The number of synthetic turf fields reaching their end-of-life in the U.S. is exploding. By 2018, more than 1,000 fields will need to be replaced every year – every year for decades to come. This means that each year nearly 100 million square feet of turf and half a billion pounds of sand/rubber infill will need to find a new home. If destined for the landfill, it is a staggering amount of waste. If not the landfill, then what?

First, let’s talk turf. There are several opportunities for diverting synthetic turf from the landfill following its sports field days. One option is that the material is re-used, or repurposed. Common re-uses include batting cage surfaces, dog runs, or even reinstallation for low level rec surfaces. A second, and more sustainable option, is processing the turf into feedstock for the plastic molding industry. This includes a huge array of molded plastic parts, as well as things like plasticized lumber, plastic pallets, flooring, and non-critical auto parts, just to name a few examples. Taking turf from the field and returning it to commerce as a new plastic good is referred to as “down-cycling” and is an affordable, sustainable, and environmentally responsible practice.

Now what about the existing sand/rubber infill? There are plenty of alternative uses for this material after it has served its purpose in the field. There is equipment available that can extract essentially all of the infill out of the old carpet right on site, making it available for installation back into the new field. It can also be used for topdressing natural grass fields or be blended into garden soil mixes. If the infill components can be separated from each other, the potential uses increase dramatically because you now have discrete products with a wide range of applications.
Mark Heinlein (shown right), recently spoke to large groups about field reclamation at the California Recycling Conference in Sacramento and the APT/STI Conference in Waikiki, Hawaii. Mark also serves on the Synthetic Turf Council’s Crumb Rubber Task Force and the American Society for Testing and Materials (ASTM) Task Group on Reclaimed Infill. He believes that the future is “green” when it comes to handling end-of-life turf fields. You can learn more about this effort and TRS’s ability to aid in the solution by checking out our previous blog on "What Happens to Used Turf".

What Happens to Used Turf?

By: Adam Coleman | October 1, 2013

What is the best approach to dealing with the synthetic turf and infill once it’s removed from a field? In just a few years, 40 million pounds of synthetic turf will be removed annually, and currently there are four viable options available. Let’s explore them in a bit more detail.
Landfill. This is the simplest and most common way to handle the synthetic turf waste stream. Even though it’s the easiest thing to do, it’s not always the most cost effective. While landfill costs in the Midwest average around $10,000, it could cost 5 times that amount on the East and West Coasts. And after the material hits the dump, it’s a lost resource.

Waste to Energy. This approach takes the synthetic turf and incinerates it at a high temperature, extracting the BTUs (energy trapped in the product). This energy is then used to heat a boiler and generate electricity. Some amount of residential carpet is handled in this way via the Carpet America Recovery Effort. In a WTE process, the volume of material is typically reduced by 95% while big, powerful scrubbers extract hazardous by-products and ensure
that emissions meet strict air quality standards. Critics argue that WTE destroys valuable resources and releases excessive CO2.

**Repurposing (Reusing).**

This solution takes a piece of turf that was deemed useless in one application and finds use for it in another (a batting cage, for example). While a good short-term solution, the reality is that once the field is divvied up into smaller pieces, the chances for recycling are greatly reduced. The other stark reality is that the repurposed market will soon be flooded with product – about 1,000 synthetic turf fields will be removed in 2016. That’s over 80 million square feet of old turf.

**Recycling.**

This is the ultimate solution, turning seemingly useless waste into useful plastic goods. These goods can continue to be recycled, creating a closed loop, allow resources to be reused (and not mined) and perpetually delay their trip to the landfill. This is arguably the most difficult solution as it requires specialized machinery to remove and separate the field, and some advanced chemistry to make polyethylene, polypropylene, polyurethane, polyester and/or nylon compatible. TRS can bring all of that together in a turnkey process and once this is done, the applications for molded plastic goods that are only limited by imagination. This option has the best chance for long-term sustainability.

So there you have it. The decision is yours. Choose wisely!

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**Confession.** Last night I threw away my son’s Hot Wheels Super Jump Raceway. It was an awesome toy. We spent hours and hours of father-son time trying to figure out which cars could make the jump and which cars were too heavy to cover the distance. He absolutely loved it. Then we moved. A few pieces got split up into different boxes. A really critical piece broke and then the thing sat there – a heap of plastic in the corner of his playroom. So, last night I was on a mission to round up all the pieces and fix the thing but the mission was not accomplished. We both admitted that it was a bust but being a 3.5 year old he still couldn’t part with it. So after the lights went out, I decisively packed it up and threw it out.

Recently a Canadian billionaire paid $27.5 Million for a sweet, cherry red 1967 Ferrari – a 275 GTB/4*S N.A.R.T. Spider to be exact. Only 10 were ever built and all 10 aren’t still around. You know what that means? Some of them at some point were thrown away. Trashed. Junked. Adios.

My wife got me a watch for my birthday. It’s a nice watch – a grown up watch. Sadly, some day it too will meet the fate of the garbage can. (I’m glad she doesn’t read this blog!) I plan to wear it for a long time. One day, it will go out of style. Maybe I’ll gift it to my son so he can throw it away.
some day. Only Smithsonian (http://www.si.edu/) level things may have a different fate. Sadly, my watch isn’t one of them.


So what’s the good news? **Things don't have to get thrown away. They can be recycled.** And recycling isn’t always easy but throwing things away uses up valuable and, let’s be honest, limited resources. Some day in the distant future, I can imagine that someone is going to mine our landfills for resources that we thought were garbage (and they just might find my son’s Hot Wheels track.)

My challenge to synthetic turf owners is to acknowledge that their beautiful, high performance synthetic turf fields are going to eventually wear out and that’s not an easy thing to think about on purchase day. The good news is those fields can meet a better fate than the landfill. They can be recycled into useful and productive products...and TRS can help make that happen.

I’ll leave you with a quote from one of my son’s favorite movies, Dr. Seuss’ The Lorax (http://www.theloraxmovie.com/index.php):

"**Unless someone like you cares a whole awful lot, nothing is going to get better. It's not.**"

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**Artificial turf removal and recycling from Turf Reclamation Solutions (TRS):**

TRS is a leading national provider of artificial turf removal and recycling solutions designed to fill a growing need in the artificial turf industry. Our services include: Artificial Turf Removal (/artificial-turf-removal) with the Viper Turf Slicer (/equipment), WINDER Turf Roller (/equipment), Rattlesnake Infill Separator (/equipment) and Wrangler Powered Base Unit (/equipment). TRS is unique in its ability to offer a complete solution from removal to recycling.