

# MEMORANDUM

**TO:** Dave Allen, Peter Rice, City of Portsmouth

**FROM:** Michael Moonan, RLA, Weston & Sampson

**DATE:** February 28, 2020

**SUBJECT:** Community Fields - Natural Grass and Synthetic Turf Field Usage

As a follow up to the City Council working session on natural grass and synthetic turf, I would like to provide you with some additional information regarding field use. During research for one of the many community-wide recreation and parks master plans that we are working on, we came across this chart from North Carolina State University. This information is in line with our opinion on natural grass field usage, we also added a brief description of the required maintenance associated with the usage:

North Carolina State University - North Carolina Cooperative Extension Expected Field Condition Based on Hours of Field Use					Weston & Sampson Recommended Maintenance for good quality safe turf
Condition	Hrs Per Year		Hrs Per Week		
	Min	Max	Min	Max	
Sustained Good Field Conditions	0	200	0	8	Routine Maintenance Program
Good Field Conditions with some Thinning of Turf and Localized Wear Areas	400	600	15	23	Routine maintenance, must include slit seeding and deep-tine aeration
Fair Field Conditions; Expect Significant Thinning and Wear	800	1000	31	38	Routine maintenance, must include slit seeding, deep-tine aeration and sodding of wear areas
Poor Field Conditions with Significant Turf Loss, Field Surface Damage, and Increased Potential for Athlete Injury	1000+		38		May not be achievable, all of the above is necessary and it may require significant rest or minor reconstruction.

As mentioned, we are working on or have completed over 30 community-wide recreation and parks master plans. During these master plans we analyze field usage and the condition of the fields. These plans have included a total of over 250 natural grass fields. The above chart, even though it is from a warmer weather climate, is in line with our findings from our master plans. When we recommend potential field use to a community, we do so not only based on information from the turf industry, university level studies and findings and other information; we also use our past information from the many master plans we have completed. I also recently spoke at the Northern New England Recreation and Parks Conference (NNERPC) on Community-wide Recreation and Parks Master Planning. I have also spoken at the American Sports Builders Association (ASBA), nationally, on the Reconstruction of Natural Turf Fields.

Also, of note, we designed a field a few years ago and it has been open to the public for about a year. We recommended synthetic turf, but due to aggressive community pushback the city decided to go with natural grass. We designed it as a high-performance sand-based natural grass field. We recommended that they limit it to 600-800 hours of use a year, but due to the use by the community and the school, they did not abide by our recommendation. They also used it during the dormant winter months due to the lack of snow this year which is not advised for natural turf under any scenario. The city does have a turf manager dedicated to the maintenance of natural grass fields and he continually tends to these fields. Since they had a push from the community, they hired a natural grass advising firm to coordinate and establish their maintenance efforts.

Coincidentally, this is the project where we came across Jerad Minnick and he advised the city that they could and should go with natural turf without a problem. The notice below indicates that they are closing the field for use until April, so the field has a chance to rejuvenate. Had the city gone with synthetic turf they could have used it all winter this year and there would have been no issues. Here is the notice regarding the field closure:

***Somerville, MA - Important Information About Playing Field at Lincoln Park for February & March 2020***

*In an effort to protect the natural grass field at Lincoln Park and prolong longevity for spring use, a temporary fence will be installed along the perimeter of the playing field from early February 2020 until approximately mid-April 2020 (weather permitting). It is imperative we give the field time to freeze and thaw in an undisturbed manner so that the field will be available for use by our many local organizations as well as the community at large. Failure to appropriately allow for freezing and thawing could result in limited playing time and damage to the field such as irreparable root, foliar, and structural damage to the turf as well as disturb the structural integrity of the newly installed and graded field.*

*This temporary fence will allow us to limit the use as well as promote root and plant health during a vulnerable and essential establishment period each year. Lincoln Park is heavily used by students at the Argenziano School during recess and gym classes, as well as permitted users like SYSL, and has regular foot traffic at all times of day. This temporary fencing will allow us to protect our field, and help ensure a safer healthier surface come April. The field at Lincoln Park will remain closed until April (weather permitting). We appreciate your understanding, cooperation, and support in this matter. We at Somerville Parks and Recreation understand the frustrations in closing one of our few green spaces, however this effort is essential to have a more sustainable field for all users in the spring, summer, and fall.*

*Thank you for your understanding,  
Somerville Parks and Recreation*