

Baseball Field Utilization in Arlington

Over the past three weeks, I have tried to do a thorough analysis of baseball field usage in Arlington, including a detailed utilization review of youth baseball fields during the week of April 11 through 17, 2016. This paper summarizes my findings. Supporting spreadsheets are available to anyone who wishes to see them.

- **Baseball is played at most for 4.21% of daylight hours during the year.** Baseball is played primarily on Saturdays, Sunday afternoons, and weekday evenings. Parks are used by others all day, every day. Based on analyses of games and practices played in spring and fall, baseball is played at most during 4.21% of daylight hours over the course of a year, and just roughly 12.5% of daylight hours during spring.
- **Fall baseball is played less than 10% as many hours as spring baseball.** In spring, baseball practices through playoffs run from March through mid June. Heaviest play is in April and May. As an example, youth played 334 hours of baseball in Arlington during the week of 4/11-4/17/2016. Youth will have played a grand total of 239.5 hours during the entire time between 9/5/2016 and 11/7/2016.
- **Usage data show that Arlington has a surplus of baseball fields.** Baseball supporters have claimed that there are too few baseball fields in Arlington. Usage data refute that argument. During the reference week in April, the fields in Arlington were used during 40% of hours when baseball is normally played, indicating a 60% supply cushion for youth baseball diamonds in Arlington. For the eleven fields comparable to Bluemont 3, the utilization rate was 54.39%, again showing a generous supply cushion for advanced youth baseball.
- **The proposed baseball field improvements would benefit only 765 boys, while harming thousands of other park users.** The Bluemont 3 field at issue would be used by just 765 players in any given year. That is 0.347% of Arlingtonians.

Details

Arlington has 29 youth baseball diamonds divided between parks and schools. It has additional softball diamonds, high school diamonds and adult diamonds that are occasionally used by youth baseball. In my analyses, I allotted to non-youth fields only the availability that equaled the hours they were used.

Arlington has two youth baseball leagues, the Babe Ruth League, which plays only in the spring, and Little League, which plays in both spring and fall.

The baseball diamond at Bluemont 3 is being designed with a pitchers' mound either 46 or 50 feet from home plate. As such, it will be used by three divisions in each league: AAA, Majors

46/60 and Majors 50/70 in Little League and AAA-2nd Year, Majors 46/60 and Majors 50/70 in Babe Ruth. Allotting 15 players per roster per team in each division of each league, I calculated 255 Little League players and 510 Babe Ruth players. I used 2016 population estimates from the County's website to calculate percentages.

Both Little League and Babe Ruth post their schedules for games and practices on line. I used the week of April 11-17, 2016 as a reference week. Using the online schedules for that week, I entered the number of baseball games or practices played in each league division (including TeeBall, etc.) on each field in Arlington into a spreadsheet. For April, I used estimated times for games; for fall, I used actual times because those are listed on the Little League schedule. For TeeBall and Rookie games, I allotted 1 hour per game; for Single A games, I allotted 1.5 hours per game or practice; for all others, I allotted 2 hours.

For non-lighted fields, I assumed that baseball could be played between 9 a.m. and 7 p.m. on Saturdays, between 1 p.m. and 7 p.m. on Sundays (except for the single instance where a game began at 11 a.m.), and between 5 p.m. and 7 p.m. on weekdays (except for the single instance where a game began at 4 p.m. at Westover 1.) For lighted fields, I added two hours of daylight per day.

I used the Naval Observatory's data on daylight hours.

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Table 1 - Baseball Field Utilization in Arlington

Based on Games and Practices played by Babe Ruth and Little League Teams in Arlington the week of April 11-17, 2016, as Reflected in the Leagues' Public Schedules

Total of 340 hours of baseball played during week across all fields combined

Month	Daylight Hours	Baseball %¹	Average/Field
January	303:43:00	0.0%	0:00:00
February	312:07:00	0.0%	0:00:00
March	371:48:00	6.00%	22:18:29
April	397:45:00	12.52%	49:47:54
May	443:58:00	13.00%	57:42:56
June	445:26:00	10.00%	44:32:36
July	451:26:00	0.50%	2:15:26
August	422:07:00	0.00%	0:00:00
September	372:10:00	1.60% ²	5:57:17
October	345:36:00	1.50%	5:11:02
November	301:31:00	0.0%	0:00:00
December	294:22:00	0.0%	0:00:00
Total year	4461:59:00	3.76%³ or 4.21%⁴	187:45:40

Table 2 – Actual Total Hours Little League Baseball Played per fall week across all fields combined

Fall Weeks	Hours Little League
9/5-9/11/2016	2.00
9/12-9/18/2016	33.25
9/19-9/25/2016	40.75
9/26-10/2/2016	27.75
10/3-10/9/2016	14.25
10/10-10/16/2016	32.00
10/17-10/23/2016	32.00
10/24-10/30/2016	29.00
10/31-11/6/2016	26.50
11/7/2016	2.00

¹ Extrapolated from April 11-17 usage

² Highest fall utilization rate was 40.75 hours the week of 9/19-9/25. Utilization week of 4/11-4/17 was 334 hours.

³ Calculated based on usage percentage for the year

⁴ Calculated based on sum of computed hours

Total hours played in fall	239.5
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Table 3 - Teams Eligible to Use Bluemont 3

Division	Team	Coach(es)	Assumed Roster
BR AAA-2 nd Year American	Muckdogs	Greenwood	15
“	Volcanoes	Menard	15
“	Ironbirds	Adams/Sosler	15
“	Sea Dogs	Dale	15
“	Mudcats	Cockrell	15
BR AAA-2 nd Year National	Mud Hens	Engelken	15
“	Riverdogs	Miller	15
“	Lake Monsters	Holland	15
“	Iron Pigs	Leonard	15
“	Paw Sox	Foti/Tallon	15
“	Sand Gnats	Matechak/Polly	15
“	Timber Rattlers	Peretti	15
BR Majors 46/60	Pirates	Butler	15
“	Orioles	Coyne	15
“	Cardinals	Newfield	15
“	Nationals	Foti/McGraw	15
“	Giants	Guffey	15
“	Phillies	Galupo	15
“	Astros	Rosenbaum	15
“	Cubs	Koomey	15
“	Mets	Black	15
“	Royals	Posner	15
“	Braves	Moran	15
“	Tigers	Defalco	15
“	Red Sox	Murray	15
BR Majors 50/70	Nationals	Porter	15
“	Orioles	Powers	15
“	Astros	Juliano	15
“	Mariners	Eby	15
“	Cubs	Koomey	15
“	Diamondbacks	Knowles	15
“	Reds	Cardinale	15
“	Red Sox	Murray	15
Total Babe Ruth			510
LL AAA	Blue Claws		15
“	Express		15
“	Iron Pigs		15
“	Legends		15

LL AAA (cont)	Rockhounds		15
"	Thunder		15
"	Scrappers		15
"	RiverCats		15
LL Majors 46/60	Bats		15
"	Bills		15
"	Express		15
"	Redwings		15
"	Thunder		15
LL Majors 50/70	Bats		15
"	Iron Pigs		15
"	Mudcats		15
"	Timber Rattlers		15
Total Little League			255
Total AAA-2—50/70			765