



# ATHLETIC FIELDS MASTER PLANNING

## Staff Report: May 2018 Update

Parks & Recreation Department  
Park & Open Space, Mayor's Office of Strategic Planning and Community Development  
SomerStat  
May 9, 2018  
Somerville, MA

# Agenda

- Background
- Data Recap
- Fields Master Plan Update, May 2018
- Field Maintenance Update
- Next Steps

# Background

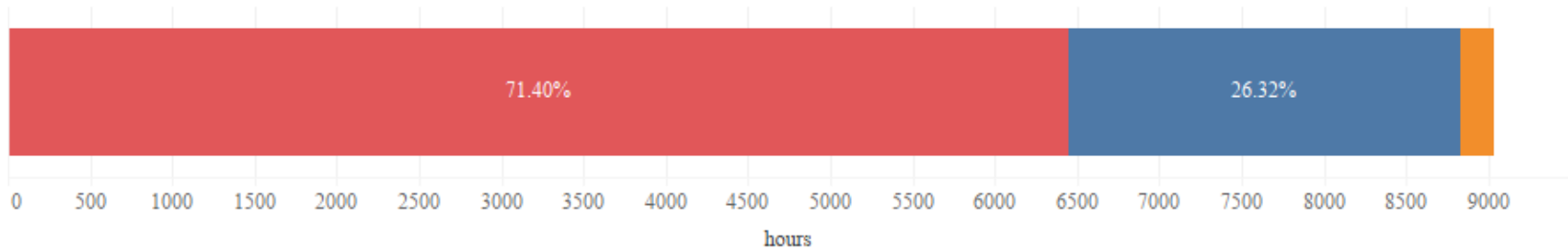
- City staff undertook an Athletic Fields Master Planning effort, including a community process, starting in late 2015
- A DRAFT staff report was released in March of 2016, and a **FINAL** staff report was released in **June 2016**.
- This presentation is the third update to that plan. (September and November 2016)
- All reports and presentations are available online in the “Plans and Reports” section of the Parks and Open Space webpage:  
<https://www.somervillema.gov/departments/ospcd/parks-and-open-space>

# Data Recap

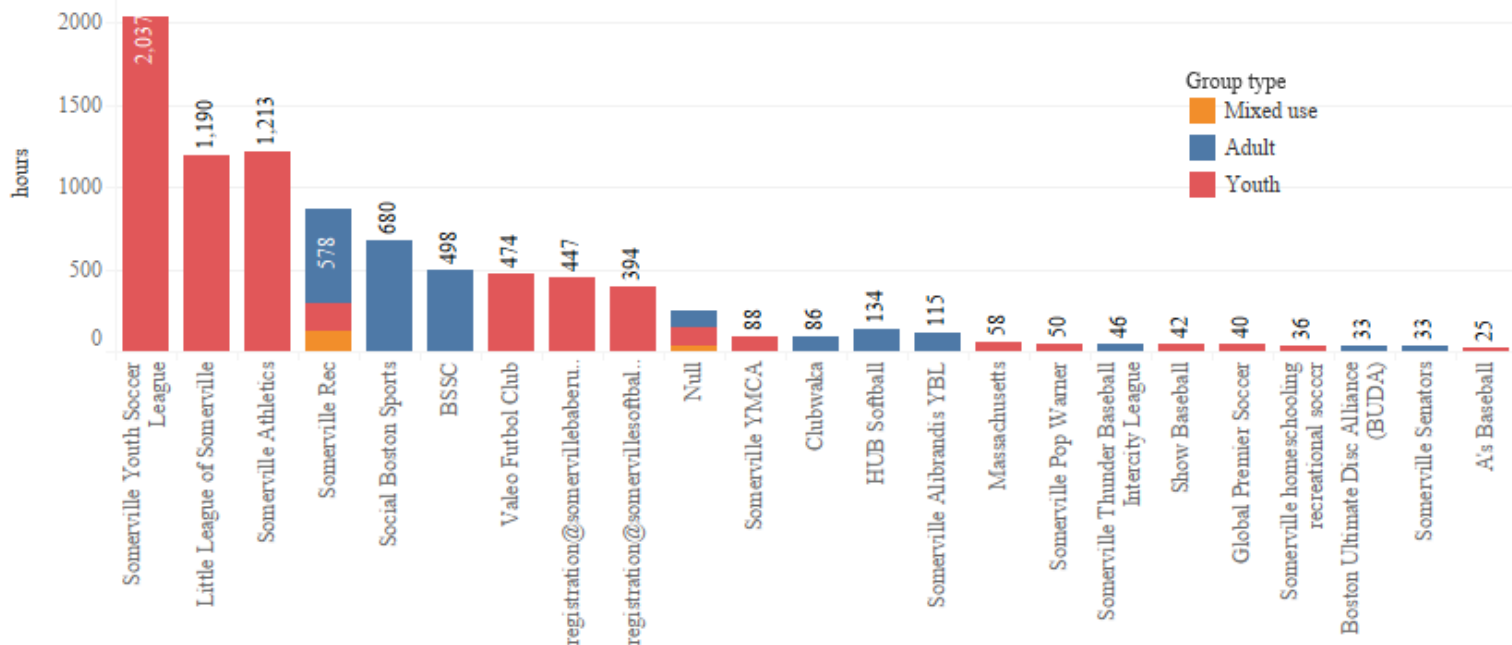
- We're continuing to monitor usage data
- We're now able to measure unmet demand, something we couldn't do in 2015
- While new data analysis differs from 2015, the takeaways are the same:
  1. Majority of field permits are issued to youth groups
  2. Demand is greater than supply
  3. Majority of uses are for rectangle fields (e.g., soccer) during peak hours

# 71% of field permits were issued to youth groups or events

Field Usage by Group

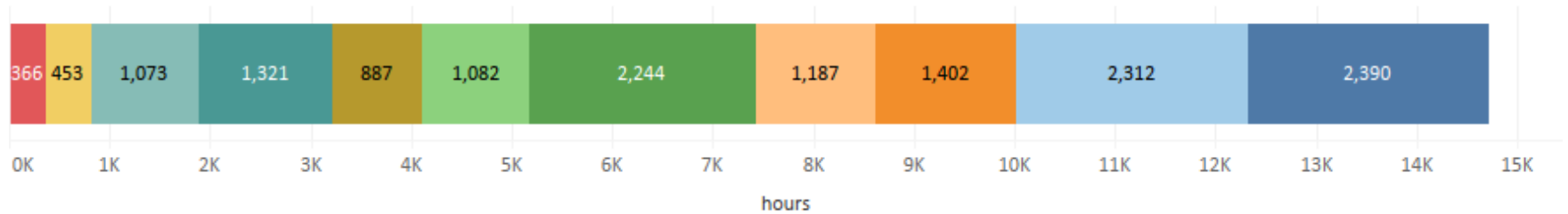


Permits by Group

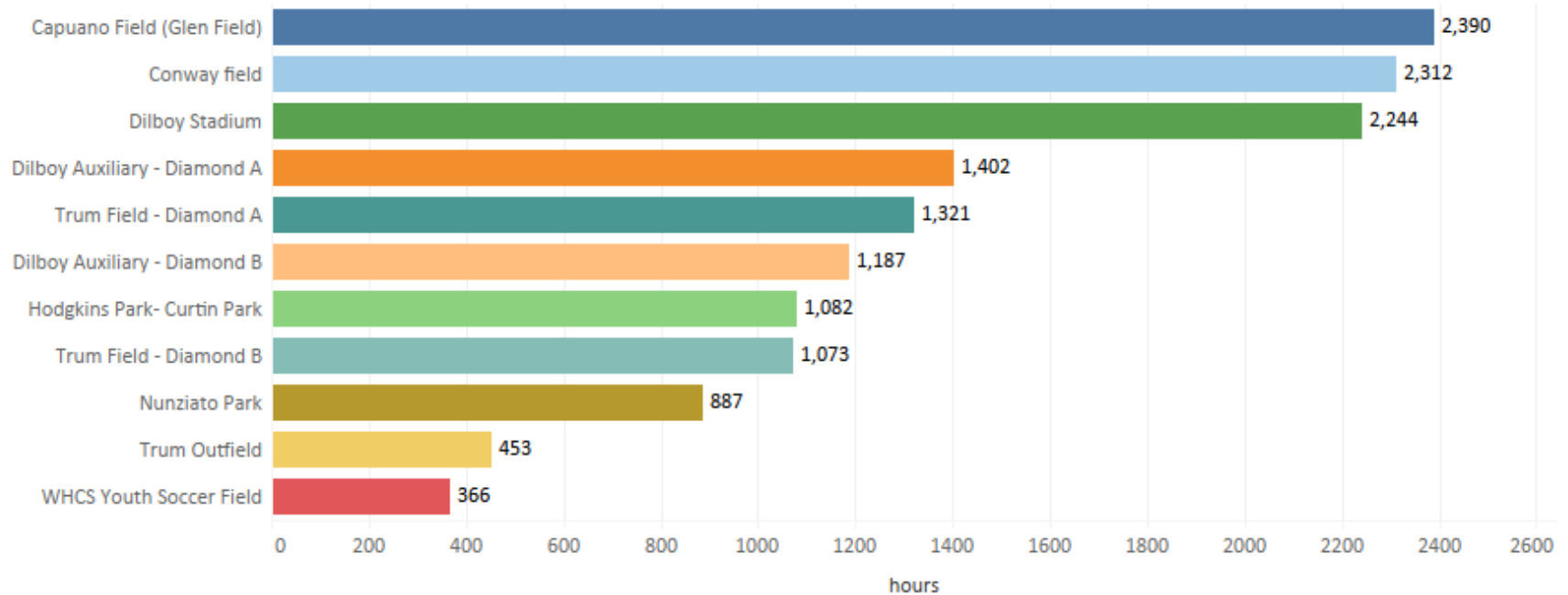


# Groups requested nearly 15k hours of athletic field use in 2017

## Total Field Requests

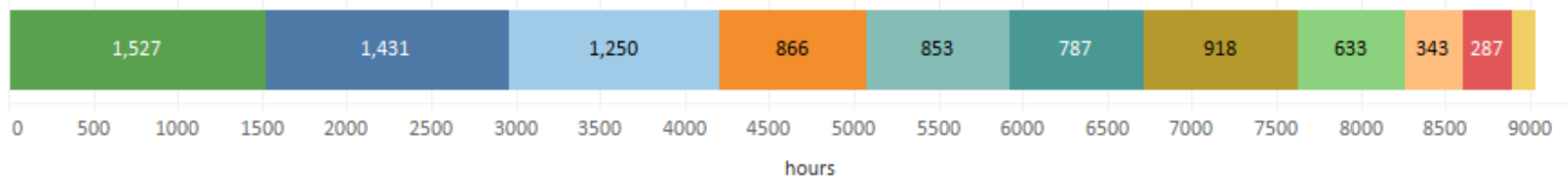


## Requests in 2017

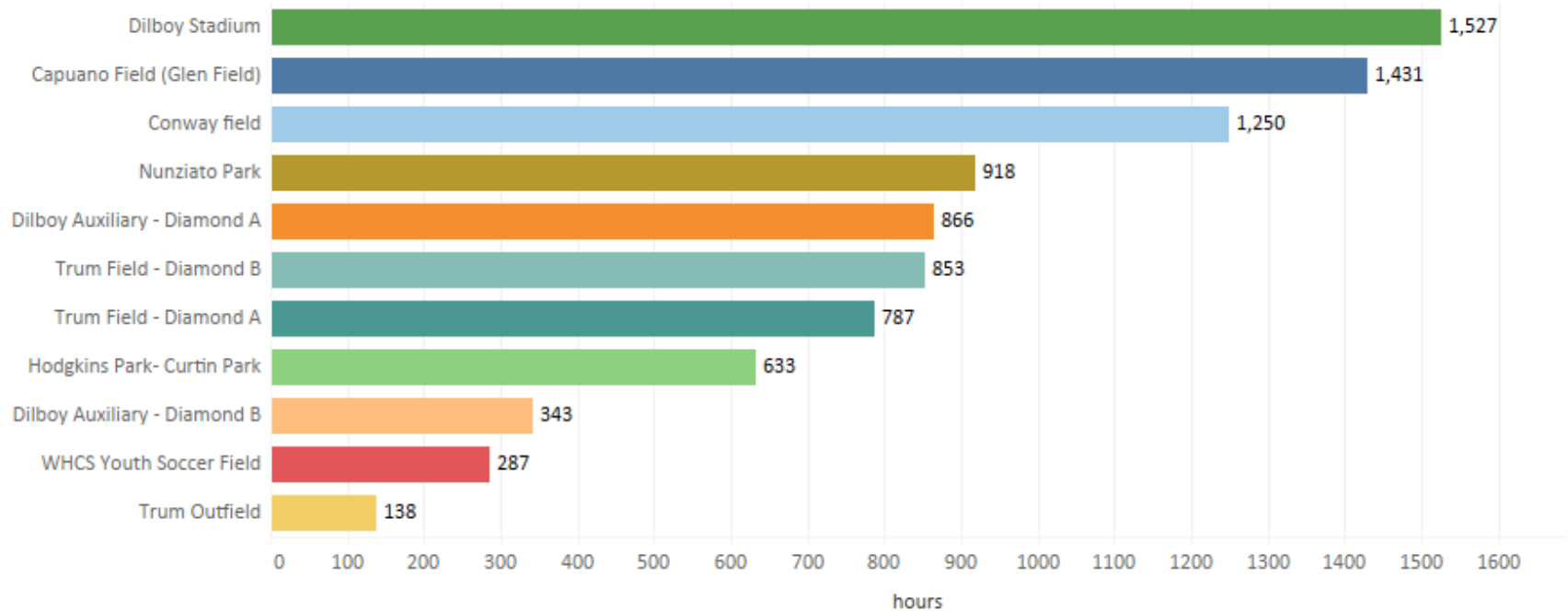


# Over 9k hours of field use permitted in 2017

## Total Field Reservations

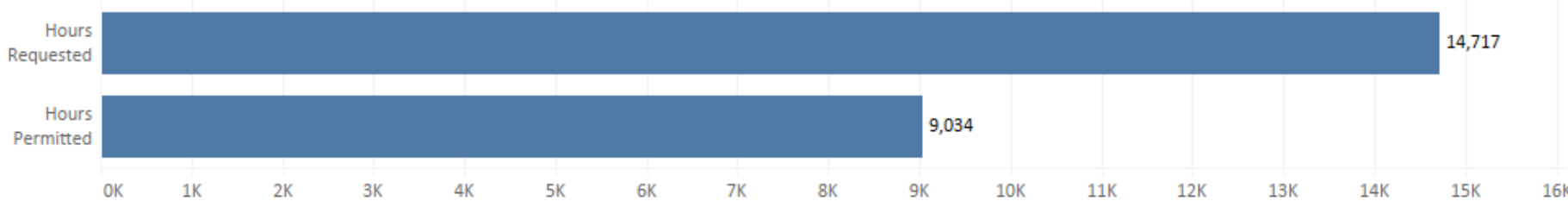


## Reservations in 2017

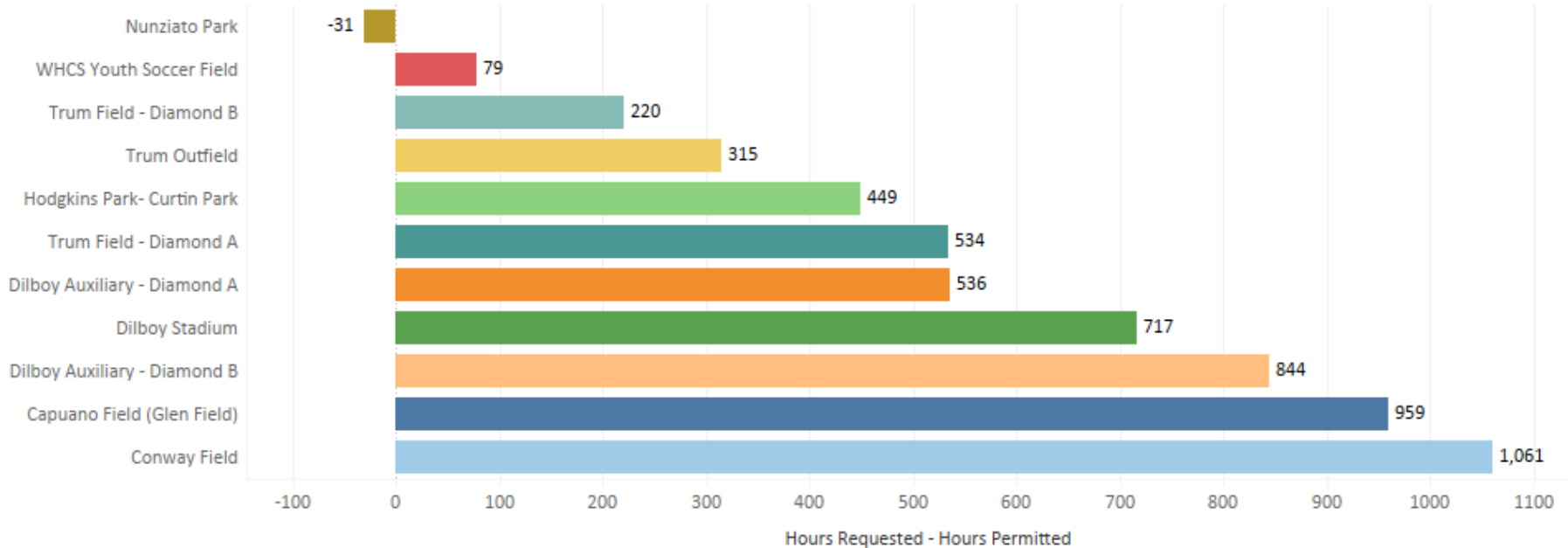


# Nearly 6k hours of unmet demand for fields

## Hours Requested vs Hours Permitted



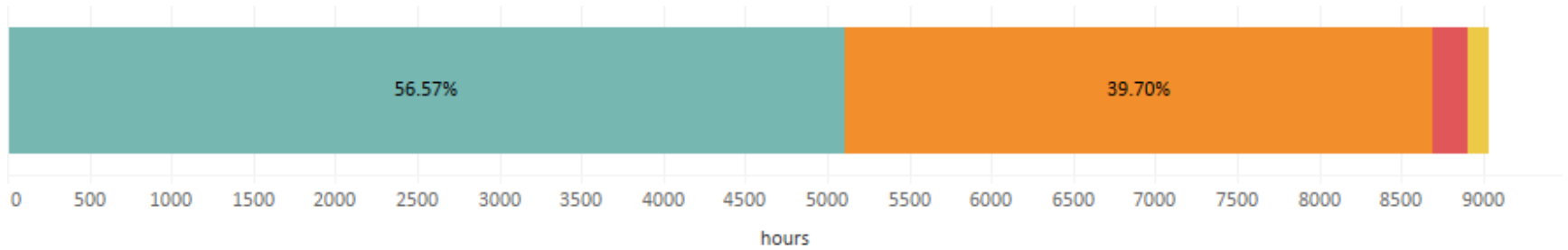
## Difference between Hours Requested and Hours Permitted by Field





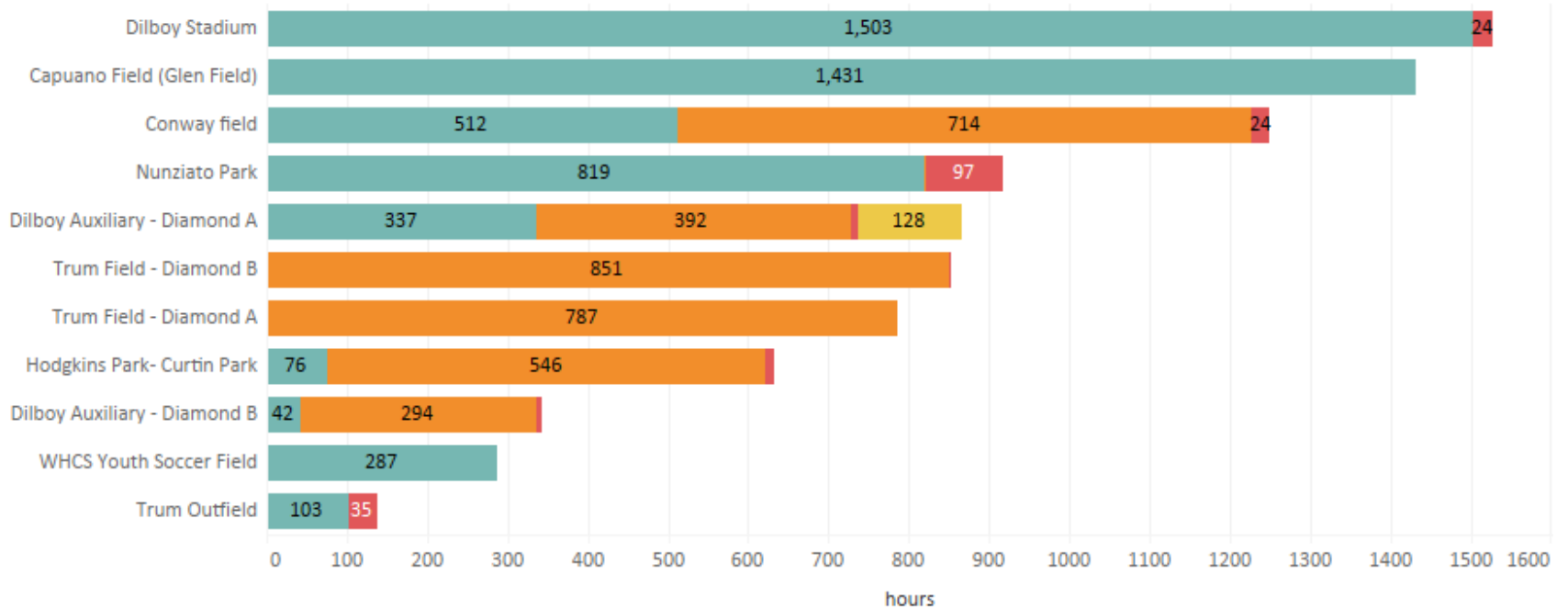
# 57% of field usage was for “rectangle” fields (i.e. Soccer, Football)

Field Usage Type



Usage Type by Field

Rectangle Diamond Non-athl. Mixed



# Fields Master Plan Update: May 2018

**\*[10 - New] Dilboy Stadium**  
Redo turf & track

**Dilboy Aux**  
[2a] Allow rectangle uses at Dilboy B ✓

[7] Renovate fields, add lights & irrigation

**Trum** ✓  
[2b] Allow rectangle uses at Trum

**Healey School**  
[6] Create XS/S turf rectangle; renovate schoolyard

**Draw 7**  
[8] Ideal: turf XL field & add lights

**Winter Hill** ✓  
[4] Create XS turf rectangle

**Conway**  
[5] Convert multipurpose M rectangle to turf multipurpose L rectangle

**Nunziato**  
[3] Stormwater project; renovate grass field and park

**Foss**  
[9] Ideal: rehabilitate park

**Lincoln** ✓  
[1] Renovate park

# May 2018 Project Status

- ✓ Completed
- Active

1. Lincoln Fields: under construction; fields available spring 2019 ✓
- 2a. Dilboy Aux: field striped & in use ✓
- 2b. Trum : field striped & in use ✓
3. Nunziato: delayed
4. Winter Hill XS Field: complete, open Aug. 2017 ✓
5. Conway Field: in progress – environmental testing ●
6. Healey School: in progress – geotech testing ●
7. Dilboy Aux: CPA application design funds approved ●
8. Draw 7: DCR leading design effort ●
9. Foss Park: pending DCR approval

NEW\*

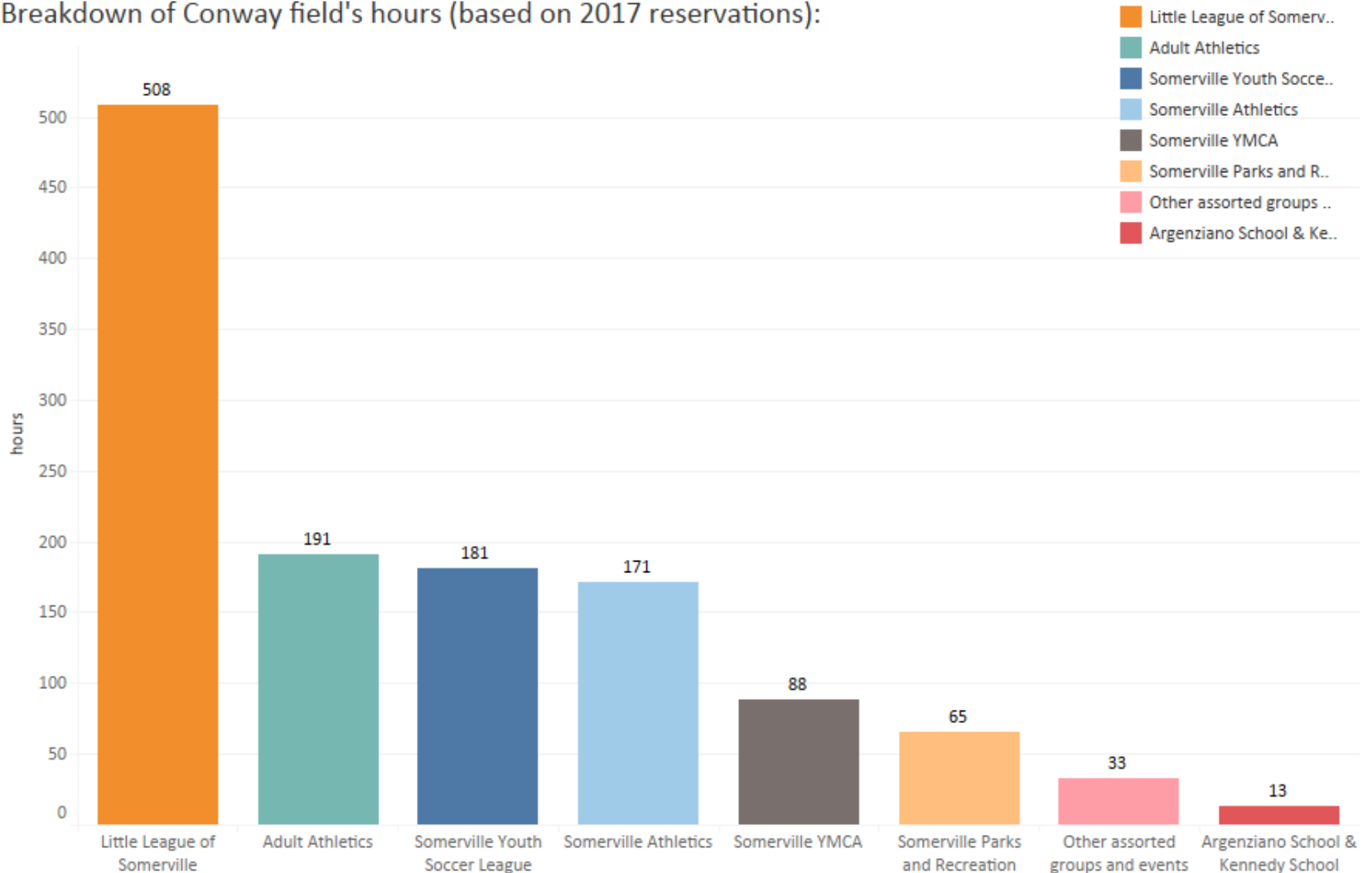
10. Dilboy Stadium Improvements: pending DCR approval

# Conway Park Update

- Testing revealed elevated levels of Lead and PCBs that trigger environmental reporting and compliance- further testing in progress
- Remediation of contaminants can occur with the field renovation
- Field closed, causing an additional shortage

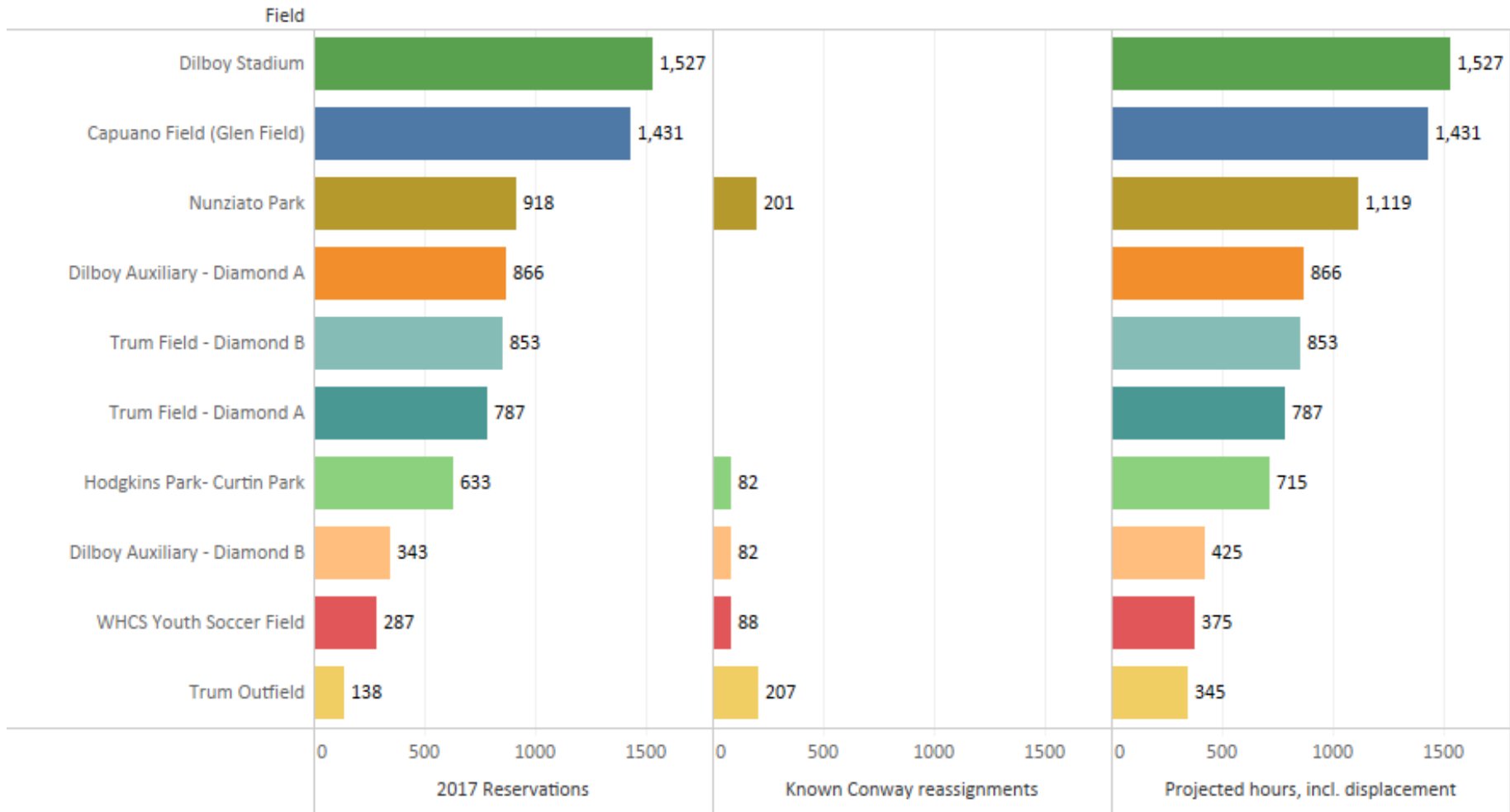
# ≈ 1250 hours displaced from Conway closing

Breakdown of Conway field's hours (based on 2017 reservations):



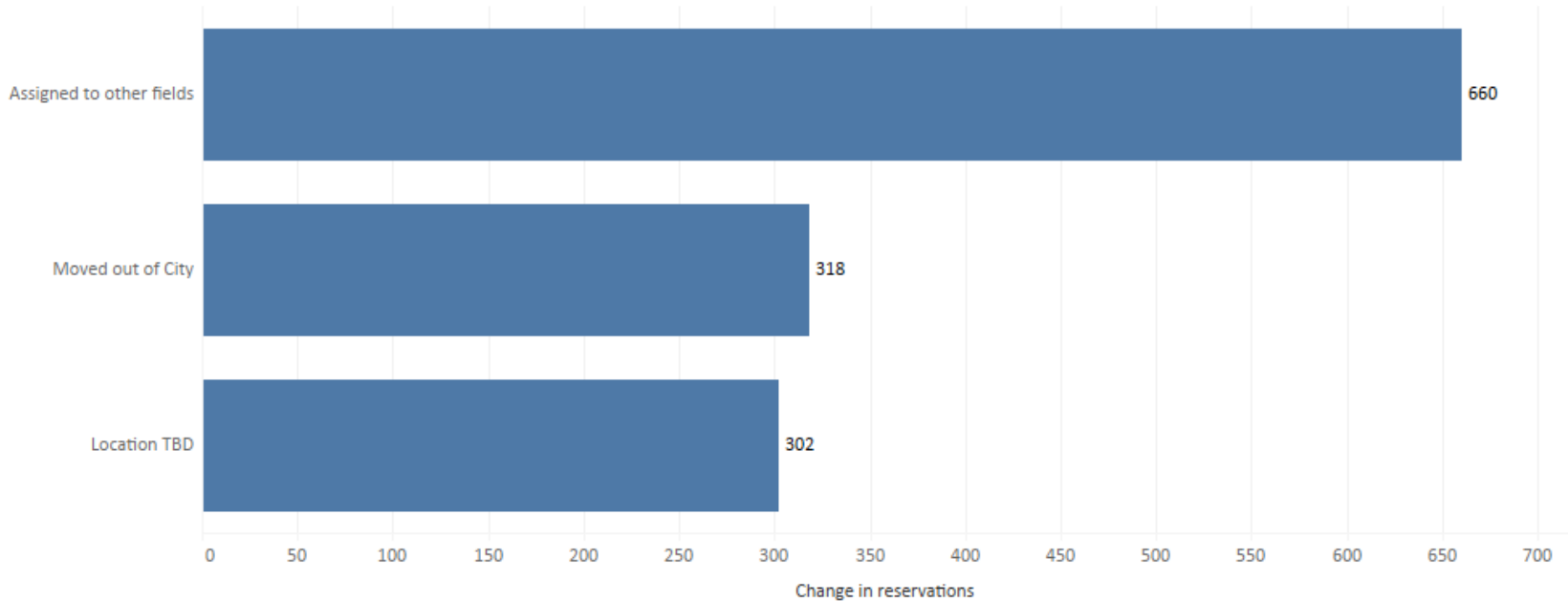
# 5 fields can expect additional activity

## Impact on other fields



# ≈ 660 hours can be accommodated on other fields

Planned destination of displaced activity:



≈ 318 hours playing out of city

≈ 302 hours without location

# Displaced groups.

Group	Use	Field type	Hrs	Destination
Little League of Somerville	Baseball	Diamond	508	Mix of Dilboy B & Hodgkins, T-ball at Trum, some Medford.
<b>Adult Athletics</b>	<b>Kickball</b>	<b>Diamond</b>	<b>158</b>	<b>Nowhere to go.</b>
<b>Adult Athletics</b>	<b>Frisbee</b>	<b>Rectangle</b>	<b>33</b>	<b>Nowhere to go.</b>
Somerville Youth Soccer League	Soccer	Rectangle	181	Trum field
Somerville High Athletics	Football	Rectangle	171	Nunziato field
Somerville YMCA-field games	Field games	Rectangle	88	Winter Hill Community School
<b>Somerville Parks and Recreation</b>	<b>Softball</b>	<b>Diamond</b>	<b>48</b>	<b>Nowhere to go. Cancelling softball.</b>
<b>Somerville Parks and Recreation</b>	<b>Other</b>	<b>Non-athletic</b>	<b>3</b>	<b>Nowhere to go.</b>
Somerville Parks and Recreation	Frisbee	Rectangle	14	Nunziato field
<b>Other Assorted Groups</b>	<b>Other</b>	<b>Non-athletic</b>	<b>21</b>	<b>Nowhere to go.</b>
<b>Other Assorted Groups</b>	<b>Soccer, Rugby</b>	<b>Rectangle</b>	<b>12</b>	<b>Nowhere to go.</b>
Argenziano & Kennedy School	Field games, Soccer	Rectangle	13	Other parks, TBD.
Somerville PHA		Rectangle	30	Nunziato field

**Youth groups given priority on accommodation.**



# Fields Maintenance

- Oct 2016: Consultant measured existing conditions of fields, produced PQS Field Report
- Dec 2016: Operations Director hired

# PQS Field Test

## PQS Field Test for Natural Turf: Soccer

Organization: **City of Somerville**

Field Name: **Trum Field**

Date Of Test: **November 6, 2017**

OVERALL GRADE  
**C**

PLAYABILITY	Tool	Average Results	Points	GRADE
In-Season Height/Quality of Cut	Grass Prism	1.89 "	4	<b>B</b>
Planarity	6-Foot Straight Edge	0.95 "	2	<b>D</b>
Rotational Traction	Traction Meter	15.00 Nm	0	<b>E</b>
Compaction Rating 3" Depth	Penetrometer	211.50 PSI	2	<b>D</b>
Surface Hardness	Clegg/Gmax	60.30 Gmax	0	<b>E</b>
Moisture 3" Depth	FieldScout TDR-300	47.62%	1	<b>E</b>
% Turf Cover	Grass Quadrant	93.30%	3	<b>C</b>
% Desirable Grass Species	Grass Quadrant	69.00%	0	<b>E</b>
% Poa Annua	Grass Quadrant	8.00%	4	<b>B</b>
Ball Roll	Ball Roll Ramp	169.90 "	0	<b>E</b>
Vertical Ball Bounce	6' Ball Drop	34.70 "	4	<b>B</b>
Goal Posts	Observation and Measurements	No	0	<b>E</b>
Boundary Fences	Observation and Measurements	Yes	5	<b>A</b>

GRADE

PRESENTATION	Tool	Average Results	Points	GRADE
Visual Index	FieldScout GreenIndex	6.97 VI	3	<b>C</b>
Color Index	FieldScout GreenIndex	0.635 DGCI	5	<b>A</b>
% Weed Cover	Grass Quadrant	19.30%	0	<b>E</b>
Field Line Markings	Observation and Measurements	125 FT	2	<b>D</b>
Surface Debris	Observation	0.00%	5	<b>A</b>
Overall Appearance	Observation	69.00%	1	<b>E</b>

STRUCTURE	Tool	Average Results	Points	GRADE
Gradient Field Length	Surveyor's Laser Level	0.09%	0	<b>E</b>
Gradient Field Width	Surveyor's Laser Level	0.95%	3	<b>C</b>
Infiltration Rate	Double Ring Infiltrometer	5.33 in/HR	2	<b>D</b>
% Bare Area	Grass Quadrant	6.70%	3	<b>C</b>
% Clover & Plantain	Grass Quadrant	16.30%	0	<b>E</b>
% Crabgrass & Goosegrass	Grass Quadrant	0.00%	5	<b>A</b>
% Knotweed	Grass Quadrant	0.00%	5	<b>A</b>
% Pests	Grass Quadrant	0.00%	5	<b>A</b>
% Disease	Grass Quadrant	0.00%	5	<b>A</b>

### Soil Profile Observations

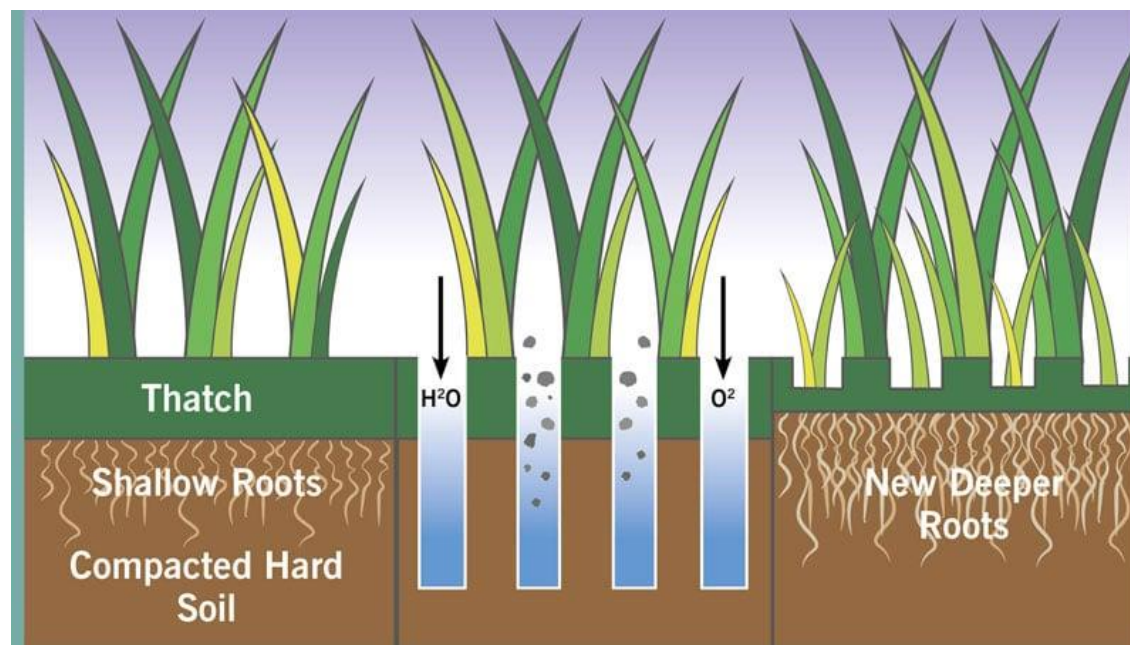
Root Depth	Observation and Measurements	2.18 "	2	<b>D</b>
Thatch Depth	Observation and Measurements	0.48 "	5	<b>A</b>
Rootzone Medium Depth	Observation and Measurements	6.40 "	3	<b>C</b>

### Soil Test Data

pH	Logan Laboratories	6.40 pH	4	<b>B</b>
% Rootzone Combined Silt and Clay Content	Logan Laboratories	39.20%	0	<b>E</b>

SCORING KEY	PQS Soccer Field	Total Criteria	Total points available for each criteria
<b>A = Superior</b>	165-133 total points	33 criteria	5 points per criteria achieved
<b>B = High Standard</b>	132-100 total points	33 criteria	4 points per criteria achieved
<b>C = Standard</b>	99-67 total points	33 criteria	3 points per criteria achieved
<b>D = Low Standard</b>	66-34 total points	33 criteria	2 points per criteria achieved
<b>E = Below Standard</b>	33 and below total points	33 criteria	1 points per criteria achieved

1. Actions based on Field Report:
  - April-Oct 2017 Monthly Aeration & Top Dressing
  - May 2017 Organic Fertilizer & Seeding
2. Oct 2017: Rehabilitation of Trum Field
3. Dec 2017: Second Field Report



# Aeration vital to better root systems



Topdressing



Aeration



Slice seeding

# 2016 to 2017 Preliminary Results

## Somerville Athletic Field Infiltration Rates

Field	2016 (in/hr)	2017 (in/hr)	% Change
Conway	1.38	3.35	143%
Dilboy Aux	0.35	9.20	2529%
Hodgkins	0.28	3.85	1275%
Nunziato	2.70	4.80	78%
Trum	1.85	5.14	178%

Increases in infiltration rates directly correlate with aeration and soil health efforts.

# Fall 2016



# Spring 2018



# Fall 2016





# Spring 2018



# Next Steps

1. Continue to gather data
2. Continue to follow the plan:
  - Conway: further testing, mitigation and continued efforts to accommodate displacement
  - Healey: explore feasibility costs of field creation
  - Dilboy improvements
  - Foss and Draw 7: collaborating with DCR
3. Continue to monitor and improve natural grass fields

End of slide presentation update