

Environmental Benefits from Artificial Turf? ... Definately!

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Artificial turf ... isn't that the abrasion-causing, joint-tearing, scrub-pad looking fake grass?

Artificial turf products have improved vastly over the past few years so forget any of the memories or nightmares you may have experienced on traditional artificial turf fields.

The City of Burnaby just completed constructing a multi-million dollar, state-of-the-art sports complex consisting of three artificial turf sport fields. The Burnaby Lake Sports Complex West is now the home of a revolutionary artificial turf product, which is also the first outdoor installation of its kind in Canada.

Without getting too technical, the product chosen by the City of Burnaby was an "in-fill" turf system rather than the widely used traditional "carpet" turf systems. Instead of a "carpet" laid over a hard surface, an in-fill system is comprised of 2-1/2" artificial grass blades tufted into a rubber backing with a combination of silica sand and ground rubber spread amongst the blades to a 2" depth.

The polyethylene and polypropylene blended grass blades give the turf the look of real grass, and the in-fill material gives it the playing characteristics of real grass. Although soccer is the primary beneficiary of the facility, the multipurpose fields also accommodate football, field lacrosse and field hockey.

All the user groups are astounded at how well the product performs and the vast majority prefer the "in-fill" artificial turf to natural grass. A by-product of the in-fill system is that turf abrasions and knee and other joint injuries commonly attributed to traditional artificial surfaces are greatly reduced.

Why Artificial Turf?

Why choose an artificial turf field over a natural grass surface? The Greater Vancouver and Victoria regions are unique to the rest of Canada. The relatively mild winters encourage soccer organizations to play their primary soccer season from September through March. Unfortunately, these West Coast regions also live up to their nickname the "Wet Coast."



During the fall/winter soccer season, natural grass playing fields face severe rainstorms leading to surface damage and often field closures. On the other hand, artificial turf fields can be played on in nearly all weather conditions without any impact to the field surface. Rainstorms are no longer a problem since the Burnaby Lake Sports Complex West fields are designed to drain 10" of rain an hour, which even for BC is more than accommodating!

Durability

One of the most appealing features of artificial turf is its durability. A standard natural grass sports field can accommodate approximately 360 games per year while a lit artificial turf field has the capability of accommodating approximately 2,080 games per year during prime time hours. This works out to an approximate 6:1 ratio. In addition, the artificial turf sports field provides a consistent quality-playing surface that the user groups can count on from week to week. Heavy wearing sports can be relocated to the artificial turf protecting the existing natural grass fields for the other user groups.

Efficiency

Due to its durability, artificial turf utilizes the land far more efficiently than natural grass fields. Had the City of Burnaby chosen not to build three artificial turf fields, nearly 18 new natural grass fields would have been required to provide the same level of activity.

As a neighbouring suburb of Vancouver, Burnaby has some of the most expensive land in the country. High acquisition costs and a limited supply of undeveloped park land has become a determining factor for the use of artificial turf in Burnaby both now and in the future.

Cost Per Game

Decision-makers often can't get beyond the capital cost requirements for constructing an artificial turf field - approximately \$1 to \$1.4 million compared to a natural grass field of \$350,000. But when the capital and operating costs of both are compared to actual usage over a 12-year life span, calculations show that artificial turf per game costs are approximately 65 per cent cheaper than natural grass.

Maintenance Requirements

As expected, maintenance requirements for artificial turf and natural grass differ quite dramatically. No matter what anyone says, artificial turf fields are not maintenance free though maintenance expenses are approximately 50 per cent lower than natural grass fields.

No Chemical Applications

Unlike natural grass fields, artificial turf does not require fertilizer or other chemical applications eliminating any concerns of leaching into surrounding ground water or streams.

Water Conservation

In-fill artificial turf systems do not require irrigation thus eliminating the need for additional water consumption. For regions serviced by water meters, the savings can be significant.

Recycling

The in-fill turf system chosen by the City of Burnaby also incorporates recycling into its construction process. Almost 30 per cent of the ground rubber particles

that make up the in-fill material are generated from recycled running shoes.

Re-use of Existing Land

Artificial turf fields can also create an indirect environmental benefit. Burnaby's new complex is adjacent to an existing sports complex with nine natural grass sports fields. To improve the quality and performance of these natural grass fields, the site will be renovated over the next few years. The performance capabilities of the neighbouring artificial turf fields now provide an opportunity to redesign the older site. With a lot of the sports usage demand transferred to the artificial turf field site, not as many natural grass fields are required. Staff is currently working on redesign plans that will revert a portion of the field space neighbouring Burnaby Lake back to a wetland environment.

Summary

At first, it sounds absurd to think that replacing natural grass fields with artificial turf would have environmental benefits for the community. But beyond its performance capabilities, artificial turf

has shown it can provide an efficient way of maximizing limited land resources. In addition, the in-fill turf system has demonstrated environmentally friendly maintenance practices by eliminating fertilizer and irrigation requirements. After all is said and done, the artificial turf may be considered "fake" but the recreational and environmental benefits certainly aren't. ♦

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