

# Woodbury GreenTimes

A special environmental edition

July 2021



## Vegetation management helps improve water quality, protects wildlife

The City of Woodbury owns and maintains more than 800 stormwater basins for flood storage and water quality benefits. These basins were designed to treat water, so it is important to note that depending on environmental factors, they may at times have low water levels and high algae or plant growth. Although they are a functional part of the city, stormwater basins are often recognized as ecological and aesthetic amenities.

In 2017, the city initiated a Public Stormwater Basin Study to develop goals for basins within the city, particularly those located along city trails and parks. The purpose of the study was to summarize the ecological condition of stormwater basins that may be considered amenities, and recommend management activities to improve vegetation resulting in improved water quality, aesthetics and the creation of beneficial habitat for pollinators, birds and other wildlife. This effort also included an analysis and prioritization of basins, and recommended that not every basin

is treated the same based on design and location of the amenity.

Through the study, more than 150 basins were identified that would benefit from vegetation management and restoration. Project implementation was initiated in 2018 with 18 of the basins. Depending on the condition of the basin area, project work can include a combination of any of the following: removal and/or treatment of invasive species, mowing, selective tree removal, installation of native plants and seeding, and controlled burning. Additional basins are added to the program each year.

The area surrounding HealthEast Sports Center and East Ridge High School was included in the 2018 Vegetation Management Project. The 2021 work plan for the area, which is in its fourth year of maintenance, included prescribed prairie burns to stimulate the growth of native plants.

*continued on back*

## Protect lakes and wetlands

### Keep grass clippings out of streets

When you cut the grass or rake the yard this summer, remember how you care for your yard affects the water quality in our lakes and wetlands.

According to the U.S. Fish and Wildlife Service, homeowners use up to 10 times more chemical pesticides per acre on their yards than farmers use on their crops. Rainwater running off your property into the street and storm drains will carry any excess fertilizer into the city's surface waters.

When mowing, it is important to be conscious of where your grass clippings go, and to sweep up any clippings left on the driveway, sidewalk or street. Grass clippings are a source of phosphorous, which is the nutrient that causes our ponds and lakes to turn green with algae. Clippings left on the lawn can provide the equivalent of approximately one application of fertilizer per year, so be sure to mow in a way that clippings are directed back onto the lawn and not into the street.

Although phosphorous can be harmful to water quality, it is a nutrient that your lawn needs to grow, and is especially good for plant roots. Keeping the clippings on your lawn results in added phosphorous to your soil and a healthier root system that is particularly important during times of drought.

Remember the phrase: "Only rain down the drain." When rainwater runs off your property, make sure it enters the storm drain without any pollutants it has picked up along the way. For more information on your lawn and garden's effect on the environment, visit the Minnesota Pollution Control Agency website at [pca.state.mn.us](http://pca.state.mn.us).



**Prairies pull carbon out of the atmosphere.**

**Carbon is stored in the plant material we see, as well as in their deep growing roots.**

**During prairie fires, minimal carbon is released compared to what the plant pulled out of the atmosphere.**





# State recognizes Woodbury for Excellence in Recycling

The City of Woodbury was recently recognized by Gov. Tim Walz for Excellence in Recycling for its innovative use of tire-derived aggregate (TDA) to manage and store stormwater in two underground systems at the city's Public Works campus.

The project, conducted in partnership with TDS Manufacturing/First State Tire Recycling, incorporated efficient use of space, provided environmental protection and reduced the number of tires added to landfills.

Traditionally, stormwater is treated with wet basins and vegetated infiltration basins. These ponds treat and store water to protect the lakes, wetlands and rivers downstream. However, space was limited at the Public Works site, so the city implemented two TDA underground systems, one on each side of the Tower Drive campus. TDA is made of used tires that are shredded down to between 1- and 2-foot-long pieces.

Within the two underground basins at the Public Works campus, 210,000 tires were used,



*The city was recognized by the State of Minnesota for its innovative use of tire-derived aggregate (TDA) to manage and store stormwater in two underground systems at the city's Public Works campus.*

keeping them out of scrap tire yards. That is the equivalent of three years of tires from Woodbury residents' vehicles! These basins were paved over with porous pavement to allow water to soak through slowly, infiltrating clean water back into the ground. Treating stormwater below parking lots is typically a costly practice, but the TDA material is about \$3 per yard, whereas the alternative fill materials run \$25-35 per yard.

The Minnesota Pollution Control Agency encourages the use of TDA in construction activities such as this.

The TDA system on the Public Works campus is the first time TDA has been used to treat stormwater in the community.

The Certificate of Recognition from Gov. Walz was issued in November 2020 and later shared with city staff due to the COVID-19 pandemic.

## Vegetation management...from front

### Prescribed prairie burns

Although prairie burns are not an annual event, it is important to understand the advanced planning and benefits to the ecosystem that can result when an area is identified for a burn.

Experienced professionals develop and submit burn plans to the Minnesota Department of Natural Resources for approval before prairie burns can be conducted. Burn permits are also required from the city's Public Safety Department. When planning the actual burn

timeline, natural conditions such as air temperature, humidity, wind speed, and direction are taken into account. Experienced ecologists decide on what basins would benefit from a prescribed prairie burn.

One benefit of establishing native plants is their ability to pull carbon out of the atmosphere, while one disadvantage of a burn is the amount of smoke that can be generated. Paying careful attention to the evaluation factors helps to minimize the amount of smoke as much as pos-

sible. Although carbon dioxide is released into the atmosphere during a fire, it is not the fossil carbon that is responsible for the rising carbon dioxide levels in the atmosphere. The smoke from prairie fires contains carbon that was pulled out of the atmosphere by the plants within the last few years. The carbon that contributes to the increasing atmospheric carbon levels is a result of the release of carbon that was stored away in coal and oil deposits until it is used for combustion.

The black ash emitted by the fire, Biochar, locks up carbon for decades, or some believe thousands to millions of years. Biochar has also been demonstrated to improve water and nutrient availability in soils. Burning prairies actually stimulates stronger vegetative growth, which sequesters even more carbon into the soil than if it were unburned. Fires also stimulate soil bacteria that provide more available nitrogen to plants.

Notifications of prairie burns are sent via the city's InTouch email notification system and posted on the city's Facebook page. The next possibility for another burn is fall 2021 or spring 2022. To learn more about prairie burns, and to review the city's frequently asked questions page, visit [woodburymn.gov/PrescribedBurns](http://woodburymn.gov/PrescribedBurns).



*In 2020, the city conducted prescribed prairie burns in wetland areas near HealthEast Sports Center to help stimulate the growth of native plants.*

