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Council Meeting Date:	May 16, 2022
Subject/Legislative Item:	Authorize the Parks & Recreation Department to Develop and Implement an Athletic Turf Management Policy
Purpose:	To support the Parks & Recreation Department’s efforts to provide safe and playable athletic fields and directs annual updates to City Council and the Parks & Recreation Advisory Board.
Executive Summary:	Proposed legislation to authorize the Parks & Recreation Director to develop an Athletic Turf Management Policy with an Integrated Turf Health Management (ITHM) Program that governs the maintenance practices and tools necessary to provide high quality, safe fields while minimizing environmental impact.

Purpose and Impact

The 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 provide safe and playable athletic fields for the community and has conducted extensive research on best practices for effective field maintenance. After implementing several turf management improvement strategies that yielded limited results, and following a period of extensive research, Staff is recommending the use of an Integrated Turf Health Management (ITHM) Program as a comprehensive solution that best balances and addresses the two primary safety concerns – the risk of injury and the risk of exposure to pesticide products – while resulting in playable surfaces.

Council support is requested for the Department to establish an Athletic Field Turf Management Policy to govern an approach that will assess field conditions and implement a prescriptive treatment plan based on existing conditions for each sports field. The policy would include parameters for the use of products, including synthetic pesticides, that recognizes their impact to safety, exposure, sustainability and the environment. The policy would also require timely and effective communication with the public – to include website updates and onsite signage when treatments have occurred – and an annual reporting process for City Council and the Parks & Recreation Advisory Board that summarizes activity, results and any substantive changes to the policy, and that allows for public input.

History

The City of Upper Arlington enjoys vibrant youth sports and community event programming. Over time, the high use of the City’s athletic fields for these activities, combined with an underdeveloped maintenance program, has resulted in turf conditions that hinder the safety and playability of playing surfaces. During the 2018 Parks & Recreation Comprehensive Plan process, it was determined that the



conditions of parks in general, and athletic fields specifically, were below acceptable standards, and as part of an extensive community input process, residents prioritized improvements to athletic fields.

Healthy, dense turf grass is the desired standard play surface for all of our field sports, including baseball/softball, football, lacrosse and soccer. The combination of live plant material and thatch provide a padding that helps protect against injury from ground impact, provides a solid consistent foothold to protect against sprains and strains, and is a growing medium that is able to tolerate wear and use with the most recuperative potential.

The challenges to achieving the desired standard of turf conditions include: infrastructure issues – such as poor drainage and uneven grading – which is addressed with our Capital Improvement Program; a deficient maintenance program; bare spots, weeds, and compacted ground – which is resolved through various cultural practices and the use of pesticides. A combination of long-term capital improvements *and* a comprehensive turf maintenance program – implemented to improve and maintain conditions – will allow healthy grass to grow and become more dense.

The Department has already taken a number of steps to improve turf conditions including. This includes:

- Creation of a dedicated Parks & Forestry (Turf) Specialist position
- Capital improvements to improve field infrastructure
- Increased mowing frequency
- Enhanced protocols within the existing turf maintenance plan
- Implementation of reviews, controls, and limitations to programing and events.

The Department has determined that the improvements resulting from these actions will be limited and short term; efforts must be taken to create a more comprehensive maintenance program that will improve the turf grass and soil.

Process

The Parks & Recreation Department, under the guidance of the Parks & Recreation Advisory Board, has conducted extensive research exploring potential maintenance approaches and the tools necessary for providing consistent quality fields. This included a review of industry and peer community best practices, discussions with experts in academia, consultant review, and community engagement.

Staff reviewed infrastructure improvements that have been implemented and those that are included in the 10-year Capital Improvement Program. These investments in field infrastructure will impact the ability to improve turf conditions, but are not a stand-alone solution for ongoing turf health. The assessment also included exploration of re-sodding the fields with dense grass and/or replacing grass with synthetic turf. These options would bring a new set of challenges, have high costs and impact our park system.

The amount of play was discussed, since wear and tear on the fields contributes to turf conditions and the ability to provide dense grass. Earlier this year, the Department implemented an Athletic Field Use Policy which prioritizes access to fields. Staff is assessing demand and determining the number of games our fields can accommodate. Staff recognizes that a successful turf maintenance program must account for – and at times may limit – the amount of athletic play and community events that take place on each field.

The review included several discussions with the Parks & Recreation Advisory Board (PRAB) to outline the process, identify potential resources, share findings, receive input, answer questions, and discuss a



recommended path forward. Each Parks & Recreation Advisory Board meeting included public comments, allowing Board members to hear from residents. At the conclusion of the process, the Parks & Recreation Advisory Board prepared a statement to represent their thoughts on this topic, which is attached for Council review.

Recommended Approach

Through this extensive process, the use of an Integrated Turf Health Management Program has been identified as the best approach, because it is site-specific and tailored to each location's existing conditions and needs, using the safest products available and the least amount necessary to accomplish maintenance goals and achieve established standards. With a focus on the overall turfgrass system, including plants, soils, and beneficial organisms, we have concluded that the Integrated Turf Health Management Program provides the best, fiscally responsible approach for improving and maintaining safe playing surfaces to reduce the risk of injury, while minimizing exposure to treatment materials by using the least amount of product necessary. Each treatment decision will be made in a way that balances recreational, ecological, horticultural, economic and community impact.

This approach would be based on regular monitoring of field conditions and scouting pests in order to make data-driven decisions on next steps. Each field will be assessed every three-four weeks – a process that will take a comprehensive look at multiple aspects of field conditions and use. Each assessment will generate a field condition rating that will inform the appropriate maintenance path, including which tools should be used for each sports field. This targeted approach is far preferable to a systemwide, schedule-based approach, since it would limit treatments to specific fields based on need.

The Integrated Turf Health Management program would consist of maintenance levels with prescribed treatment options based on the assessment rating. The program starts with cultural practice as core treatments for all acreage. Maintenance levels range from Level 1, which is ideal, to Level 2, Level 3 and Rescue Level which is the most severe conditions. As fields are assessed and rated, their maintenance levels would be adjusted.

Policy

Staff wishes to develop an Athletic Turf Management Policy in order to implement an Integrated Turf Health Management Program, with protocols and applications implemented on a field-by-field basis. The draft policy is provided in the packet and includes a field evaluation process to score field conditions and rate with a corresponding maintenance level. Each level has a list of available prescribed treatment approaches. The draft policy also includes additional rules, restrictions and guidelines above and beyond those required by the Ohio Department of Agriculture and the Environmental Protection Agency for product selection and use.

The maintenance of the City's athletic fields is ever evolving and the Department will modify the Athletic Turf Management Policy as necessary and appropriate, while striving to achieve optimal results within available staffing and financial resources, while minimizing treatments. Specifically, the policy and Integrated Turf Health Management Plan will be re-evaluated if any field being treated at the Level 3 or Rescue Level remains at this level after three years. The policy requires an annual update to City Council and the Parks & Recreation Advisory Board and will include a list of fields by identified maintenance level, the treatments applied, a comparison from year-to-year of pesticide usage, resulting field conditions, an analysis of the Integrated Turf Health Management approach, and a plan for the next year. The update will also include a summary of field usage and capital improvements implemented and planned.



Implementation Costs

The implementation of the Integrated Turf Health Management Program is scalable based on available resources, including staff capacity and the annual budget for turf care. The Department does not expect to radically improve all athletic fields in a short time period, since current conditions have been years in the making. As fields are assessed and categorized, the actual condition is evaluated to determine the necessary treatment. The onus is on Staff to determine the underlying condition that results in field assessment scores and to treat the specific cause. Thus, all applications that are available in a prescribed program may not be implemented. As a result, the cost of implementation would be fluid, based on actual conditions. However, to offer a cost analysis, a per acre cost is provided as if all available treatments are applied, which may not be necessary.

A cornerstone of our approach is to treat all athletic fields with standard practices, including aerification, and applying seed and fertilizer. The cost for these core treatments is already included in the annual operating budget. The additional cost for prescribed maintenance ranges from Level 1 at \$575 per acre to the Rescue Level at \$2,227 per acre. With the 60 acres of athletic fields, if 25% of the acres fall into the Rescue Level, the annual cost to treat these 15 acres would be \$33,405. The Department did assess an organic approach which would involve the use of different core and treatment products at a cost of approximately three-four times the Rescue Level cost per acre. This is a simplified cost comparison as the approaches differ in both core program products and maintenance treatments.

Implementation of the Integrated Turf Health Management Program will be phased in on a priority basis in order to address the most severe conditions. Ideally, an annual amount of \$50,000 - \$60,000 would allow Staff to establish an approach that addresses turf conditions and impacts the safety and playability of fields. This amount would be reduced over time as field conditions improve. Staff is also able to scale the annual plan based on the operating expense Council is able to support. For 2022, Staff plans to use existing appropriations as available to begin this program, and will include a recommendation in the 2023 budget process for a full year approach.

Recommendations

After a thorough research and evaluation process including Parks & Recreation Advisory Board discussions and community engagement, Staff recommends establishing an Athletic Field Turf Management Policy that outlines an Integrative Turf Health Management Program focused on improving the whole turfgrass system. The overarching goal is to balance safety by reducing the risk of injury and risk of exposure to pesticide products while resulting in playable surfaces.

This approach is based on a field assessment process to determine the necessary level of maintenance and applicable methods of treatment to offer safe and playable fields. Repeated field assessments would position fields in different maintenance levels as conditions change, thereby limiting the number of potential applications to a minimal number. The policy governs the use of pesticides, calling for selection for effectiveness and the lowest level of toxicity.

The Integrated Turf Health Management Program is a new approach for the Department and ongoing evaluation will be part of our standard practice. The policy, field assessment rating sheets, treatment



plans, and available products (organic and synthetic) will continue to be evaluated as the program is implemented.

Alternatives

This analysis is based on determining an effective approach to improve the safety and playability of athletic fields. Ideally, any alternative would assist in achieving this goal. A few alternatives Council could consider include:

1. Continuing with current practices that exclude the use of pesticides. This approach would maintain the status quo which many in our community have stated was not acceptable during the 2018 Department Comprehensive Plan process. Additionally, park users have addressed concerns with field safety and playability.
2. Changes to the amount of scheduled athletic play and community events on fields.

Staff considered other options, including an all-organic approach, and did not find any alternatives that were fiscally responsible, met our desire for a data driven approach to minimize the use of chemicals, and/or provided a reasonable probability of success.

