

ATHLETIC FIELD TURF MANAGEMENT POLICY

The Upper Arlington Parks & Recreation Department maintains 183 acres of parkland of which approximately 60 acres are mixed-use turf that primarily function as athletic fields. The Department strives to maintain each sports field for safety, playability and to meet the community's standards by using sustainable maintenance practices that can be best described as Integrated Turf Health Management (ITHM).

The City has determined that Integrated Turf Health Management is the solution that most effectively balances and addresses the two elements of safety concerns: risk of injury and risk of exposure. As such, the long-term goal is to support the physical, social, and environmental health of the Upper Arlington community through sports fields that support safe play and minimize and promote the long-term reduction of the use of synthetic pesticides.

Integrated Turf Health Management (ITHM) Program

"Integrated Turf Health Management (ITHM) focuses on the whole turfgrass system, including plants, soils, and beneficial organisms, to provide safe playing surfaces, reduce inputs, and limit environmental impact. ITHM relies on frequent cultural practices, site-specific treatments, and using the least impactful inputs. Each treatment decision seeks to balance the recreational, ecological, horticultural, economic, and sociological consequences. The backbone of the program is monitoring conditions and scouting pests to make data-driven decisions about cultural practices and treatments." -SFMA = Sports Field Managers Association

A key element of this approach is to equip staff with the necessary tools to achieve our optimal goal for providing playable and safe athletic fields. Unique to the City's program is a site-specific plan, differing levels of maintenance, tools available and criteria for usage. In addition, because this is a new program, Staff will develop a prioritization for implementation of the Integrated Turf Management Program based on available staff time and financial resources. Thus, some fields that qualify for a more intensive level of treatment may receive less treatment due to overall priorities with athletic field maintenance. The Integrated Turf Health Management Program is limited to athletic fields **only**, with a minimal buffer area. The treatments undertaken as part of this management program would not be applied to surrounding park grounds. The following is an outline of the program:



Inspections and Assessment

The backbone of the Integrated Turf Health Management Program is a field-specific approach, based on frequent assessments. A knowledgeable and trained member of Staff will spend between approximately four-eight hours every three-four weeks going through an objective, comprehensive, and systematic check list for measurable qualities and quantities that affect a field's safety and playability. This assessment will result in an overall rating score. The score will govern the maintenance level followed and which of the available tools – some combination of cultural practices (such as reseeding and aeration) and pest management – will be prescribed and utilized for the management of each field.

Program Levels and Available Tools

All Levels include a robust maintenance plan focused on the health of the turf, including all cultural practices: bi-weekly mowing to ensure proper height, spring and fall seeding, frequent cultivation of soil (hollow or solid tine aeration, soil fracture, and slit seed), fertilization, and prescriptive rolling, thatch management, leaf control and topdressing.

Because insect and disease populations can spike so quickly, can be extremely damaging to turf, and their effects can result in Rescue Level conditions in a short timeframe, the tools of insecticides and fungicides are available to each of the programs described below. Their use is extremely judicious as prescriptive and preventative when pest pressure dictates.

Maintenance Level 1 occurs when turf is performing and recuperating at the desired level and playability standards. Attaining and maintaining this level is the ultimate goal for every field in the system. As a result, it incorporates the lowest level of pesticide usage to prescriptive, isolated, spot, or dormant season treatments.

Maintenance Level 2 occurs when conditions begin requiring additional treatments to improve turf health. A maximum of three herbicide rounds are available but rounds 1 and 2 are expected to be applied at a reduced acreage and intended to be applied as spot treatments within the fields, not via a blanket application.

Maintenance Level 3 is a more intensive program warranted by turf conditions. The program has up to three herbicide applications available if conditions necessitate their use.

Rescue Level is the most intensive program for fields impacted by a combination of existing conditions, severe weather events, or use under stressful conditions. It is the most intensive of all programs and is intended for short-term use only. All tools listed in the chart below are available. Blanket herbicide applications are recommended initially, however before a treatment is applied the field will be re-inspected (as described in the inspection assessment schedule) to make sure this is necessary. An addition of up to 35% more seed and starter



fertilizer is available to help establish grass in bare spots resulting from the absence of undesired herbaceous vegetation.

Parameters for Product Usage

All products proposed for usage will be evaluated by Staff for impacts to safety, exposure, sustainability, and the environment.

One of the tools available in the Integrated Turf Health Management Program are pesticides. The term “pesticide” covers a wide variety of products, including insecticides, herbicides, and fungicides. Public awareness and concern regarding pesticide use has grown over the past few years. However, the selective and careful use of pesticides is desirable and necessary to protect public health and safety, and to maintain athletic facilities in a manner consistent with community values and standards. The Department will continue to evaluate the ITHM program and seek out the safest treatments, including exploring any viable use of organic or natural pesticides.

The Department is committed to the proper use of pesticides which might be stored and applied on City property. Applications and storage of pesticides shall be in accordance with all applicable Ohio Department of Agriculture and the Ohio Environmental Protection Agency laws, regulations, policies and procedures, and in addition the following specific use requirements are utilized by City staff and contractors when pesticides are used on athletic turf:

City Use Requirements

1. As described above, an Integrated Turf Health Management philosophy is followed to promote the long-term reduction of the use of synthetic pesticides. Cultural practices, including turf mowing height and frequency, cultivation/aeration, irrigation, mulching, overseeding, and fertilization are used to improve plant health and reduce pest problems. Pest and wear resistant plants are selected when possible.
2. Necessary pesticides are selected for efficacy and the lowest level of toxicity. The safest effective method of application is selected. Products labeled Caution are considered prior to the use of products labeled Warning. In general, products labeled Danger are not used. If circumstances where use of a product labeled Danger was deemed necessary by staff, approval of use must be granted by both the Parks & Recreation Director and the City Manager.
3. Long term storage of pesticides is kept to a minimum. All materials are stored in accordance with label instructions. All such products and application equipment are stored in secure facilities away from the public which are clearly marked as pesticide storage areas.



4. All chemicals will have complete label instructions and will remain in the original containers until mixed or used. Material Safety Data Sheets (MSDS) for pesticides will be kept on file in the Parks & Forestry Division's shop and are available to anyone who handles such materials or who may be exposed to the product.
5. All pesticide applications are made in strict compliance with the label instructions including selection of pesticides labeled for use in parks and athletic fields. Employees shall be provided necessary personal protection equipment (PPE).
6. All pesticide application records will be recorded, updated, and kept as required by the Ohio Department of Agriculture.
7. Communication – The Department will work with the Community Affairs Office on communication to the general public and park users through various methods such as social media and the City's website. When Department athletic fields are treated with pesticides the following communication methods, at a minimum, will be implemented
 - a. Treated City property is, at the time of application, temporarily posted with appropriate warning signs at entrance and perimeter areas.
 - b. Scheduled use shall be modified as necessary and users shall be notified in advance.
 - c. A publicly accessible online database will be available including the time and contents of applications.
8. Reentry period will be followed and/or extended (a minimum of 24 hours for pesticides) as an increased safety measure.
9. Department employees responsible for handling and applying pesticides are required to have a valid Pesticide Applicator's License issued by the Ohio Department of Agriculture or shall be a Trained Serviceman under the direct supervision of a Licensed Applicator, as directed by Ohio Department of Agriculture guidelines.
10. Staff will receive ongoing training and education to ensure that the program, techniques, and products are continually evaluated based on the most up to date research and information, and that any concerns or alternatives are identified.
11. Any contractual services requiring the use of pesticides will conform to this policy.

Field Usage

The Department recognizes the benefits of providing quality athletic programs and community events to our community. In Upper Arlington there is a finite amount of park space and athletic fields to serve these interests. Our responsibility as a Parks & Recreation Department is to balance the public's needs for field space and the proper amount of use and care the athletic fields require. It is our goal to maximize our field use for play experiences but also to ensure the fields are maintained in a sustainable manner.

The Department recently established a Field Usage Policy that prioritizes usage for recreation level play which results in less wear on fields than from the higher skill level teams. The Department will continue to monitor programming and field usage to achieve the balance



between providing a great asset to the community through sports and mixed-use programming and preventing damaging overuse.

Infrastructure Improvements

Based on a recommendation from the 2018 Parks & Recreation Comprehensive Plan, the Department has made athletic field infrastructure a priority. Planned improvements include drainage, regrading fields, adding irrigation and other general improvements. Additional infrastructure improvements have been evaluated, but currently are not planned. These include synthetic turf fields which would change the use of parks that include community events and leisure use. Replacing grass with sod would be a short-term fix as maintenance practices are still necessary to manage turf health. The time for sod to establish could impact seasonal sports schedules. The Department will continually evaluate infrastructure upgrades as part of this policy and the City's Capital Improvement Program development process.

The Department plans to work systematically through our fields for infrastructure improvements that will reduce conditions that contribute to stress of the turf. As infrastructure improvements are implemented, ongoing turf health practices will evolve, but remain a constant aspect for athletic fields and protection of the investment of capital improvements. The Integrated Turf Health Management Program approach specified in this policy is the best solution to providing quality fields to our residents and players for existing conditions and as infrastructure improvements are implemented.

Field Safety and Playability

While it might seem desirable to live in a pesticide-free world, practical considerations for athletic turf management make that very difficult. Some residents urge the Department to do whatever is necessary to improve park maintenance standards, including the use of more pesticides. Others feel strongly that few if any pesticides should be used regardless of the ramifications. City and community standards for safe and playable athletic turf on our high use fields requires an intensive Integrated Turf Health Management Program. Within that program pesticides are one small tool available for successful management.

There are two elements to safety: injury and exposure. Injury is reduced by having strong, resilient turf. Exposure is reduced by using the lowest effective amount of the safest materials to get the job done at the right time. This plan, as established, effectively and simultaneously addresses both elements of safety. Ultimately, the Department utilizes the various maintenance practices of Integrated Turf Health Management to maximize our safety and playability and minimizes the use of pesticides and exposure all while being mindful, judicious and responsible when it comes to the use of public funding. This is achieved by utilizing best



management practices, selecting the least toxic products that will be effective when pesticides must be used, and applying them in adherence to the applicable laws and the City's supplemental use requirements for safety. The Department will continue to explore viable treatments and product selection to support the safety and playability of fields.

Policy Review

City Staff will report annually (fall season) on the scope of implementation, practices and products used, and program outcomes to both the Parks & Recreation Advisory Board and City Council. The update will include any applicable:

1. Soil and field conditions at the beginning of the field season
2. Soil and field conditions at the end of the field season
3. Pesticide, fertilizer, and cultural treatments made during the year
4. Capital improvements made to athletic fields during the year
5. Information regarding any safer and innovative treatments used during the year or under consideration for the following year

The update should also include a comparison from year-to-year of pesticide usage, an analysis of the Integrated Turf Health Management approach, any exploration of new organic or natural products or methods, and a plan for the next year. The update will also include a summary of field usage.

The Integrated Turf Health Management approach is aimed to improve field conditions and through assessments the fields scores should improve and advance to a less intensive maintenance level. If any field remains at the Level 3 or Rescue Level after three years of treatment, the Integrated Turf Health Management Program and this policy will be completely re-evaluated.



APPENDIX A

The Integrated Turf Health Management Program includes the following applications available for each level of the plan. These steps will be evaluated and implemented as needed based on turf conditions. Staff will review this plan and adjust as necessary as the program is evaluated.

Practice	Frequency per year	Level 1	Level 2	Level 3	Rescue Level
Field Inspection/ Assessment	16	√	√	√	√
Mowing	64	√	√	√	√
Cultivation	16	√	√	√	√
Rolling	Determined by condition	Prescriptive	Prescriptive	Prescriptive	Prescriptive
Thatch Management	Determined by condition	Prescriptive	Prescriptive	Prescriptive	Prescriptive
Leaf Control	4	√	√	√	√
Starter Fertilizer and Seed	2	√	√	√	√ + %
Fertilizer	6	√	√	√	√
Topdressing	Determined by need and level	Up to 1	Up to 2	Up to 2	Up to 2
Herbicide	Determined by need and level	Up to 1 (November)	Up to 3 2 of which are spot only	Up to 3	Up to 4
Insecticide	Determined by need and level	Prescriptive	Prescriptive	Preventative	Preventative
Fungicide	Determined by need and level	Prescriptive	Prescriptive	Prescriptive	Prescriptive

