



Town of Arlington  
Department of Health and Human Services  
Office of the Board of Health

27 Maple Street  
Arlington, MA 02476

Tel: (781) 316-3170  
Fax: (781) 316-3175

Artificial Turf Study Committee Agenda  
01/23/24

Meeting Date: January 23, 2024

Meeting Time: 5PM-6:30PM

Location: Zoom- Registration link:

<https://town-arlington-ma-us.zoom.us/meeting/register/tZAvcuqoqTssHt1BnuSXOpbXEnysRzAC-LUe>

**Objectives:**

- 1) To provide feedback/guidance to each working group on current research findings.
- 2) To further clarify additional research needs within working groups and any additional topic areas relevant to Artificial and Natural Turf fields.
- 3) To identify potential Subject Matter Experts that members of the working groups would like to invite to a future meeting to present information to the Committee.

**Agenda**

- I. Acceptance of Meeting Minutes
- II. Correspondence Received
- III. Working Group updates
  - a. Health
  - b. Safety
  - c. Environmental
- IV. Discussion: Additional research needs/ gaps
- V. Discussion: Project Timelines
- VI. Discussion: Subject Matter Experts
- VII. New Business
- VIII. Adjourn



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## Artificial Turf Study Committee Meeting Minutes

Meeting Date: January 16, 2024

Meeting Time: 5PM-6:30PM

Location: Zoom- Registration link:

<https://town-arlington-ma-us.zoom.us/meeting/register/tZAvcuqoqTssHt1BnuSXOpbXEnysRzAC-LUe>

### **Objectives:**

- 1) To provide feedback/guidance to each working group on current research findings.
- 2) To establish a guidelines/standard structure for how groups will report out their final research findings to the larger group of Committee Members.
- 3) To further clarify additional research needs within working groups and any additional topic areas relevant to Artificial and Natural Turf fields.
- 4) To identify potential Subject Matter Experts that members of the working groups would like to invite to a future meeting to present information to the Committee.

Committee Members present: James DiTullio, Chair; Natasha Waden, Clerk; Mike Gildesgame; Leslie Mayer; Jill Krajewski; Joseph Connelly; Claire Ricker

### **Agenda**

- I. Acceptance of Meeting Minutes

Motion to approve meeting minutes from 01/09/2024 was made by Mike Gildesgame.

2<sup>nd</sup> by Leslie Mayer

#### **Vote:**

Mike Gildesgame, Yes  
Leslie Mayer, Yes  
Joseph Barr, Absent  
Jill Krajewski, Abstain  
Natasha Waden, Yes  
Marvin Lewiton, Absent  
James DiTullio, Yes

Approved (4-0 with 2 Absent and 1 Abstain)

## II. Correspondence Received

Natasha Waden reviewed correspondence received from Susan Chapnick and Leslie Mayer. No additional discussion by Committee Members.

## III. Working Group updates

### a. Health

This group is composed of Marvin Lewiton, Jill Krajewski and Natasha Waden. Lewiton was unable to attend this meeting, but did provide input/feedback to the health working group via email which was incorporated into the update provided by the group.

The group reported that they had not been able to meet in the last week due to vacation schedules, but that members have been working independently to review a variety of studies that have been shared amongst the group. Additionally, the group has begun to reach out to potential speakers and hopes to share more information about this next week.

### b. Safety

This group is composed of James DiTullio, Leslie Mayer, and Joseph Connelly.

This group met and discussed possible speakers and additional research avenues to explore. The group has reached out to Mass Department of Public Health in hopes to connect with someone from the agency or multiple agencies that have put together the State's FAQ on Artificial Tuft. Additionally, the group has reached out to the Athletic Director at Arlington High School in hopes to connect with one of the athletic trainers who may be willing to speak to the group about injuries/safety issues they have observed as it pertains to Artificial Turf and Natural Turf fields.

### c. Environmental

This group is composed of Mike Gildesgame, Joseph Barr, and Claire Ricker. Barr was unable to attend this meeting.

The group has reached out to a variety of agencies, including but not limited to: 1) Mass DEP Northeast Region to discuss any investigations, cases, or research that they are involved with as it relates to Artificial Turf Fields. Although the group is waiting on more information from DEP, they did discover that there is a case before DEP in regards to an Artificial Turf field at a school in Dorchester, MA. 2) The group is also waiting to hear back from representatives at the Mass Department of Fish and Wildlife to determine if they have any investigations, cases, or ongoing research related to artificial turf. 3) The group has reached out to the State House to get background information on a Bill sponsored by Senator Pacheco regarding Artificial Turf.

The group has looked further into the City of Boston's ban on Artificial Turf and discovered that Mayor Wu's initial Executive Order on the ban, may now be a recommendation, but the group is still looking to get more information on this.

The group acknowledged that it has been difficult to find studies on non-rubber infill materials and components of Artificial Turf fields for the purpose of understanding the

potential impacts these materials may have on the environment. However, the group has reached out to some of the EPA research groups regarding non-rubber infill materials and hopes to provide that information to the Committee at a future meeting.

The group has identified several possible speakers including toxicologists from academia, but a challenge has been the ability to identify a presenter who can give a broad overview of the big picture.

#### IV. Discussion: Guidelines for working group reports

The Committee discussed the best way to move forward would be for each working group to outline bullet points about the topics they have been researching and a narrative on what they have concluded from the research. This would allow all Members to get a better understanding of: 1) the research topics each group has covered; 2) the direction the research is leading the group in; and 3) provide an opportunity for Members to give feedback on whether or not any additional topics in the respective category should be further explored or revisited.

The Committee seemed to agree that the final report would include a narrative from each of the working groups that will follow a standard format. Some components of the format include an introduction of the working groups, the specific topics the group covered, how research was conducted, what the findings were, what gaps were identified, what conclusions the group came to, what/if any mitigation measures were identified, and what/if any recommendations the group proposes. Additional components of the final report will be discussed in future meetings.

#### V. Discussion: Additional research needs/ gaps

Jim DiTullio discussed concerns raised by various Committee Members as it pertains to Artificial Turf topics/concerns that fall outside of the working groups and preview of the Committee, but none the less seem relevant for Town Meeting members to make informed decisions about Natural/Artificial Turf fields. Topics included the following: 1) field cost comparisons between Artificial and Natural Turf as it relates to installation, maintenance, and repairs; 2) general information such as the number and types of fields available in Arlington; 3) field demands of user groups; 4) closure of fields due to inclement weather and/or excessive heat; and 5) comparison of the number of playing hours between Artificial and Natural Turf fields.

The Committee seemed to agree that these topics were relevant and should be further explored and included in the final report to Town Meeting. As such, Natasha Waden agreed to follow up with the Town Manager's Office to determine if there are other departments or town staff available to help with obtaining this information. Joe Connelly also offered to assist with gathering this data and consulting with some landscape architects to get some estimates on the cost differences associated with the installation, maintenance, and repairs as it pertains to Natural and Artificial Turf fields.

#### VI. Discussion: Subject Matter Experts

This agenda item was discussed under the working group updates.

VII. Discussion: Updated 2024 Meeting Schedule

Natasha Waden reported that the survey results revealed that Tuesday evenings from 5pm-6:30pm still appears to be the best meeting time for the Committee. However, the second best meeting time was Thursday evenings from 6pm-7:30pm.

The Committee agreed to continue to meet on Tuesdays at 5pm-6:30pm.

VIII. New Business

No new business was discussed.

IX. Adjourn

Motion to adjourn was made by Leslie Mayer.

2<sup>nd</sup> by Mike Gildesgame.

Vote:

Mike Gildesgame, Yes  
Leslie Mayer, Yes  
Joseph Barr, Absent  
Jill Krajewski, Yes  
Natasha Waden, Yes  
Marvin Lewiton, Absent  
James DiTullio, Yes

Approved (5-0, with 2 Absent)



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**ARTIFICIAL TURF COMMITTEE MEETING COMMENTS FROM THE CHAT**

Date: January 16, 2024

Time: 5PM

Location: Remote Participation

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Wynelle Evans

13:03

**WE**

Can you post the state's FAQ in the chat? Thank you!

Grant Cook

14:17

**GC**

<https://www.mass.gov/info-details/artificial-turf-fields>

Wynelle Evans

14:36

**WE**

Yep, just found it—thx.

Grant Cook

15:02

**GC**

The writeup speaks a lot to crumb rubber, which is not a given in all usages.

Susan Chapnick

18:06

**SC**

I don't think Arlington HS has athletes playing on artificial turf in the summer months - so may not have the heat perspective

Thanks Joe !- I didn't know that

Wynelle Evans

41:03

**WE**

In terms of additional research, it would make sense to track what is happening with legislative and regulatory changes re: artificial turf and PFAS. The climate there is changing rapidly, and the possibility of negative future impacts on the town should be considered.

Susan Stamps

51:48

**SS**

Question for the committee: Is the issue of number of potential field users more important than possible adverse environmental impact and long-term health concerns of artificial turf? Are they equally important? Less important?

Susan Chapnick

59:55

**SC**

There are maintenance and disposal costs on the Synthetic Turf Association website info and in TURI fact sheets.

Susan Chapnick

01:01:05

**SC**

Soil / Grass caps are acceptable under MassDEP as a remedial strategy =  
For landfills  
I don't think that is an accurate representation of the regulations in MA  
that a concrete cap is needed is not accurate

Susan Stamps

01:06:25

**SS**

I don't think we can predict based on historic data, ex. we just had the hottest 3 years on the plane.t

Susan Chapnick

01:08:48

**SC**

NOAA has Daily temperature and precipitation data tables - can access them on-line

Wynelle Evans

01:09:48

**WE**


Thanks all!

## Re: Review of Artificial Turf Study Committee Meeting days/times

Joe Connelly <jconnelly@town.arlington.ma.us>

Thu 1/11/2024 8:43 AM

To: Natasha Waden <nwaden@town.arlington.ma.us>

 1 attachments (198 KB)

MIAA-Heat-Modification-Policy-081821-amended-9-1-22CB.pdf;

Here is the MIAA Heat Policy

Joseph Connelly, M.Ed.

Director of Recreation

Town of Arlington

781-316-3889

jconnelly@town.arlington.ma.us

### Public Records Notice

*Please be advised that pursuant to G.L. c. 4 sec. 7(26) email correspondence to and from public employees is considered a public record. Only where the content of an email falls within one of the stated exemptions within the law may the Town withhold documents or information.*

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**From:** Natasha Waden <nwaden@town.arlington.ma.us>

**Sent:** Wednesday, January 10, 2024 4:19 PM

**To:** james\_ditullio@hotmail.com <james\_ditullio@hotmail.com>; Marvin Lewiton <mlewiton@verizon.net>; JILL.KRAJEWSKI.ARLINGTON@GMAIL.COM <jill.krajewski.arlington@gmail.com>; jobar@alum.mit.edu <jobar@alum.mit.edu>; Leslie Mayer <lmayer@town.arlington.ma.us>; Mike Gildesgame <mikeg125@gmail.com>; David Morgan <dmorgan@town.arlington.ma.us>; Joe Connelly <jconnelly@town.arlington.ma.us>; Claire Ricker <cricker@town.arlington.ma.us>

**Cc:** Colleen Leger <cleger@town.arlington.ma.us>; Christine Bongiorno <CBongiorno@town.arlington.ma.us>

**Subject:** Review of Artificial Turf Study Committee Meeting days/times

Good Evening all,

As discussed, with the new year, we recognize that schedules can change. We thought it would be a good time to check in to re-evaluate our meeting options.

Please complete the survey which can be found [here](#). There are only 2 questions and it shouldn't take much time at all. We will discuss our options at next week's meeting.

Thank you!

Natasha

Natasha Waden, MPA

Public Health Director



Email: [nwaden@town.arlington.ma.us](mailto:nwaden@town.arlington.ma.us)

Phone: 781-316-3170

Town of Arlington

[www.arlingtonma.gov](http://www.arlingtonma.gov)



### MIAA Heat Modification Policy

August 18, 2021

During all activities, each individual school, or district, must select and promote a method of monitoring the environment for heat related concerns and comply with standard recommendations for activity modifications, for the safety of the student-athlete.

Schools must follow the statewide policy for conducting activities in all sports during times of extremely high environmental conditions. The policy shall follow modified guidelines of the American College of Sports Medicine in regard to:

1. The scheduling of practice and interscholastic competition activities at various heat/humidity levels
2. The ratio of workout time to time allotted for rest and hydration at various heat/humidity levels. Game conditions and actual competitions afford valuable work to rest ratios, ability to rest in the shade, ability to hydrate often and other aspects different than continuous 1 to 2 hour practices.
3. The heat/humidity level that will result in activity being modified/altere/cancelled

A scientifically approved instrument that measures Wet Bulb Globe Temperature (WBGT) reading must be utilized at each activity to ensure that the written policy is being followed properly. For indoor events without climate control, a WBGT reading should be taken indoors. For climate-controlled indoor events, this measurement is unnecessary. WBGT can change during an event and throughout the day.

WBGT READING	PRACTICE AND/OR COMPETITION ACTIVITY
Below 76°F	Normal activities. Provide at least 3 separate rest breaks each hour for a minimum duration of 3 minutes each during workout.
76.1-81.0°F	Use discretion for intense or prolonged exercise, and watch at-risk players carefully. Provide at least 3 separate rest breaks each hour for a minimum duration of 4 minutes each.
81.1-84.0°F	Maximum activity time is 2 hours. For equipment intensive sports: Players should be restricted to a helmet, shoulder pads, and shorts during activity; all protective equipment must be removed for conditioning activities. For all sports: Provide at least 4 separate rest breaks each hour for a minimum of 4 minutes each.

84.1-86.0 °F	Maximum length of activity is 1 hour. No protective equipment may be worn during activity, and there may be no conditioning activities. There must be 20 minutes of rest breaks provided during the hour of activity.
Above 86.1 °F	No outdoor workouts. Cancel exercise, and delay activity until a cooler wet-bulb globe temperature reading occurs.
<i>*If equipment modifications are necessary, no games should occur for that sport.</i>	

Guidelines for hydration and rest breaks:

1. Rest time should involve both unlimited hydration intake (water or electrolyte drinks) and rest without any activity involved
2. For sports that use helmets, helmets should be removed during rest time
3. The site of the rest time should be a “cooling zone” and not in direct sunlight

When WBGT is **above 84**, ice water and towels should be available in the “cooling zone” to aid the cooling process. Cold-water immersion tubs should be available for the benefit of any player showing signs of heat illness.

Definitions

1. Practice activity: the period of time that a participant engages in coach-supervised, school-approved sport or conditioning-related practice activity. Practice activities are timed from the time the players report to the field until they leave.
2. Conditioning activities: warmup, stretching, cardio, moderate to intense aerobic activities, etc.
3. Walk through: this period of time shall last no more than one hour and is not considered to be a part of the practice time regulation, and may not involve conditioning or weight-room activities. Players may not wear protective equipment.
4. Interscholastic competition: actual game play between teams and players. Given the opportunity for pauses in play, breaks when changing possessions and valuable work to rest ratios, interscholastic competition can take place up to and including WBGT readings of 86.0 °F.

# EDUCATIONAL ATHLETICS



MIAA | 33 Forge Pkwy | Franklin, MA 02038 | 508-541-7997




## Requested Data

Joe Connelly <jconnelly@town.arlington.ma.us>

Wed 1/17/2024 2:48 PM

To: Leslie Mayer <blmayer@msn.com>; james\_ditullio@hotmail.com <james\_ditullio@hotmail.com>; Natasha Waden <nwaden@town.arlington.ma.us>

 2 attachments (493 KB)

Weather Data.pdf; Maintenance and Weather.xlsx;

Attached is requested data discussed at last nights meeting.

Tab 1 - Field Maintenance Costs -AHS Turf Verse Thorndike Field

Tab 2 - Weather and Usage - Data taken from National Weather Service -Data Attached

.10 rainfall or hire

Rainfall rate is generally described as light, moderate or heavy. Light rainfall is considered less than 0.10 inches of rain per hour. Moderate rainfall measures 0.10 to 0.30 inches of rain per hour. Heavy rainfall is more than 0.30 inches of rain per hour.

This is meant to be a guide, there is a million ways to break down this data.

I have requested field construction costs from three landscape architect firms that specialize in sports fields. Once I get these I will forward.

Joseph Connelly, M.Ed.

Director of Recreation

Town of Arlington

781-316-3889

jconnelly@town.arlington.ma.us

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## Climatological Data for Boston Area, MA (ThreadEx) - March 2023

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-03-01	42	33	37.5	2.9	27	0	0.00	0.0
2023-03-02	44	37	40.5	5.7	24	0	0.58	0.0
2023-03-03	44	34	39.0	4.0	26	0	T	T
2023-03-04	37	31	34.0	-1.2	31	0	0.32	0.4
2023-03-05	43	30	36.5	1.0	28	0	0.00	0.0
2023-03-06	48	37	42.5	6.8	22	0	0.00	0.0
2023-03-07	40	29	34.5	-1.4	30	0	T	T
2023-03-08	47	30	38.5	2.4	26	0	T	T
2023-03-09	49	34	41.5	5.1	23	0	0.00	0.0
2023-03-10	51	32	41.5	4.9	23	0	0.00	0.0
2023-03-11	40	35	37.5	0.7	27	0	0.06	T
2023-03-12	42	32	37.0	-0.1	28	0	0.00	0.0
2023-03-13	42	36	39.0	1.7	26	0	0.34	0.0
2023-03-14	41	33	37.0	-0.6	28	0	2.20	0.5
2023-03-15	44	34	39.0	1.2	26	0	0.01	T
2023-03-16	51	34	42.5	4.4	22	0	0.00	0.0
2023-03-17	53	38	45.5	7.1	19	0	0.00	0.0
2023-03-18	53	40	46.5	7.9	18	0	T	0.0
2023-03-19	40	30	35.0	-3.9	30	0	0.00	0.0
2023-03-20	52	28	40.0	0.8	25	0	0.00	0.0
2023-03-21	58	34	46.0	6.5	19	0	0.00	0.0
2023-03-22	50	38	44.0	4.2	21	0	0.00	0.0
2023-03-23	61	45	53.0	12.9	12	0	T	0.0
2023-03-24	53	38	45.5	5.1	19	0	0.00	0.0
2023-03-25	42	32	37.0	-3.7	28	0	0.06	0.0
2023-03-26	57	40	48.5	7.5	16	0	0.01	0.0
2023-03-27	55	39	47.0	5.6	18	0	0.32	0.0
2023-03-28	46	37	41.5	-0.2	23	0	0.23	0.0
2023-03-29	45	33	39.0	-3.0	26	0	0.00	0.0
2023-03-30	42	32	37.0	-5.4	28	0	0.00	0.0
2023-03-31	48	32	40.0	-2.7	25	0	0.16	0.0
<b>Sum</b>	1460	1067	-	-	744	0	4.29	0.9
<b>Average</b>	47.1	34.4	40.8	2.5	-	-	-	-
<b>Normal</b>	45.5	31.1	38.3	-	828	0	4.17	9.0

Observations for each day cover the 24 hours ending  
at the time given below (Local Standard Time).

Max Temperature : midnight

Min Temperature : midnight

Precipitation : midnight

Snowfall : unknown

**Climatological Data for Boston Area, MA (ThreadEx) - April 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-04-01	63	41	52.0	8.9	13	0	0.35	0.0
2023-04-02	55	35	45.0	1.5	20	0	0.00	0.0
2023-04-03	52	31	41.5	-2.3	23	0	0.00	0.0
2023-04-04	54	43	48.5	4.3	16	0	T	0.0
2023-04-05	49	39	44.0	-0.6	21	0	T	0.0
2023-04-06	56	39	47.5	2.5	17	0	0.01	0.0
2023-04-07	58	39	48.5	3.1	16	0	0.00	0.0
2023-04-08	51	34	42.5	-3.2	22	0	0.00	0.0
2023-04-09	49	35	42.0	-4.1	23	0	0.00	0.0
2023-04-10	62	36	49.0	2.5	16	0	0.00	0.0
2023-04-11	76	47	61.5	14.6	3	0	0.00	0.0
2023-04-12	72	52	62.0	14.7	3	0	0.00	0.0
2023-04-13	88	49	68.5	20.8	0	4	0.00	0.0
2023-04-14	83	49	66.0	17.9	0	1	0.00	0.0
2023-04-15	57	47	52.0	3.5	13	0	T	0.0
2023-04-16	55	48	51.5	2.6	13	0	T	0.0
2023-04-17	53	47	50.0	0.7	15	0	0.08	0.0
2023-04-18	60	48	54.0	4.4	11	0	T	0.0
2023-04-19	52	43	47.5	-2.5	17	0	0.00	0.0
2023-04-20	58	42	50.0	-0.4	15	0	0.00	0.0
2023-04-21	51	45	48.0	-2.8	17	0	T	0.0
2023-04-22	50	46	48.0	-3.1	17	0	0.22	0.0
2023-04-23	52	48	50.0	-1.5	15	0	0.51	0.0
2023-04-24	56	47	51.5	-0.3	13	0	0.00	0.0
2023-04-25	57	46	51.5	-0.7	13	0	T	0.0
2023-04-26	52	46	49.0	-3.5	16	0	0.00	0.0
2023-04-27	56	45	50.5	-2.4	14	0	0.04	0.0
2023-04-28	57	44	50.5	-2.7	14	0	0.00	0.0
2023-04-29	52	48	50.0	-3.5	15	0	0.08	0.0
2023-04-30	54	49	51.5	-2.3	13	0	1.81	0.0
<b>Sum</b>	1740	1308	-	-	424	5	3.10	0.0
<b>Average</b>	58.0	43.6	50.8	2.2	-	-	-	-
<b>Normal</b>	56.4	40.8	48.6	-	496	4	3.63	1.6

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown

**Climatological Data for Boston Area, MA (ThreadEx) - May 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-05-01	64	49	56.5	2.3	8	0	0.05	0.0
2023-05-02	61	47	54.0	-0.5	11	0	0.16	0.0
2023-05-03	55	45	50.0	-4.8	15	0	0.03	0.0
2023-05-04	50	44	47.0	-8.1	18	0	0.01	0.0
2023-05-05	55	46	50.5	-4.9	14	0	0.02	0.0
2023-05-06	76	51	63.5	7.9	1	0	0.00	0.0
2023-05-07	79	58	68.5	12.6	0	4	0.01	0.0
2023-05-08	76	52	64.0	7.8	1	0	T	0.0
2023-05-09	57	50	53.5	-3.0	11	0	0.00	0.0
2023-05-10	73	48	60.5	3.7	4	0	0.00	0.0
2023-05-11	82	58	70.0	13.0	0	5	T	0.0
2023-05-12	85	57	71.0	13.7	0	6	T	0.0
2023-05-13	82	59	70.5	12.9	0	6	0.00	0.0
2023-05-14	68	50	59.0	1.2	6	0	0.00	0.0
2023-05-15	74	52	63.0	4.9	2	0	0.00	0.0
2023-05-16	81	61	71.0	12.6	0	6	0.00	0.0
2023-05-17	61	44	52.5	-6.1	12	0	0.00	0.0
2023-05-18	64	42	53.0	-5.9	12	0	0.00	0.0
2023-05-19	69	46	57.5	-1.7	7	0	0.00	0.0
2023-05-20	66	53	59.5	0.0	5	0	1.83	0.0
2023-05-21	76	61	68.5	8.8	0	4	0.11	0.0
2023-05-22	64	50	57.0	-3.0	8	0	0.00	0.0
2023-05-23	59	49	54.0	-6.3	11	0	0.00	0.0
2023-05-24	74	48	61.0	0.4	4	0	0.03	0.0
2023-05-25	66	51	58.5	-2.4	6	0	T	0.0
2023-05-26	63	51	57.0	-4.2	8	0	0.00	0.0
2023-05-27	75	51	63.0	1.5	2	0	0.00	0.0
2023-05-28	86	59	72.5	10.7	0	8	0.00	0.0
2023-05-29	67	52	59.5	-2.6	5	0	0.00	0.0
2023-05-30	62	48	55.0	-7.4	10	0	0.00	0.0
2023-05-31	77	49	63.0	0.3	2	0	0.00	0.0
<b>Sum</b>	2147	1581	-	-	183	39	2.25	0.0
<b>Average</b>	69.3	51.0	60.1	1.7	-	-	-	-
<b>Normal</b>	66.5	50.3	58.4	-	234	29	3.25	0.0

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown

**Climatological Data for Boston Area, MA (ThreadEx) - June 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-06-01	84	59	71.5	8.4	0	7	0.00	0.0
2023-06-02	83	57	70.0	6.6	0	5	0.37	0.0
2023-06-03	57	47	52.0	-11.7	13	0	0.08	0.0
2023-06-04	55	47	51.0	-13.1	14	0	0.10	0.0
2023-06-05	61	51	56.0	-8.4	9	0	0.07	0.0
2023-06-06	75	57	66.0	1.2	0	1	T	0.0
2023-06-07	66	56	61.0	-4.1	4	0	0.00	0.0
2023-06-08	65	55	60.0	-5.5	5	0	0.01	0.0
2023-06-09	63	53	58.0	-7.8	7	0	0.04	0.0
2023-06-10	65	54	59.5	-6.7	5	0	0.34	0.0
2023-06-11	75	54	64.5	-2.0	0	0	0.00	0.0
2023-06-12	81	62	71.5	4.6	0	7	0.34	0.0
2023-06-13	70	60	65.0	-2.2	0	0	0.01	0.0
2023-06-14	79	59	69.0	1.4	0	4	0.12	0.0
2023-06-15	80	60	70.0	2.1	0	5	0.00	0.0
2023-06-16	79	66	72.5	4.2	0	8	T	0.0
2023-06-17	67	58	62.5	-6.1	2	0	0.77	0.0
2023-06-18	67	59	63.0	-5.9	2	0	0.04	0.0
2023-06-19	65	58	61.5	-7.8	3	0	0.00	0.0
2023-06-20	65	56	60.5	-9.1	4	0	T	0.0
2023-06-21	66	57	61.5	-8.4	3	0	0.00	0.0
2023-06-22	66	58	62.0	-8.2	3	0	0.00	0.0
2023-06-23	74	60	67.0	-3.5	0	2	T	0.0
2023-06-24	80	68	74.0	3.2	0	9	0.05	0.0
2023-06-25	84	71	77.5	6.4	0	13	0.02	0.0
2023-06-26	83	69	76.0	4.6	0	11	0.00	0.0
2023-06-27	80	69	74.5	2.9	0	10	0.55	0.0
2023-06-28	80	68	74.0	2.1	0	9	0.53	0.0
2023-06-29	80	67	73.5	1.4	0	9	T	0.0
2023-06-30	76	66	71.0	-1.3	0	6	0.00	0.0
<b>Sum</b>	2171	1781	-	-	74	106	3.44	0.0
<b>Average</b>	72.4	59.4	65.9	-2.1	-	-	-	-
<b>Normal</b>	76.2	59.7	68.0	-	50	138	3.89	0.0

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown



**Climatological Data for Boston Area, MA (ThreadEx) - August 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-08-01	78	65	71.5	-2.7	0	7	0.00	0.0
2023-08-02	72	60	66.0	-8.1	0	1	0.00	0.0
2023-08-03	80	61	70.5	-3.6	0	6	0.00	0.0
2023-08-04	80	66	73.0	-1.0	0	8	0.00	0.0
2023-08-05	77	66	71.5	-2.5	0	7	0.00	0.0
2023-08-06	84	64	74.0	0.1	0	9	0.00	0.0
2023-08-07	75	65	70.0	-3.8	0	5	T	0.0
2023-08-08	85	66	75.5	1.8	0	11	1.33	0.0
2023-08-09	85	71	78.0	4.3	0	13	0.00	0.0
2023-08-10	85	70	77.5	3.9	0	13	0.04	0.0
2023-08-11	84	68	76.0	2.5	0	11	0.05	0.0
2023-08-12	82	63	72.5	-0.9	0	8	0.00	0.0
2023-08-13	88	71	79.5	6.2	0	15	0.15	0.0
2023-08-14	85	70	77.5	4.3	0	13	T	0.0
2023-08-15	76	67	71.5	-1.6	0	7	0.64	0.0
2023-08-16	70	66	68.0	-5.0	0	3	T	0.0
2023-08-17	71	63	67.0	-5.9	0	2	T	0.0
2023-08-18	81	67	74.0	1.3	0	9	1.35	0.0
2023-08-19	74	60	67.0	-5.6	0	2	0.00	0.0
2023-08-20	84	66	75.0	2.5	0	10	0.00	0.0
2023-08-21	86	68	77.0	4.7	0	12	0.28	0.0
2023-08-22	75	63	69.0	-3.2	0	4	0.00	0.0
2023-08-23	72	62	67.0	-5.0	0	2	0.00	0.0
2023-08-24	78	59	68.5	-3.4	0	4	0.01	0.0
2023-08-25	73	61	67.0	-4.7	0	2	1.78	0.0
2023-08-26	85	69	77.0	5.5	0	12	0.00	0.0
2023-08-27	72	64	68.0	-3.3	0	3	T	0.0
2023-08-28	71	62	66.5	-4.6	0	2	T	0.0
2023-08-29	72	64	68.0	-2.9	0	3	0.29	0.0
2023-08-30	82	67	74.5	3.8	0	10	0.54	0.0
2023-08-31	73	61	67.0	-3.5	0	2	0.00	0.0
<b>Sum</b>	2435	2015	-	-	0	216	6.46	0.0
<b>Average</b>	78.5	65.0	71.8	-0.9	-	-	-	-
<b>Normal</b>	80.4	65.1	72.7	-	5	245	3.23	0.0

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown

**Climatological Data for Boston Area, MA (ThreadEx) - September 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-09-01	70	57	63.5	-6.7	1	0	0.00	0.0
2023-09-02	80	58	69.0	-1.0	0	4	0.00	0.0
2023-09-03	86	64	75.0	5.3	0	10	0.01	0.0
2023-09-04	81	67	74.0	4.6	0	9	0.00	0.0
2023-09-05	84	67	75.5	6.3	0	11	0.00	0.0
2023-09-06	87	75	81.0	12.1	0	16	0.00	0.0
2023-09-07	93	75	84.0	15.4	0	19	0.00	0.0
2023-09-08	88	71	79.5	11.2	0	15	0.00	0.0
2023-09-09	85	69	77.0	9.0	0	12	0.13	0.0
2023-09-10	74	68	71.0	3.3	0	6	0.20	0.0
2023-09-11	72	68	70.0	2.6	0	5	0.39	0.0
2023-09-12	77	67	72.0	5.0	0	7	0.09	0.0
2023-09-13	76	67	71.5	4.8	0	7	0.57	0.0
2023-09-14	78	63	70.5	4.1	0	6	0.00	0.0
2023-09-15	70	57	63.5	-2.5	1	0	0.00	0.0
2023-09-16	72	59	65.5	-0.2	0	1	0.07	0.0
2023-09-17	78	59	68.5	3.2	0	4	0.00	0.0
2023-09-18	66	63	64.5	-0.4	0	0	1.52	0.0
2023-09-19	73	61	67.0	2.4	0	2	0.00	0.0
2023-09-20	74	59	66.5	2.3	0	2	0.00	0.0
2023-09-21	69	57	63.0	-0.8	2	0	0.00	0.0
2023-09-22	68	57	62.5	-1.0	2	0	0.00	0.0
2023-09-23	61	58	59.5	-3.6	5	0	0.12	0.0
2023-09-24	63	60	61.5	-1.2	3	0	0.31	0.0
2023-09-25	62	59	60.5	-1.8	4	0	0.07	0.0
2023-09-26	60	50	55.0	-7.0	10	0	0.00	0.0
2023-09-27	64	49	56.5	-5.1	8	0	0.00	0.0
2023-09-28	64	52	58.0	-3.2	7	0	0.00	0.0
2023-09-29	61	55	58.0	-2.8	7	0	0.27	0.0
2023-09-30	62	56	59.0	-1.4	6	0	T	0.0
<b>Sum</b>	2198	1847	-	-	56	136	3.75	0.0
<b>Average</b>	73.3	61.6	67.4	1.8	-	-	-	-
<b>Normal</b>	73.1	58.2	65.6	-	71	91	3.56	0.0

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : unknown

**Climatological Data for Boston Area, MA (ThreadEx) - October 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-10-01	68	53	60.5	0.4	4	0	0.00	0.0
2023-10-02	69	57	63.0	3.3	2	0	0.00	0.0
2023-10-03	83	53	68.0	8.7	0	3	0.00	0.0
2023-10-04	77	61	69.0	10.0	0	4	0.00	0.0
2023-10-05	75	60	67.5	8.9	0	3	0.00	0.0
2023-10-06	68	62	65.0	6.8	0	0	0.00	0.0
2023-10-07	67	57	62.0	4.1	3	0	0.13	0.0
2023-10-08	65	52	58.5	1.0	6	0	T	0.0
2023-10-09	63	47	55.0	-2.1	10	0	0.00	0.0
2023-10-10	65	49	57.0	0.2	8	0	0.00	0.0
2023-10-11	69	50	59.5	3.1	5	0	0.00	0.0
2023-10-12	71	53	62.0	5.9	3	0	T	0.0
2023-10-13	63	48	55.5	-0.2	9	0	0.00	0.0
2023-10-14	61	50	55.5	0.1	9	0	0.00	0.0
2023-10-15	61	50	55.5	0.4	9	0	0.00	0.0
2023-10-16	59	49	54.0	-0.7	11	0	0.06	0.0
2023-10-17	60	50	55.0	0.6	10	0	T	0.0
2023-10-18	62	50	56.0	1.9	9	0	T	0.0
2023-10-19	66	52	59.0	5.3	6	0	0.00	0.0
2023-10-20	64	50	57.0	3.6	8	0	0.05	0.0
2023-10-21	60	56	58.0	4.9	7	0	0.56	0.0
2023-10-22	58	48	53.0	0.3	12	0	0.00	0.0
2023-10-23	63	46	54.5	2.1	10	0	T	0.0
2023-10-24	62	45	53.5	1.4	11	0	0.00	0.0
2023-10-25	76	53	64.5	12.8	0	0	0.00	0.0
2023-10-26	80	59	69.5	18.1	0	5	T	0.0
2023-10-27	79	61	70.0	18.9	0	5	0.00	0.0
2023-10-28	81	60	70.5	19.7	0	6	0.00	0.0
2023-10-29	61	47	54.0	3.6	11	0	0.19	0.0
2023-10-30	54	45	49.5	-0.6	15	0	0.43	0.0
2023-10-31	50	40	45.0	-4.8	20	0	0.00	0.0
<b>Sum</b>	2060	1613	-	-	198	26	1.42	0.0
<b>Average</b>	66.5	52.0	59.2	4.4	-	-	-	-
<b>Normal</b>	62.1	47.5	54.8	-	326	9	4.03	0.2

**Observations for each day cover the 24 hours ending at the time given below (Local Standard Time). Observation times may have changed during this period.**

Max Temperature : midnight

Min Temperature : midnight

Precipitation : midnight

Snowfall : unknown, midnight

**Climatological Data for Boston Area, MA (ThreadEx) - November 2023**

Date	Temperature				HDD	CDD	Precipitation	New Snow
	Maximum	Minimum	Average	Departure				
2023-11-01	45	36	40.5	-9.0	24	0	T	0.0
2023-11-02	47	34	40.5	-8.6	24	0	0.00	0.0
2023-11-03	56	37	46.5	-2.3	18	0	0.00	0.0
2023-11-04	60	47	53.5	5.0	11	0	0.00	0.0
2023-11-05	62	46	54.0	5.8	11	0	0.00	0.0
2023-11-06	50	44	47.0	-0.8	18	0	0.00	0.0
2023-11-07	66	49	57.5	10.0	7	0	0.10	0.0
2023-11-08	52	37	44.5	-2.7	20	0	0.00	0.0
2023-11-09	46	37	41.5	-5.3	23	0	0.11	T
2023-11-10	52	38	45.0	-1.5	20	0	0.00	0.0
2023-11-11	49	34	41.5	-4.7	23	0	0.00	0.0
2023-11-12	43	31	37.0	-8.9	28	0	0.00	0.0
2023-11-13	44	28	36.0	-9.5	29	0	0.00	0.0
2023-11-14	49	36	42.5	-2.7	22	0	0.00	0.0
2023-11-15	50	35	42.5	-2.4	22	0	0.00	0.0
2023-11-16	63	43	53.0	8.4	12	0	0.00	0.0
2023-11-17	66	41	53.5	9.3	11	0	0.00	0.0
2023-11-18	58	35	46.5	2.6	18	0	0.10	0.0
2023-11-19	53	35	44.0	0.4	21	0	T	0.0
2023-11-20	40	30	35.0	-8.3	30	0	0.00	0.0
2023-11-21	42	27	34.5	-8.4	30	0	0.03	0.0
2023-11-22	53	38	45.5	2.9	19	0	1.15	0.0
2023-11-23	52	40	46.0	3.7	19	0	0.00	0.0
2023-11-24	49	30	39.5	-2.5	25	0	0.00	0.0
2023-11-25	37	27	32.0	-9.7	33	0	0.00	0.0
2023-11-26	47	28	37.5	-3.9	27	0	0.04	0.0
2023-11-27	55	39	47.0	5.9	18	0	0.40	0.0
2023-11-28	40	31	35.5	-5.2	29	0	0.00	0.0
2023-11-29	37	28	32.5	-7.9	32	0	0.00	0.0
2023-11-30	47	30	38.5	-1.6	26	0	0.00	0.0
<b>Sum</b>	1510	1071	-	-	650	0	1.93	T
<b>Average</b>	50.3	35.7	43.0	-1.7	-	-	-	-
<b>Normal</b>	51.6	37.9	44.7	-	608	0	3.66	0.7

<b>Observations for each day cover the 24 hours ending at the time given below (Local Standard Time).</b>
Max Temperature : midnight
Min Temperature : midnight
Precipitation : midnight
Snowfall : midnight

<b>Maintenance</b>	<b>Artificial Turf</b>	<b>Natural Grass</b>
Annual Mowing/Trimming		\$6,720.00
Line Striping	2925	\$6,720.00
Irrigation Start Up /Shut down		\$5,000.00
Organic Turf Treatment		\$40,000.00
Turf Grooming Contract	\$ 6,200.00	
Gmax Testing	400	
<b>Total</b>	<b>\$9,525.00</b>	<b>\$58,440.00</b>
<b>Annual Estimated Difference</b>		<b>\$48,915.00</b>
<b>10-year turf life span</b>		<b>\$489,150.00</b>

Connelly, Email 2\_Attachment 2

Dates	Total Days	Early Spring Season Closure	Rain Days 2023=>.10">	Temp Over 90
March 15 - June 15	92	20	14	0
August 15 - November 15	92	0	20	1
Total Missed Natural Grass	54			
Total Missed Days Turf	1			
Percentage of Missed Natural Grass	29.35%			
Percentage of Missed Turf	0.54%			
<a href="https://www.weather.gov/wrh/Climate?wfo=box">https://www.weather.gov/wrh/Climate?wfo=box</a>				

**Re: correspondence for the next Artificial Turf Study Committee meeting, please**

Wynelle Evans &lt;evco7@rcn.com&gt;

Thu 1/18/2024 11:12 AM

To: Natasha Waden &lt;nwaden@town.arlington.ma.us&gt;

Cc: james\_ditullio@hotmail.com &lt;james\_ditullio@hotmail.com&gt;

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Thank you!

Best,  
Wynelle

On Jan 18, 2024, at 11:04 AM, Natasha Waden <[nwaden@town.arlington.ma.us](mailto:nwaden@town.arlington.ma.us)> wrote:

Received and will be included in the next packet.

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**From:** Wynelle Evans <[evco7@rcn.com](mailto:evco7@rcn.com)>

**Sent:** Thursday, January 18, 2024 11:00 AM

**To:** [james\\_ditullio@hotmail.com](mailto:james_ditullio@hotmail.com) <[james\\_ditullio@hotmail.com](mailto:james_ditullio@hotmail.com)>; [jobar@alum.mit.edu](mailto:jobar@alum.mit.edu) <[jobar@alum.mit.edu](mailto:jobar@alum.mit.edu)>; Joe Connelly <[jconnelly@town.arlington.ma.us](mailto:jconnelly@town.arlington.ma.us)>; [mikeg125@gmail.com](mailto:mikeg125@gmail.com) <[mikeg125@gmail.com](mailto:mikeg125@gmail.com)>; [jill.krajewski.arlington@gmail.com](mailto:jill.krajewski.arlington@gmail.com) <[jill.krajewski.arlington@gmail.com](mailto:jill.krajewski.arlington@gmail.com)>; [mlewiton@yahoo.com](mailto:mlewiton@yahoo.com) <[mlewiton@yahoo.com](mailto:mlewiton@yahoo.com)>; Leslie Mayer <[lmayer@town.arlington.ma.us](mailto:lmayer@town.arlington.ma.us)>; David Morgan <[dmorgan@town.arlington.ma.us](mailto:dmorgan@town.arlington.ma.us)>; Natasha Waden <[nwaden@town.arlington.ma.us](mailto:nwaden@town.arlington.ma.us)>

**Cc:** Eugene Benson <[EBenson@town.arlington.ma.us](mailto:EBenson@town.arlington.ma.us)>; Susan Stamps <[susan.stamps@comcast.net](mailto:susan.stamps@comcast.net)>; Susan Chapnick <[s.chapnick@comcast.net](mailto:s.chapnick@comcast.net)>

**Subject:** Re: correspondence for the next Artificial Turf Study Committee meeting, please

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with a corrected subject line ...

On Jan 18, 2024, at 10:57 AM, Wynelle Evans <[evco7@rcn.com](mailto:evco7@rcn.com)> wrote:

Dear Members of the Artificial Turf Study Committee:

I'm one of the people who worked hard to bring the original Melofchik Article 12 to Annual Town Meeting. I've attended all your meetings but one, I think, and I applaud the detailed approach you are taking to this issue. (As an aside, I am grateful for the

open chat, and for the transcript of the chat in your excellent minutes. It is a great resource.)

I do have one thought about the work-to-date I'd like to share, which is that the focus is very Arlington-centric. I understand why this is the case, but I believe a strong argument can be made to zoom out and consider our place in the larger world. The Town is working to make our public facilities more energy efficient, to transition public vehicles to hybrid and electric where possible, and is working at the state and local level to encourage new construction that is fossil fuel free. This is all being done with the understanding that addressing climate change requires coordinated, global action.

In exactly the same way, the planet is overwhelmed with plastic pollution, which requires a concerted and world-wide effort to reverse. We are learning more every day about how the vast amount of plastics in our environment affects human health and planetary health. Our role in adding to this glut of material that breaks down into microscopic particles, that is very difficult if not impossible to recycle, and that has known and unknown health effects, especially for children, must be considered as it affects our entire planet.

For this reason, I hope the Committee will acknowledge that what we do in our 5 square miles has much larger impacts, and consider the effects of future use of artificial turf in that context.

Thank you for listening, and for your work.

Best,  
Wynelle

---

Wynelle Evans  
TMM, Pct. 14  
781.859.9291 cell  
[evco7@rcn.com](mailto:evco7@rcn.com)

PS: Would it be possible to provide a contact email on the Study Committee's web page? Thank you!