hours per week.

**% Field Capacity Usage**

Practice Field - Synthetic Model									Total Hrs/Wk	Total Hrs/Year*	
Hrs/Day	Time	Mon	Tue	Wed	Thr	Fri	Sat	Sun			
1	08a										
	09a										
2	10a										
3	11a										
4	12p										
5	01p										
6	02p										
7	03p										
8	04p										
9	05p										
	05:30p										
10	06p										
11	07p										
12	08p										
13	09p										
14	10p										
15	11p										
<b>Total Capacity:</b>		<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>15.0</b>	<b>105.0</b>	<b>2,520.0</b>

FCPS Usage:	6.0	6.0	6.0	6.0	6.0	0.0	0.0	30.0	720.0	34.3%
Cmnty Usage:	5.5	5.5	5.5	5.5	5.5	15.0	15.0	57.5	1,380.0	65.7%
<b>Total Usage:</b>	<b>11.5</b>	<b>11.5</b>	<b>11.5</b>	<b>11.5</b>	<b>11.5</b>	<b>15.0</b>	<b>15.0</b>	<b>87.5</b>	<b>2,100.0</b>	<b>83.3%</b>

\* Total hours per year is based on a Fall and Spring season of 12 weeks each (24 weeks total) multiplied by the total hours per week.

**% Field Capacity Usage**

### SUMMARY TABLES

Field Utilization Grass vs. Synthetic Turf	Field Capacity (Hrs/Year)	Field Usage (Hrs/Year)	% Field Capacity Usage
- Stadium Field - Grass	2,520	360	14.3%
- Stadium Field - Synthetic Turf	2,520	2,328	92.4%
- Practice Field - Grass	2,016	1,596	79.2%
- Practice Field - Synthetic Turf	2,520	2,100	83.3%
<b>- Combined - Grass</b>	<b>4,536</b>	<b>1,956</b>	<b>43.1%</b>
<b>- Combined - Synthetic Turf</b>	<b>5,040</b>	<b>4,428</b>	<b>87.9%</b>

FCPS and Community Usage	Field Usage (Hrs/Year)	% Field Usage
<b>Stadium Field - Grass</b>		
- FCPS Usage	360	100.0%
- Community Usage	0	0.0%
<b>Total:</b>	<b>360</b>	<b>100.0%</b>
<b>Stadium Field - Synthetic Turf</b>		
- FCPS Usage	1,536	66.0%
- Community Usage	792	34.0%
<b>Total:</b>	<b>2,328</b>	<b>100.0%</b>
<b>Practice Field - Grass</b>		
- FCPS Usage	996	62.4%
- Community Usage	600	37.6%
<b>Total:</b>	<b>1,596</b>	<b>100.0%</b>
<b>Practice Field - Synthetic Turf</b>		
- FCPS Usage	720	34.3%
- Community Usage	1,380	65.7%
<b>Total:</b>	<b>2,100</b>	<b>100.0%</b>
<b>Two-Field Usage - Grass</b>		
- FCPS Usage	1,356	69.3%
- Community Usage	600	30.7%
<b>Total:</b>	<b>1,956</b>	<b>100.0%</b>
<b>Two-Field Usage - Synthetic Turf</b>		
- FCPS Usage	2,256	50.9%
- Community Usage	2,172	49.1%
<b>Total:</b>	<b>4,428</b>	<b>100.0%</b>

Synthetic Turf Increased Usage Over Grass		
- FCPS Usage	900	36.4%
- Community Usage	1,572	63.6%
<b>Total:</b>	<b>2,472</b>	<b>100.0%</b>