Although economic reasons are often cited for substandard performance of school playing fields, there are other considerations including: poorly defined or unrealistic expectations; lack of an appropriate asset management plan to support expectations; lack of appropriate maintenance plans; a reactive maintenance approach is often adopted (aside from mowing and weed control); and inappropriate prioritization of resources.

Moving Forward
Clearly, an important benefit of improved and/or quality field conditions is that it assists students to develop better playing skills and add to their enjoyment of the sport. If schools are to fulfill their expectations and provide acceptable playing conditions, both a strategic and operational approach is required when managing sports fields.

Strategic Considerations
1. Clearly defined expectations for each field. This provides a basis for identifying capital and maintenance requirements thus allowing for the establishment of appropriate budgets. Equally, it enables schools to quickly determine the appropriateness (or otherwise) of a given expectation.
   - Is closure due to wet weather acceptable?
   - What is the maximum number of closure day(s) that is acceptable?
   - How much use must we accommodate?
   - What level of play are we accommodating – senior representative play vs. junior or casual use?

Schools face the considerable challenge of trying to provide for the different training requirements of their students. Inevitably, sports fields, despite being a major educational facility, are at the bottom of the “food chain” when it comes to receiving funding. Consequently, sports fields at many schools fail to meet expectations at some time during the year. Furthermore, the same host of problems often reoccur from one year to the next.
2. Developing an appropriate asset management plan. This will involve:

- A feasibility study to confirm the limiting factors and options available for moving forward.
- Identifying the most appropriate grass for the situation, along with the maintenance requirements and costs of the various grassing options.
- Identifying the ongoing maintenance costs for the chosen level of playing quality or standard of sports field. This is a major consideration, given that for many schools obtaining funding for capital works is often easier than finding ongoing funding necessary for the upkeep of the upgraded fields. Regrettably, it is not uncommon to see fields failing despite considerable capital improvements due to the lack of or inappropriate maintenance.
- Identifying the capital improvement options that best meet your expectations and the ramifications of each. For example, potential options for improving the availability of the fields for play include:
  - Additional, appropriate maintenance like verti-draining, nitrogen fertilization
  - Improving levels to prevent ponding
  - Subsurface drainage
  - Sand technology
  - Artificial surfaces

Each of these options provide differing levels of service and financial impact for the school.

Operational Requirements

1. Maintenance. Once the school has completed the strategic process detailed above, it is essential that an appropriately resourced and ongoing maintenance plan is adopted. Implementing a basic, regular annual maintenance program is more cost-effective than letting fields get run down and spending several thousand dollars to resurface them. A regular rather than reactive approach to maintenance provides:

- Better consistency and predictability of sports field playing quality.
- Maintenance costs are more predictable and easier to budget for.
- Less risk of unexpected or additional costs, e.g. increased janitorial costs for cleaning classrooms thanks to muddy feet/bodies.

2. When determining what is an appropriate level of maintenance:

- Be realistic. The greater your expectations, or the more a field is used, the greater the maintenance requirements.

The Ontario Perspective

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For schools in Ontario, weed control options are limited to cultural controls and bioherbicide ingredients listed in Class 11 by the Ontario Ministry of the Environment (www.ene.gov.on.ca/en/land/pesticides/class-pesticides.php). There are also some mechanical control options such as propane flaming and steaming that are available for non-selective weed control in turf. Overseeding, either by broadcast seeding or slit seeding, helps ensure a quality playing field and also helps reduce weed populations.
• Establish priorities for maintenance activities based on the amount of use a field receives and/or the importance of each field. Generally, high use fields require greater inputs than lower use fields.

Too often, field maintenance is made unnecessarily complicated or expensive. The key is to prioritize resources and place your emphasis on those options that will provide the best return on your maintenance dollar. Research and field observations have shown that the most common limiting factor on fields is poor turf cover. Once grass cover is lost, field condition deteriorates rapidly.

3. For many schools, the maintenance priority list would typically consist of: **Mowing.** Use appropriate equipment that will not damage the field (e.g. marks from agricultural tires). Mowing frequency and height are the most important requirements.

**Usage control.** Where modern sand or synthetic surfaces are not an option, closure of the field(s) when they are excessively wet or soft will provide major benefits for the school – both in better playing quality for the remainder of the year and significant savings due to reduced requirements for renovation.

**Nitrogen fertilization.** For most situations, strategic applications (late spring, late summer and late fall) should be the first priority and will provide a stronger plant throughout the summer when retaining grass cover is paramount.

**Weed control.** For schools, weed control is critical to avoid both the health (bee stings) and nuisance problems that they create.

**Other.** Physical treatments and undersowing.

First and foremost, the provision of safe, consistent and quality sports fields requires expectations to be clearly defined. Thereafter, an appropriate asset management and preventative-based maintenance plan needs to be implemented.

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