



Integrated Pest Management Program

4-Tiered Approach

Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage with the least possible hazard to people, property, and the environment

1. **Setting action thresholds** - Thresholds are a point at which the pest environment conditions or populations indicate pest control action should be taken. The level at which the pests will become an economic threat is important to guide the future decisions of pest control. The University of St Thomas has identified specific areas on campus that require a varying level of maintenance. Thus, having a differing threshold.

Threshold Levels - The well-maintained appearance of the campus grounds is an integral part of attracting perspective students and the overall student experience at the University of St Thomas. We also have to consider our community. This university is nestled in a traditional urban neighborhood setting and has an obligation to take in consideration the context provided by adjacent properties.

Level 1 - Upper and lower quadrangles (quads), baseball outfield, Morrison House, Sitzmann Hall, and the Minneapolis campus have been identified as areas that require a level 1 threshold. Campus quadrangles, or quads, are a very important part of the

student experience at this university and many others throughout the country. The quads provide an opportunity for students to take a break from their studies and get outside. You will often see students eating lunch, congregating with friends, throwing a frisbee or simply lying in the grass. There are also many organized activities held on the quad lawns that have medium to heavy impact on the ground plain. These are essential gathering spaces. The baseball outfield is another area that requires a consistent, durable and safe playing surface that will meet the needs of competitive use. Lawn grass is the most appropriate surface material to support these types of programming. These areas are specifically maintained to have resilient weed free lawns, planting beds, and hardscape surfaces. Lawn areas must appear lush and green throughout the growing season. Plant material must have a healthy vibrant appearance.

Level 2 - All other lawn and landscape areas that receive supplemental irrigation have been identified as level 2. These areas require a majority of the lawn, planting beds, and hardscape to be weed free. Lawn areas must appear green throughout the growing season. Plant material must have a healthy appearance.

Level 3 - The unirrigated lawn area in the southwest corner of the St Paul campus has been given a level 3 threshold. This area has been identified as an area with the potential to be managed in accordance with an organic land care standard or sustainable landscape management program. We are currently investigating the feasibility of managing this area without the use of inorganic fertilizers, fungicides and herbicides in favor of ecologically preferable materials. This area will NOT be treated with any pesticides starting in the spring of 2020 except for the first twenty feet from the back of the curb along Goodrich Ave and Mississippi River Blvd.

Level 4 - The grotto & stewardship garden spaces have been identified as level 4. These areas are managed without the use of inorganic fertilizers, fungicides and herbicides in favor of ecologically preferable materials.

- 2. Monitoring and identifying pests** - The Turf Technician along with the Grounds Maintenance Supervisor at the University of St Thomas are responsible for identifying and monitoring pest levels in the various vegetated areas of campus

- Evaluate lawn areas and planting beds weekly.
 - Response to evaluations are based on threshold level.
3. **Prevention** - The grounds crew takes preventative measures while managing the lawns, planting beds, natural areas, and hardscape surfaces to minimize the chance of pests becoming a risk.
- a. **Lawn Turf**
 - i. **Soil Testing** - Comprehensive soil testing is used to determine what is currently present in existing soils and what may or may not need to be done to ensure healthy soils.
 - ii. **Fertilizer** - In the past the fertilizer used was all categorized as synthetic. In 2019, the University of St Thomas transitioned to treating all lawn turf using fertilizers that fit into the category called "bridge organic" products. "Bridge organic" products are comprised of all organic matter but may also contain Urea. Urea is used to extend the window of effectiveness.
 - iii. **Herbicide** - Time released granular crabgrass and broadleaf weed control will be applied in the spring to prevent widespread invasion. We are currently pursuing organic weed control methods.
 - iv. **Mowing Height** - Set mower decks to 3-4" height. A longer healthy lawn is proven to better compete with pests. The baseball outfield lawn may require a reduced mowing height.
 - v. **Mowing Times** - Lawns should be mowed when grass is dry whenever possible to avoid spreading turf diseases.
 - vi. **Mower Maintenance** - Use sharp blades to reduce plant stress. Mower blades should be sharpened regularly.
 - vii. **Grass Clippings** - Grass clippings will be left in place to degrade. This practice provides an organic source of nitrogen and additional organic matter. Grass clippings also provide a thatch layer that is beneficial if no greater than $\frac{3}{4}$ ". Thatch exceeding $\frac{3}{4}$ " will be removed when lawn is health and has the best chance to recover.
 - viii. **Aeration & Over Seeding** - Lawn areas are aerated and over seeded as necessary.
 - b. **Planting Beds and Trees**

- i. Weed Removal - Low volume weed growth in planting beds are to be removed mechanically or by hand periodically to prevent major infestations.
- ii. Pruning - Shrubs and trees are to be pruned away from buildings and off the ground to allow proper air circulation.
- iii. Plant Selection - Plant material replaced or proposed shall be selected using our University of St Thomas Recommended Plant List. Specific plant selection considerations include survivability, aesthetics, native selections, disease resistance and pollinator friendliness.

4. Control

- a. After monitoring, identification as well as the action thresholds signifies that pest control is needed and preventive procedures are no longer available or effective, the IPM programs evaluate proper control methods for risk and effectiveness. Effective but less risky herbicide control methods are selected first like mechanical removal. If more monitoring, identifications as well as action thresholds signify that less risky controls aren't working, then more pest control processes are to be employed. Spraying of pesticides is the last resort.
 - i. Herbicide - Additional applications of herbicide will be determined by comparing monitoring results with threshold levels. Spot treating weeds using herbicide will be done during mid and late season and only as necessary to meet threshold level requirements.