

**PARK AND RECREATION DEPARTMENT  
TOWN OF NEEDHAM, MASSACHUSETTS**

**UNDERSTANDING MAINTENANCE  
CONTRIBUTING TO SAFE FIELD CONDITIONS**

In order to have quality playing conditions on athletic fields, it takes three conditions to be coordinated to achieve success. The goal is to have athletic fields that provide a safe environment for the athletes, and help prevent injuries as much as possible. In simple math, it is the **SUM** of these three!

**S**cheduling

**U**se

**M**aintenance

<b>SCHEDULING</b>
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Many factors go into decisions on how fields are scheduled that relate to maintenance. Some of the decisions are based on science. The UMASS Extension Service provides lots of information, as well as several specialized university research programs throughout the country. Some are specific to a particular field and coordination with other uses or concerns.

- *No field should be used if it is excessively wet or excessively dry.* Park and Recreation will close fields with “standing water” and those announcements are made through Notify Me, on the website and on the recorded information line. Organizations need to make the decision on weekends and holidays, and ask for your full cooperation, which we acknowledge can be a challenge as league officials can’t control all coaches who want to play no matter what the circumstances, and it is also difficult to figure out how to get all games played with constant cancellations. A wet field is damaged about 5 times the amount of damage from a regular use.
- *Fields shouldn’t be used unless the grass is growing, to insure it has the ability to recover from use.* This is a difficult condition to honor. The compromise is that fields do not open until April 1<sup>st</sup> at the earliest, with only the High School having some limited use prior to that date. It is typically closer to May before the grass starts growing, so how the fields are used in April is an important decision. The second way to honor this condition is to shut down the heavily used natural grass multi-purpose fields during the summer months, and allow for some recovery

time, though not at an optimal time of year, so that the fields are available in the heavily-used spring and fall.

- *Fields should not be used when frozen, has a frost covering or is partially thawed.* The April 1<sup>st</sup> opening date is often delayed as the fields are still snow covered, frozen, or soaked even though the snow has gone. Fields are not scheduled in the winter months, and are closed in mid-November. The schools are asked to assist with how fields are used in the winter months.
- *Limit use to 50 activities per year.* This is an impossible goal to achieve. An activity is a single use that is 2-4 hours in length. Wear patterns can start to show after 10 activities. After 25 activities, the turf will become thinner and more vulnerable to weeds. Beyond 50 activities...we all know what that looks like! A compromise on this goal is that fields are shut down for a minimum of two growing seasons after being seeded, to allow for a strong root system. Summer and winter are not considered growing seasons.
- *Appropriate amounts of parking are needed for the use.* Some activities are just too large for a particular site, so need to be scheduled at a location that can handle the parking needs. This is also a reason that special event requests are submitted for activities that are not typical for a park, so that issues related to parking can be accommodated.

## USE

Once Park and Recreation has scheduled locations, it is now up to the organizations to make some decisions on actual use, to help achieve the goal of having safe and functional athletic fields for the athletes.

- *Keep practices and drills off of high traffic areas, and move to different locations each time.* Reducing the stress on heavily used areas will decrease the amount of compaction and allow for more growth of grass.
- *Communicate with coaches on when fields are available, and when they aren't.* A single coach, ignoring the decision of the league, can use a field and create enough damage that it isn't available for use for an extended period of time.
- *Move practice equipment around so the same areas aren't impacted.* For practice, game areas do not need to be used, particularly for repetitive drills or activities that need heavy equipment. NO STORAGE on natural grass fields without permission – let the grass breathe and thrive!
- *Put items away after use.* The covers need to be returned to the sandpits on the track; nets/goals should be put back if the field is used for multiple sports.

- *Ask athletes to use “gentler” footwear that is less likely to create divots or tear root systems.* A stressed field will receive less damage if sneakers are worn, but the decision is also based on the athletes haven’t proper footing.
- *Report concerns about field conditions to league officials who will report to the Town.* A low spot on a multi-purpose field or a lip between the infield and outfield of a diamond can all decrease the safe conditions on a field. Prevent activities that create these issues!
- *Reduce unpermitted use.* The organizations that have permits tend to work with the Town to assist with how the fields are used to properly maintain their conditions. There are “sandlot” uses, which can cause some damage, but typically it is minimal. The hardest uses creating the most damage are the organized uses without permits. They play on a regular basis whenever they can sneak on, and tend to use fields as long as there is no snow coverage. They are not contributing to the care of the fields. Your assistance in helping us get these groups off the fields is greatly appreciated!!
- *Pick up trash!* Most locations have barrels near the entrances so items can quickly be dropped on the way out. If no barrel is seen or if all barrels are full, please “carry out.” DeFazio and Memorial Parks have rolling carts. Some schools do not permit barrels, as they attract bees and a number of students have life-threatening allergies to bees.
- *NO vehicles!* Vehicles are not permitted to drive at any park without permission from DPW Parks and Forestry. No wheeled vehicles should be brought across the track.

<b>MAINTENANCE</b>
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This is an integral part of the equation for quality athletic fields. The DPW Parks and Forestry Division provides the majority of the maintenance at athletic fields. Along with this task, Parks and Forestry has many other duties, including its Forestry division’s work, special projects like the Blue Tree and Rosemary Pool’s pre-season maintenance, and tasks on trails, greenways and pocket parks. Some funding has increased in recent years to allow for the purchase of additional supplies for the maintenance program, and for contracts to hire specialists to help with some maintenance tasks, including mowing at some sites.

The goal at all fields is to have a strong root system of natural turf, providing a solid foundation for proper footing for the athlete, and preventing the growth of invasive weeds and insects. The Town works from an Integrated Pest Management (IPM) Plan, and attempts to have as natural a maintenance program as possible, with limited use of chemicals on an as-needed basis. All of Needham’s athletic fields exceed the amount of recommended use, so compaction becomes a major issue leading towards other issues.

## **Components of Natural Turf Maintenance Program**

Soil and water testing	Fertilization and Lime
Mowing	Aeration (various methods)
Topdressing	Overseeding
Drainage	Irrigation, where appropriate

These are all considered components of a fertility program that is specifically designed for the needs of each field. The treatment of invasives is done on an as-needed basis, following the state requirements for fields used for school programs. Chemical treatment is not used for aesthetic purposes.

On fields with irrigation, the amount of water is controlled, so as not to overwater any facility. The height of the grass and the amount of irrigation are coordinated to encourage deep root growth, creating a higher quality athletic field

The amount of funds available, the type of equipment, the ability to properly nurture the soil based on test results, the amount of compaction from overuse, and the schedule of use (and unscheduled uses) can all impact a maintenance program at an individual site.

### **Maintaining the Natural Turf**

Currently, 30 acres of natural turf are maintained at a higher level. Some of them were rebuilt as part of Fields of Dreams and are sand-based fields that require a different type of maintenance program. Some are fields used for high school sports, as well as community groups. The program includes soil testing; core aeration and deep tine aeration to reduce compaction; specialized fertilization multiple times per year; overseeding and top dressing; and as needed, treatments for weeds or insects.

Cricket multi-purpose (1, 2)	Claxton softball (1, 2)
Memorial Park 90' diamond	High Rock multi-purpose, 60' diamond
DeFazio 90' diamonds (McLeod, Warner)	DeFazio multi-purpose (Healy, Conroy)
Pollard multi-purpose, 60' diamond	Walker-Gordon 90' diamond
Greene's Field 60' diamond, multi-purpose	

Currently, 40 acres of natural turf are maintained at a less than optimal level, primarily due to funding resources. They receive a less stringent level of aeration, fertilization, and seeding. These include the other athletic fields not listed above, the Town Common, the Heights Common, and small "pocket" parks.

### **Regular Maintenance – Diamonds**

Maintaining diamonds, particularly the infield areas, is labor intensive work. Mowing crews are scheduled at least once a week, during growing seasons, weather permitting. Diamond crews are scheduled in the spring and summer seasons to do daily tasks. The crews are needed for other tasks in the fall, and weather permitting, clean-ups are done on each diamond to prepare them for the following spring season. Fall permits are scheduled around maintenance projects.

With limited staff, it isn't possible to maintain an infield on a daily basis at every diamond. Top priority is given to the diamonds used by Needham High Athletics, and top priorities for youth baseball and softball programs are the second maintenance priority.

### **Regular Maintenance – Multi-Purpose Fields**

The major task is mowing, and mowing crews are scheduled at least once a week, during growing seasons, weather permitting. These fields are not available during the summer to allow for maintenance to relieve compaction and to provide some rest.

### **Other Facilities**

All groups – track users and those using Conroy Field within the track – need to work together to protect the investment in the track surface. The track should be kept clear of objects, unless in use. Hurdles should be stored to the side of the track. Sand pit covers needs to be replaced after use. No wheeled objects can be brought across the track. Tape and paint are not permitted on the track surface.

It is the responsibility of the user groups to leave the dugouts and batting cages clean after use.

### **Synthetic Turf**

Regular maintenance is done on the synthetic turf fields to prolong the life-span of the fields and to keep in safe condition for the heavy use.

Only water is permitted on the fields. No other food item, including sports drinks, food, or gum. All trash should be removed after use.