A Guide to Native Plants

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LADY BIRD JOHONSON

"Native plants give us a sense of where we are in this great land of ours."

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Introduction

This Native Plant Guide serves as a resource for landowners when planning or developing landscapes that are pollinator, water, and climate friendly.

This guide is intended to include information from start to finish of native vegetation establishment.

Benefits of Native Vegetation

Native plants are often viewed as weeds, and the commitment to establish and maintain the plants may seem time consuming or overwhelming. While there is some effort required to establish and maintain native vegetation, the ecological and economical benefits far out weigh the effort that it takes.

Once native vegetation is established, for the most part the plants take care of themselves. Most maintenance usually involves controlling weeds that may be present.

Benefits of Native Vegetation

Environmental Quality

~ Nutrient Removal
~ Nutrient Cycling
~ Carbon Sequestration
~ Increases Water Infiltration
~ Groundwater Recharge
~ Reduces Erosion and Runoff (Water & Wind)
~ Increases Slope Stability
~ Preserves Biodiversity
~ Evapotranspiration
~ Water interception and filtration
~ Increases Soil Health


Water Quality
Improvement Project
Retention ponds and native plantings
benefit Lake Washington by:
• Settling out sediments
• Removing contaminants
• Absorbing nutrients
• Controlling erosion
LAKE WASHINGTON
Improvement Association
in partnership with land owners
Martha Weisgram, Colette
Le Sueur County —
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Benefits of Native Vegetation

Wildlife Habitat

~ Creates Pollinator Habitat
~ Host Plant for a variety of Insect Species
~ Food sources for pollinators, insects, and other animals
~ Shelter and nesting habitat for birds and other animals
~ Aquatic habitat for insects, fish, birds, and other animals

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Benefits of Native Vegetation

Landscape Resiliency

~ Suitability to local conditions (weather, climate, soil, sunlight, moisture, etc.)

~Flood attenuation

~ Providing Connectivity between essential habitat

~ Ability to adapt through genetic adaptation, succession, and natural colonization

~ Provides competition for nonnative and invasive species


2016


2020
8

Benefits of Native Vegetation

Other Human Services

~ Regional character and identity
~ Urban cooling from tree and shrub canopies
~ Protection of homeowners sensitive landscapes
~ Landscape aesthetics
~ Human health benefits from healthy ecosystems
~ Low maintenance once established
~ Educational opportunities

2016

2022

How to Choose Species

The first thing to look at when choosing species, it their biology and habitat preference. Since native plants are adapted to our local environments it is easy to find a diversity of plants that thrive in various conditions.

When choosing native plants based off of their biology consider the following preferences for each species:

~Soil types (clay, sand, silt)
~Sunlight availability (full sun, partial sun/shade, or full shade)
~Moisture requirements (dry, dry mesic, mesic, wet mesic, or wet)
~Drought tolerance
~Flood tolerance
~Salt Tolerance

Top Left:
Purple Prairie Clover (Dalea purpurea)-Prefers full sun, dry soils, heat & drought tolerant.

Middle Right: Big Blue Stem (Andropogon gerardii)-Prefers partial shade & sun, average to dry soils, salt and drought tolerant, somewhat flood tolerant.

Bottom Left:
Ostrich Fern (Matteuccia struthiopteris)-Prefers partial shade or full shade, moist to wet soils, somewhat flood tolerant.

How to Choose Species

The other thing you will want to consider as a landowner is what are your goals? What do you hope to accomplish with native plantings? You may have more than one goal with your project!

Common Goals for Landowners:

~Aesthetically Appealing

~Create Habitat

~Create a Wind Break

~Privacy

~Reduce Erosion and Runoff

~Increase Water Infiltration

~Create Water Storage

~Protect Sensitive Resources

~Filter Nutrients and Pollutants

~Reduce Compaction

~Increase Slope Stability

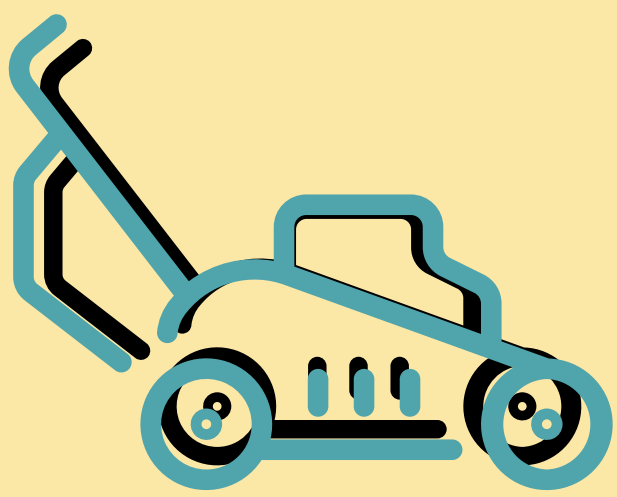
This is an example of a native buffer project on a lakeshore property. The project achieves the following goals: aesthetically appealing, provides shoreline and sensitive habitat protection, provides wildlife habitat, and filters out pollutants and nutrients.

The project below is is an example of a rain garden project on a lakeshore property. The project achieves the following goals: aesthetically appealing, provides shoreline and sensitive habitat protection, provides wildlife habitat, filters out pollutants and nutrients, increases water infiltration, increases water storage, and reduces erosion and runoff.

Diversity of Species is important in order to provide the greatest benefit of ecological services and project success!

Site Prep and Planting

Site Preparation is essential in order to successfully establish native plantings. Making sure weeds are controlled and planting species in ideal conditions is critical. Site preparation will include some type of management of existing vegetation that is present. A combination of mechanical and chemical management methods may be used such as mowing, prescribed burning, tilling, chemical applications, hand pulling, digging, and raking.



Site Prep and Planting

Where, when, and how you plant your native vegetation is critical. Factors to consider before you begin your establishing your native vegetation:

~Spacing requirements between plants
~Suitability of area for specific species
~Seed to soil contact
~Depth requirements for potted plant or plugs
~Time of year
~Size of your native planting project area
~Specific desired species
~Costs of plants
~Time you want to spend establishing and maintaining vegetation

Site Prep and Planting

When should you plant?

It will all depend on species, whether you have seed mixes or potted plants, biology of plants, which ecoregion you are located in, site conditions, and weather conditions.

Generally for spring plantings start no earlier than April 1st, and no later than June 30th. For fall plantings, start no earlier than August 1st and no later than October 15th. If you are planning to do a dormant seeding in the fall, than do not start until after November 1st. Again, this is dependent on a lot of factors. If weather conditions are too hot, cold, wet, or dry you may want to consider delaying your establishment until conditions are better.

Site Prep Example

Shoreline Planting Example

Maintenance

Maintenance is another critical factor when working with native vegetation. Many native vegetation projects fail due to lack of maintenance efforts!

Very similar to site preparation, maintenance, will include some type of management of the existing vegetation that is present. A combination of mechanical and chemical management methods may be used such as mowing, prescribed burning, tilling, chemical applications, hand pulling, digging, and raking.

Removing competition whether the species are native, nonnative, or invasive will give your plantings the best opportunity to outcompete undesirable species.

Maintenance

The first three years of your native vegetation project are the most important. It can take up to that long before your plants are fully established! The first year of growth is when native plants are growing biomass underground and creating dense root structures. The second and third years of growth plants will focus on creating biomass above the ground and reproducing.

The first year will require the most maintenance due to competition with other undesirable species and to promote plant growth. You more than likely will have to do at least two maintenance treatments the first year (ex: mow/spray in spring and fall). If you put the time in the first year, it will make subsequent years much easier to manage.

The second and third years of maintenance should be more spot treatments and not necessarily treating the entire project area. Manage your project area as needed.

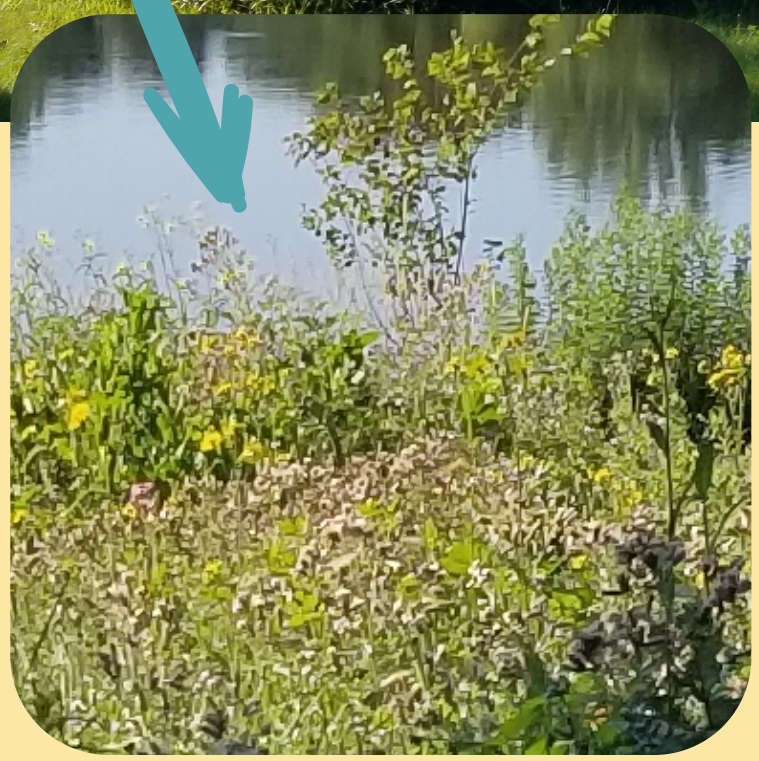
By the time year 5-7 comes along, you may want to consider treating the entire project area, depending on size of area and presence of undesirable species, to slow down succession and reduce competition.

Maintenance

If you are using chemicals to control undesirable species, be very careful not to target desirable species!

Also, if you are using chemicals, make sure to read and follow all of the instructions before use! Overapplying herbicides and pesticides can negatively impact nontarget species such as other plants, birds, fish, pets, humans, and so forth. Additionally, you can create “dead zones” that will prevent species from growing. If applying adjacent to water, make sure to purchase a chemical that is aquatic friendly.

Example of Maintenance



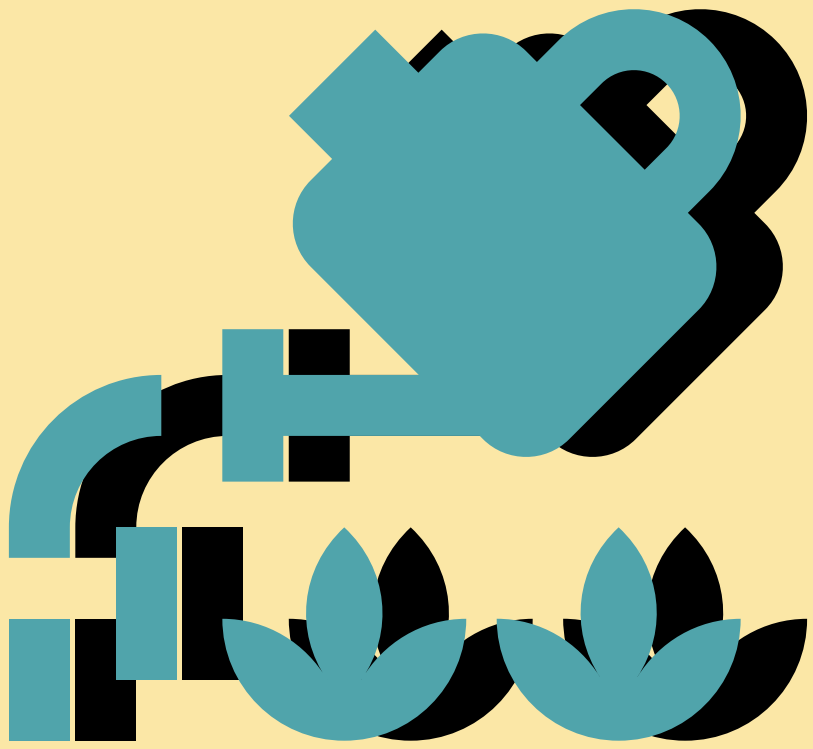
Pictures above demonstrate a rain garden that needed vegetation maintenance due to presence of woody species, thistles, and reed canary grass. Overall there is good diversity of native plants, but they are starting to be outcompeted by both native and non native species.

Pictures below shows the same rain garden about a year later. It is abundant with native plants, and the undesirable species have been removed.

Maintenance

Another part of maintenance that tends to be forgotten is watering. I can not stress this enough, you must water your native vegetation!

Watering is needed the most during the first year in order to get your species well established. Potted plants and plugs in particular need watering the first year! I would recommend watering your plants every few days the first year of establishment.

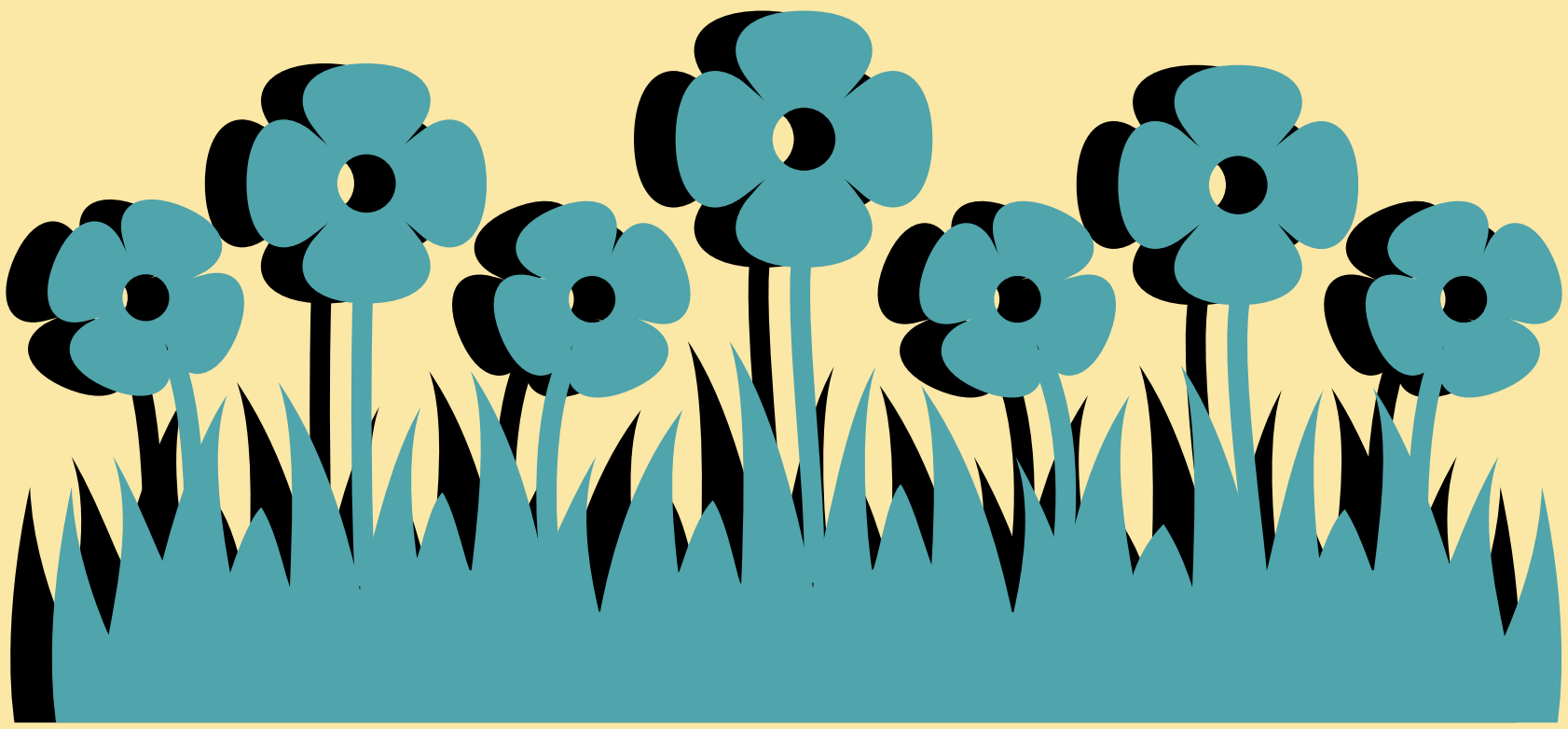


Maintenance

Once your vegetation is established, watering may only need to take place 1-2 times per week during a normal year.

During the summer try to water your plants in the early morning or evening. This will allow your plants to absob as much water as possible.

If we are experiencing a dry year, watering should occur at least every few days.



Example of A Complete Native Vegetation Project

Site Preparation 2015. Remove existing vegetation before establishment.

Vegetation Establishment 2015. Native shrubs installed along shoreline, and native prairie seed mix broadcasted in remaining project area.

Maintenance Check 2017. Prescribed burn occurred in the Fall of 2016 to help promote native species growth and inhibit nonnative species growth.

This native vegetation planting project has been largely successful. There is good diversity of native species, and the area has received multiple years of maintenance efforts including mowing and prescribed burning. Maintenance should continue.

Some native plants observed include: asters, goldenrods, big blue stem grass, coneflowers, butterfly milkweed, and compass plant. There is also a presence of nonnative species such as clovers, alfalfa, thistle, and reed canary grass.

Conclusion

Native vegetation establishment is often trial and error. You may do everything right and some species still wont grow and/or some of your plants will die. That is okay, and it will happen.

Diversity of species is important. If you rely on just one species for your project, it will reduce your chances of success.

It can take up to three years to see the “full effects” of your native planting project. Be patient, it is well worth the wait!

Most importantly, have fun with your project! It really is exciting to see your native plantings grow as time goes on!