

Re-using synthetic turf infill

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THE SPORTS TURF INDUSTRY has seen huge growth in the number of synthetic turf sports field both in our nation and the rest of the world over the last decade. The newer infilled playing surfaces now number in the thousands, if not tens of thousands. The quality of play on these fields compared to the first generations of artificial playing surfaces is impressive. A large number of college and professional teams now own synthetic sports fields, either at their stadium or practice facilities. What was once a luxury now seems to be a necessity for many.

The basic construction of a synthetic playing surface consists of synthetic fibers or carpet, the infill (sand or rubber), backing material, a choker stone layer, open grade and soil. In essence the fields are not all that complicated and installations in most cases can be done in a just a few days or weeks at most. While the investment of a synthetic field now seems commonplace and enjoyed by owners for years and years.

A new question is looming on the horizon. What to do with the fields once they have met its life expectancy. There are an alarming number of fields that will be removed over the next decade and some thought should be given on how to dispose of them properly.

The average synthetic field will include between 300,000-750,000 pounds of infill material varying due to the mix of sand and rubber and over 80,000 square feet of plastic fibers. So what is the answer that would be the most environmentally friendly? Waste Management and many other disposal companies are now signaling that they do not want the materials or they will charge outrageous fees to put them in a landfill.

Many companies now promoting recycling all materials well in advance of their industry peers and are using machines to remove the synthetic fields at the end of their life and separate the components of each to be recycled or reused. Let's take a look at how the materials could possibly be used in a constructive and environmentally sound manner.

Several years ago Dr. Trey Rogers and Tim Vanini from Michigan State University identified that crumb rubber had potential as a possible topdressing material. The approach makes sound economic sense, but the use of rubber infill only on a limited basis. Can the application of using crumb rubber as a soil amendment be popularized?

The majority of playing fields are made of plastic fibers produced from polyethylene and polypropylene. The clean surface



fibers of these older fields can be cut, recycled and made into lower density fibers. However, most backing materials cannot be recycled in this manner and are used as a low grade fuel at some smelting plants and cement kilns that harness this energy for producing other goods. A number of synthetic turf manufacturers are now advertising turf made from fully recycled materials ahead of their competition.

There are a relative few turf installers that have discovered that removing, cleaning and reusing materials on site is not only a good method, but also reduces the cost of a replacement field. A mechanical infill remover can take out the old infill separate it and then it can be cleaned for reuse or disposed if necessary. A large portion of rubber infill can be used again in most applications, while sand is disposed of by selling or donating to other sources.

If the playing field is worn, but still has some life left it can be sold or donated to high school or other facilities with lower budgets. There are also stories surfacing of used turf being used as golf tee mats, to line sand traps on golf courses, or other uses. There seems to be a growing number of outlets for used synthetic turf and the world wide net can surprisingly help find an old field a new home.

The Synthetic Turf Council (STC) is the first group to take a pro-active look at these concerns with its End of Life Disposal Task Force. The STC encourages options that avoid landfills once a synthetic turf field has met its life expectancy. Owners can seek advice from them and request copies of publications such as the organization's "Suggested Performance Guidelines" that will help identify when a playing field is nearing its end of life. Check out their website at www.syntheticurfCouncil.org.

The number of equipment manufacturers that produce machines to assist end users in the recycling of synthetic turf and its components is growing. The companies that provide this service will grow exponentially as the thousands of fields start to mature. Look for the increasingly numerous sources to recycle or repurpose the byproducts of your old field before its end of life and you will not only save yourself costs of replacement, but you will also keep your operation environmentally friendly. ■