Common Burdock (Arctium minus) Treatment at Shingle Creek

Native Resource Preservation (NRP), experts in invasive species management, are working with the City of Minneapolis Public Works Division to improve 15 stormwater infrastructure sites. The primary goal of this work is to maintain functionality of stormwater systems. Secondarily, NRP is using the establishment and enhancement of native vegetation to prevent the spread of invasive species.

At Shingle Creek, NRP has targeted Common Burdock (*Arctium minus*) as a major issue preventing success in their goals. Common Burdock is an invasive species that is preventing the establishment of native vegetation, and impacting the overall quality of the site. Common Burdock is an aggressive species that grows a deep tap root and large leaves. These plants shade out other species and are difficult to fully remove due to said tap root. A single plant can produce 15,000 seeds each year, which are viable in the soil for 1-3 years.

Native Resource Preservation uses the philosophy of "Light on the Land" in their work. Their aim is to conserve and restore native habitat through non-intensive restoration techniques. NRP is always looking for methods that get the best results while keeping the land, communities, and people at the forefront. During the first year working at Shingle creek, NRP successfully prevented all Common Burdock from producing seed using a combination of mowing, hand weeding, and herbicide treatment. This process took persistence to keep this aggressive plant from producing seed. Though the first year was successful, they wanted to shift methodology that eliminates the use of herbicides while still achieving the same end result.

In the second year of management, NRP will be implementing this new method known as "Solarization". This is an alternative management method to prevent the growth of Common Burdock in the largest infestations at Shingle Creek. Solarization uses black plastic to cover areas that have heavy infestations and minimal native vegetation present. The covering is installed in the early spring and is left throughout the growing season to trap heat and block sunlight. Common Burdock will not be able to grow and therefore not produce seed at all. This method will also leave a clean slate to reestablish natives the following year.

For a comparison, NRP will be leaving a few small areas of Common Burdock that have a greater composition of native vegetation within. These smaller areas will continue to receive the original management practices of targeted mowing and herbicide treatment. This will provide a real world comparison of the success between two management techniques on the same site. Overall, herbicide use will be significantly decreased across the site by using the solarization method. Using "Light on the Land" ethic and their management expertise, NRP will continue to make these spaces as ecologically beneficial as possible to the surrounding communities.

For more information on the work NRP does you can visit <u>https://nativeresourcepreservation.com/</u>.





Locations of Burdock treatment Red polygons= Solarization treatment method Yellow polygons= Original treatment method

