



City of Goshen

STORMWATER TOOLBOX

Public Works & Utilities
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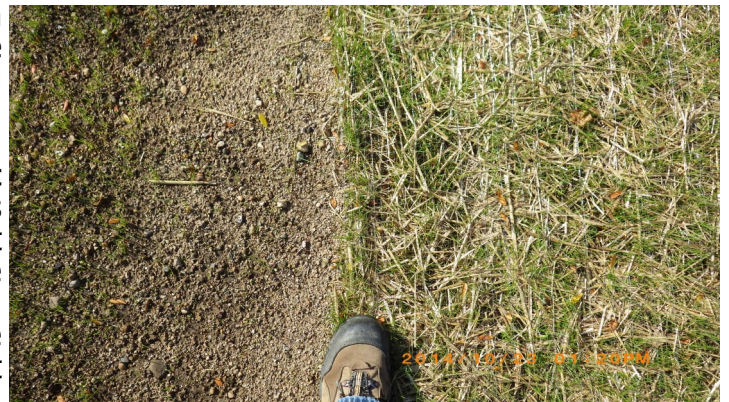
Stabilization—Any Cover is Better Than None

Winter is coming, the amount of daylight each day is less and less, temperatures are falling, and vegetation is going dormant for the next 5-6 months. If you still have outdoor projects with bare soil or will be working in the soil during the winter months it is doubly important to cover these areas as quickly as possible. The ground may freeze during the winter but it will eventually thaw and could wash away. Keeping the soil in place is easier and less expensive than stopping it from reaching our local waterways once it has started moving. Additionally, sediment is the primary mode of transport for many other types of pollutants. Thus, covering bare soil with something is better than nothing.

Microplastics are less than 4.75 mm in size and the picture below shows microplastics collected in the Great Lakes compared to a penny. (Picture Credit: 5Gyres).



Temporary stabilization options include hydromulch, anchored straw, wood mulch, sod, erosion control blankets, or plastic tarps. When the soil is covered erosion cannot begin. A good example of this can be seen in the following YouTube video showing what runoff from vegetation, mulch, and bare soil looks like: bit.ly/2eexVAf.



As you can see in these pictures, grass grew much better in the areas that were covered by some type of mulch. Mulch helps protect seed from wind dispersal or becoming food for animals, it also helps to moderate temperature and moisture.



Finally, if you find yourself with bare soil during the winter months you don't have to wait until spring when the ground is soft and wet to seed it. Instead you can use one of the following stabilization techniques: dormant seeding (when temperatures are below 50°F) or frost seeding (when soils are in the freeze-thaw stage). Check out the Indiana Stormwater Quality Manual, Chapter 7, pages 41-45 for more information - www.in.gov/idem/stormwater/2363.htm.



A DROP OF NEWS

Your Stormwater Newsletter

Microfibers: The Unknown Plastic Pollutant

In 2015, bans on microbeads were passed in several states including Indiana. Additionally, in 2015, President Obama signed into law a bipartisan bill prohibiting the sale and distribution of products containing microbeads beginning in 2017. Even though plastic microbeads are a big issue when it comes to plastic pollution in the Great Lakes and Oceans it is not the only source of microplastics and in fact is one of the smaller sources in the streams and rivers that flow into the Great Lakes. Other sources of microplastics include plastic bags, plastic bottles, straws, plastic pellets, fishing line, and clothing. Clothing? Yes, clothing.

A recent U.S. Geological Survey study of microplastic pollution in 29 streams and rivers (or tributaries) flowing into the Great Lakes found that 71% of all particles collected were fibers/fishing lines but mostly fibers, followed by fragments at 17%, foams at 8%, films at 3%, and pellets/beads at 2%. How



microfibers make it into our waterways is still being researched but a recently released study from Plymouth University in England showed a single load of laundry of acrylic fabrics could release up to 700,000 microfibers. This study clearly shows the type of material used to make the clothing plays a big role in the amount of microfibers released with synthetic materials being the worst. Further study is needed to determine how to address this problem and what can be done to reduce the release of these microfibers.

Sources:

- Plastic fibers emerge as Great Lakes pollutant—bit.ly/2f1UeKV.
- Plastic Debris in 29 Great Lakes Tributaries: Relations to Watershed Attributes and Hydrology—bit.ly/2fwjBcn. This is an unofficial adaptation of an article that appeared in an ACS publication. ACS has not endorsed the content of this adaptation or the context of its use. (Source of above picture.)
- Your Laundry Is Worse For The Environment Than You Think—bit.ly/2eeAlyA.

Report an Illicit Discharge

An illicit discharge is anything other than rain that could flow or be washed into a storm drain. If you see something that doesn't look right please call 574-534-2201, send an email to jasonkauffman@gohsencity.com, or submit a Stormwater Report through the City of Goshen's new "Report an Issue" button in the upper corner of the City's website (www.goshenindiana.org).

