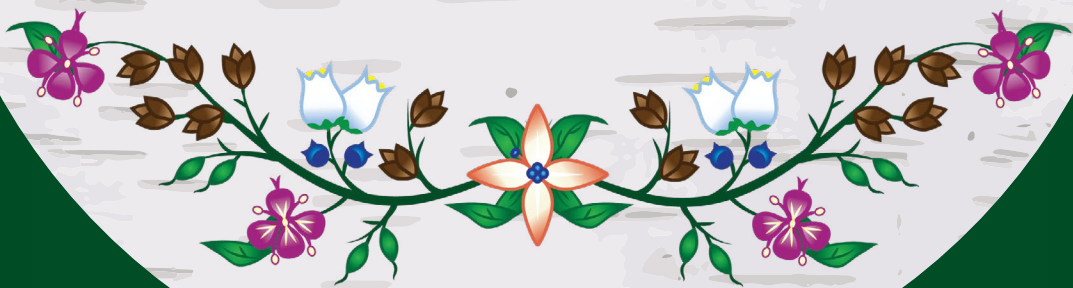
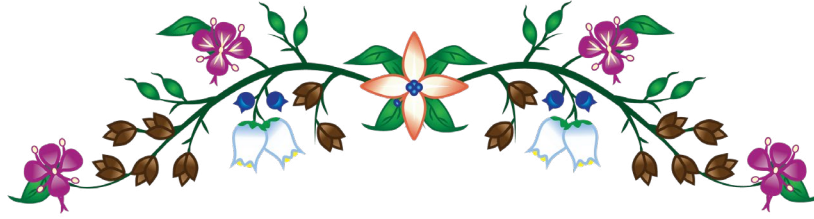


GANAWENINDIWAG

Working with plant relatives to heal
and protect Gichigami shorelines





Introduction

This guide empowers users to grow, promote, and use plant beings specifically from natural plant communities adapted to coastal areas of Gichigami (Lake Superior) to heal and protect Gichigami shorelines. While the focus of this guide is specific to the Wisconsin coast, the basic premise extends to other regions of the Gichigami basin and watershed, though some of the plant communities may be different. It is designed for use by coastal-land caretakers, resource managers, landscape planners, and anyone who interacts with the Gichigami shoreline. Users of this guide will be introduced to many plants that have thrived on this landscape, and with whom the Ojibwe people have developed long-standing relationships. This guide was developed by a collaborative team including the Lake Superior National Estuarine Research Reserve, the Great Lakes Indian Fish and Wildlife Commission, the Lake Superior Research Institute, and UW-Madison Division of Extension's Natural Resources Institute. From its inception, the intent of this planting guide has been to blend different ways of knowing together and to share about plants in a way that intentionally elevates the knowledge and the guidance of Indigenous communities. Many knowledge holders generously contributed their time, wisdom, and creativity to the development of this resource.

The Ojibwemowin title, Ganawenindiwaag (they take care of each other) was chosen because it describes the plant-human relationship from the Ojibwe perspective. Plants are elders, teachers, and providers. Long ago, according to the Ojibwe creation story, the plant beings agreed to care for humans by giving us things we need to survive: food, medicine, ceremonial items, the raw materials for creating technology, and more. Our responsibility as humans is to treat our plant relatives with respect, reciprocity, and gratitude; harvest and use their gifts in a good way; and use our voices to speak for those who cannot speak for themselves. Working with the land and the lake and investing in our relationship with plants, rather than in concrete, stone, and steel, is one way for humans to use our voices and our actions to live up to our responsibilities to our relatives and to our place.

Cover photo credits: (left) GLIFWC, (center and right) Lake Superior Reserve





fireweed



northern white cedar



wild rice



blueberry

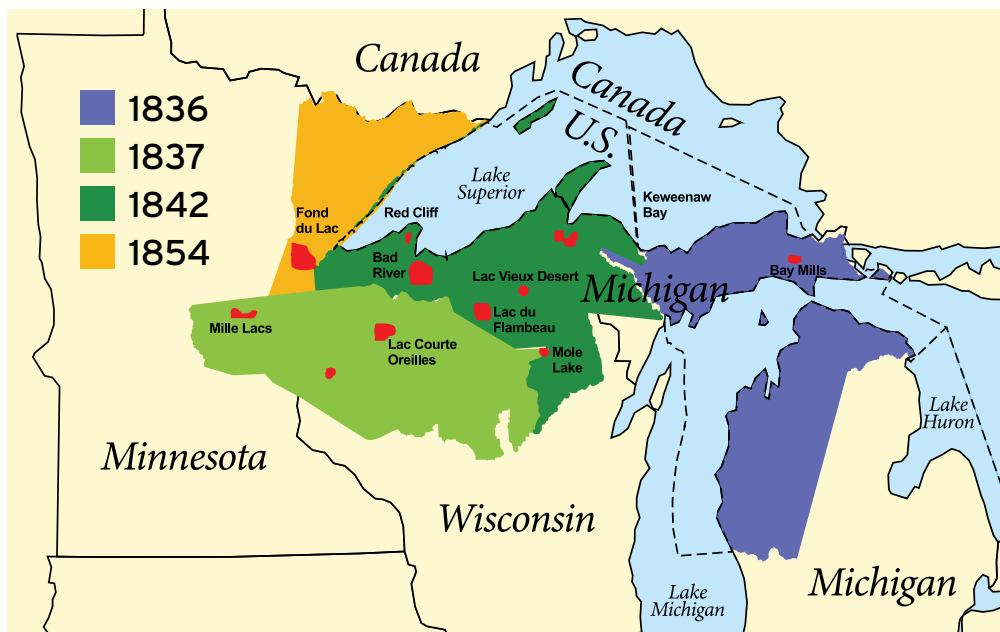


red osier dogwood

Miigwech to artist Sarah Howes, who designed the Ojibwe floral found on the front cover of this guide and the embellishments featured on every page as well as the plant relationship icons shown on each plant profile. In the plant chain, the artwork integrates plants that are featured in this guide: ozhaashijibik (fireweed), giizhik (northern white cedar), manoomin (wild rice), miinagaawanzh (blueberry), and miskwaabiimizh (red osier dogwood). Each plant relationship icon was designed in thought partnership with the project team and cultural advisory group.

Acknowledgments

This project concerns the plant communities in the northern Wisconsin portion of the Gichigami basin, which are the homelands of the Lake Superior Ojibwe and other Indigenous people. This land was ceded by the Ojibwe in the Treaties of 1837 and 1842. It holds great significance for the sovereign tribal nations and Indigenous people here. We recognize the sovereignty of the tribal nations in this region, and the long-standing relationships with plant relatives held by Anishinaabeg.



This work was sponsored by the National Estuarine Research Reserve System Science Collaborative, which supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is funded by the National Oceanic and Atmospheric Administration and managed by the University of Michigan Water Center (NA19NOS4190058).

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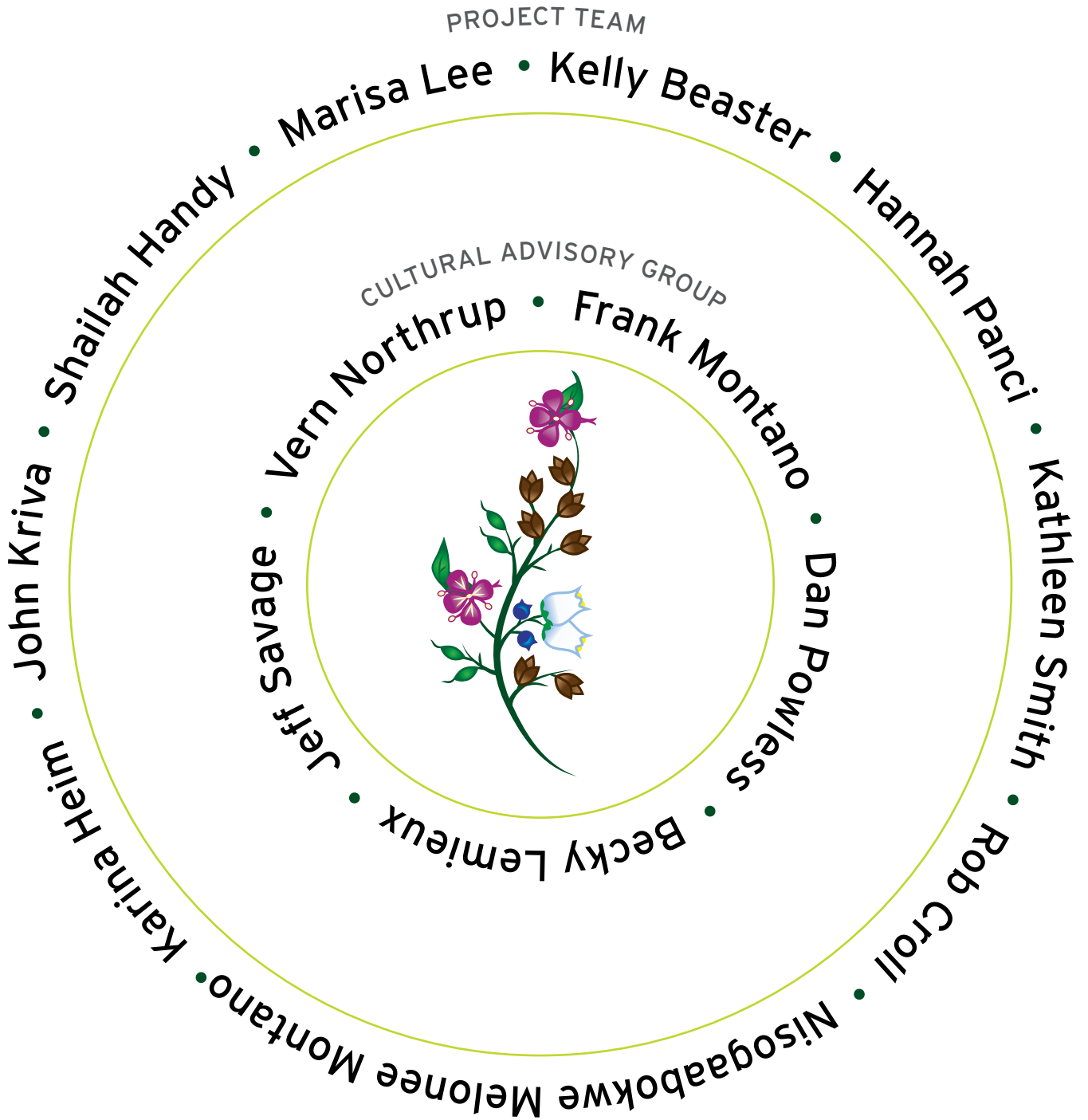


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Authorship Circle



They take care of each other

In the basin of Gichigami (Lake Superior) there is a fluidity to the landscape where the lake and the land meet. The shoreline has been continually changing, and plant communities have evolved to live and thrive in these places of confluence for thousands of years. But two centuries of resource extraction and a steady influx of Euro-American settlers has changed the story of this landscape. Industry, development, and privatization of the shoreline have disrupted plant communities and removed plants from places where their roots long held the earth in place. At the shore, this leaves the land especially vulnerable to erosion and other forces.

Climate change is putting additional pressure on Gichigami and the surrounding land. The shores of Gichigami are now experiencing highly dynamic conditions. Periods of sustained high or low water levels, recurring severe storms and floods, and increased winds over the lake have resulted in a shoreline increasingly susceptible to erosion. Miles of clay-soil bluffs on the south shore have been affected by erosion and slumping, and places that once had sand dunes or beaches may find that the sand has been washed away to be deposited elsewhere. Land owners attempting to slow erosion by “hardening” shorelines and armoring the waterfront with revetments often simply redirect wave energy and impact neighboring areas. These climate impacts have revealed the limits of current shoreline stability and protection practices. Degradation of banks and shoreline can lead to property damage and diminished water health in tributaries and nearshore waters and disrupt lake access for people and animals.

In this dynamic moment, we must gather up all the tools we can to help this place and rebuild our relationships with the land and water. Restoration of native plants to coastal landscapes is one



Photo credit: Deanna Erickson

important tool. This guide was created because restoring plants along the shore of Gichigami can help strengthen a landscape under pressure from many forces. Plants that send their roots deep into the ground help hold the earth together and create important spaces, food, and medicine sources for human and non-human beings. According to the Ojibwe creation story, aki (land) and the elements, including nibi (water), were created first, followed by plants, animals, and finally, human beings. Each order relies on the ones preceding it, and humans are the last and least order. We rely on the gifts given to us by all the other orders of creation for everything we need, while they will all survive and thrive without us. Plants do not depend on us, but they will continue to care for us; our responsibility is to care for them and speak for those who have no voice.



Gekinoo'amaagejig (We are all teachers): Incorporating multiple ways of knowing into this guide

As long as the Great Lakes have existed there have been people learning to live alongside them. Anishinaabeg have developed long-standing relationships with the plants in this region, and view them as more-than-human relatives, elders, and teachers. Generations of living on the south shore of Gichigami taught the Ojibwe how to care for plant relatives by having a respectful relationship with them and by gathering plant relatives at appropriate times and in ways that ensure they continue to thrive.

Cultural knowledge of and access to plants for food, medicine, technology, and ceremony continues to be important in both unceded and ceded territories along Gichigami. The effects of settler colonialism, including loss of access to traditional gathering lands and waters, along with deliberate government policy designed to separate Indigenous people from their language, culture, and lifeways has disrupted the original and mutually supportive relationships between humans and their more-than-human relatives. The impact of climate change on culturally important plants may reinforce and exacerbate this disruption.

As humans caring for the land around Gichigami undertake landscape restoration, we have an opportunity to restore our relationships with the land and our plant relatives. Putting native and beneficial plants in the ground in appropriate places is a start, but we can also challenge ourselves to truly consider the personhood of plants as we seek to support coastal places for the long term. To this end, the authors sought guidance from Ojibwe knowledge holders in the development of this planting guide, and attempted to incorporate ways of knowing that go beyond ecological plant characteristics. The knowledge

and practices of Ojibwe land stewards have protected and supported northern Wisconsin coastal landscapes for thousands of years. **With appropriate background, all coastal caretakers can support access to foods and medicines that underscore tribal sovereignty and the important resurgence of Anishinaabe language, culture, and lifeways.** Respectful sharing of appropriate Indigenous and ecological knowledge about coastal plants to those facing erosive or inundated shorelines can support many facets of human and non-human well-being.

Note: The knowledge of plants that has been developed over generations of Anishinaabe land stewardship is so expansive that it cannot be effectively relayed in a written document.

The information shared in this guide affirms cultural relationships with plant beings, and it is just a beginning. Readers of this guide are encouraged to humbly approach the land, the beings, and the knowledge holders for plant stories and teachings that are meant to be earned and shared deliberately. Users of this guide can expect to find icons that are representative of the kinds of gifts that plants have shared with people under the categories of food, medicine, technology, and ceremony. It is not possible to share all uses of the plants in this guide. Some are not shareable to a wider public audience, while others have been hidden by generations of devaluation of Indigenous knowledge and culture and are waiting to be rediscovered.



Photo credit: Lake Superior Reserve



Preparing to plant: Knowing the land and the native plant communities

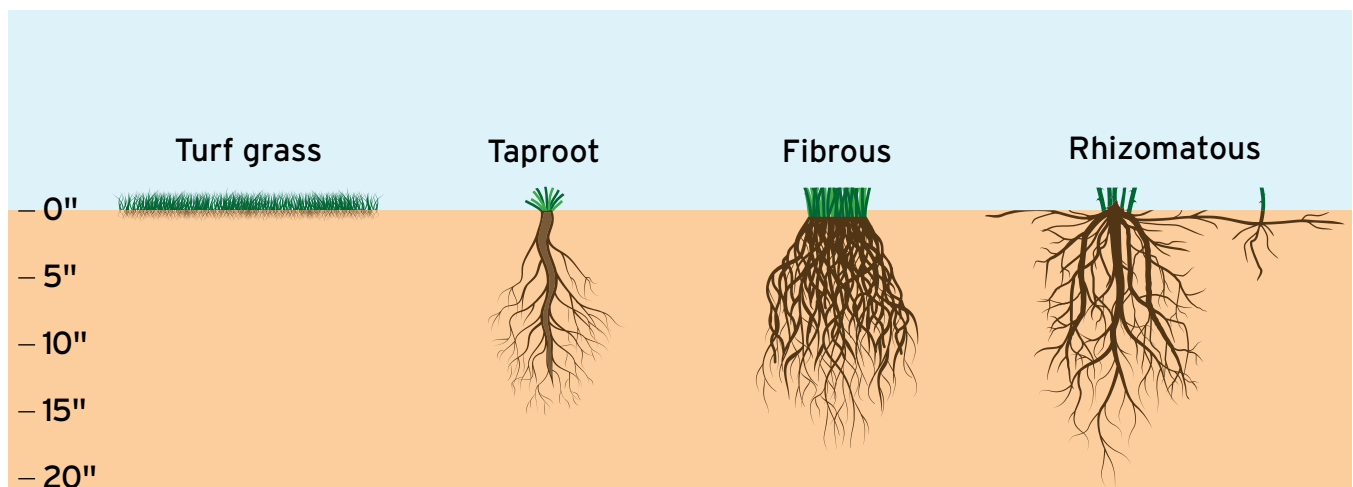
Glaciers that covered the northern Wisconsin landscape retreated over 10,000 years ago, carving out the basin that would become the world's largest surface of fresh water. Plant communities established based on their proximity to Gichigami, creating coastal landscapes of forests and fens, marshes and meadows, clay bluffs, and sandy dunes.

This guide empowers users to grow, promote, and use plant beings specifically from these natural plant communities adapted to the coastal areas of Gichigami. Native plants have had a long presence on the landscape and with the beings and the people that inhabit it, and planting these beings can support ecological health, tribal sovereignty, and Anishinaabe lifeways.

The presence of plants can have a stabilizing effect on the landscape. Planting native beings on the landscape alone cannot fix all erosion problems, but when paired with other techniques, the impacts of storm surges and erosion can be moderated. Vegetation can help to manage water flow by capturing water before it flows directly into the lake, and by allowing water to sink deep into the soil. Upstream, rain gardens and stream restorations can help hold water on

the landscape. Softening shorelines and planting emergent vegetation slows wave energy that would otherwise erode softer soils. **Native plantings are a tool that can better prepare us for a changing environment.**

Native plants are beneficial for many other reasons. They have evolved to survive in this environment and climate, thriving with a particular amount of annual rainfall, temperature range, and length of seasons. Native plants rely on and support native bees, flies, butterflies, moths, and other pollinators. Without access to enough native plants, pollinators may decline and potentially disappear. Native plants also provide food and shelter to animals that inhabit the Great Lakes region. Oftentimes, the root structures of native plants are longer and stronger than those of introduced plant beings (such as turfgrasses), and thus more able to moderate impacts from wind and waves. Native plants have fewer maintenance and planting requirements than their horticultural varieties. Since they are already adapted to the harsh, northern winters, mulching or covering in protective burlap is not necessary. Additional watering throughout the season is not needed unless an abnormal period of drought occurs.

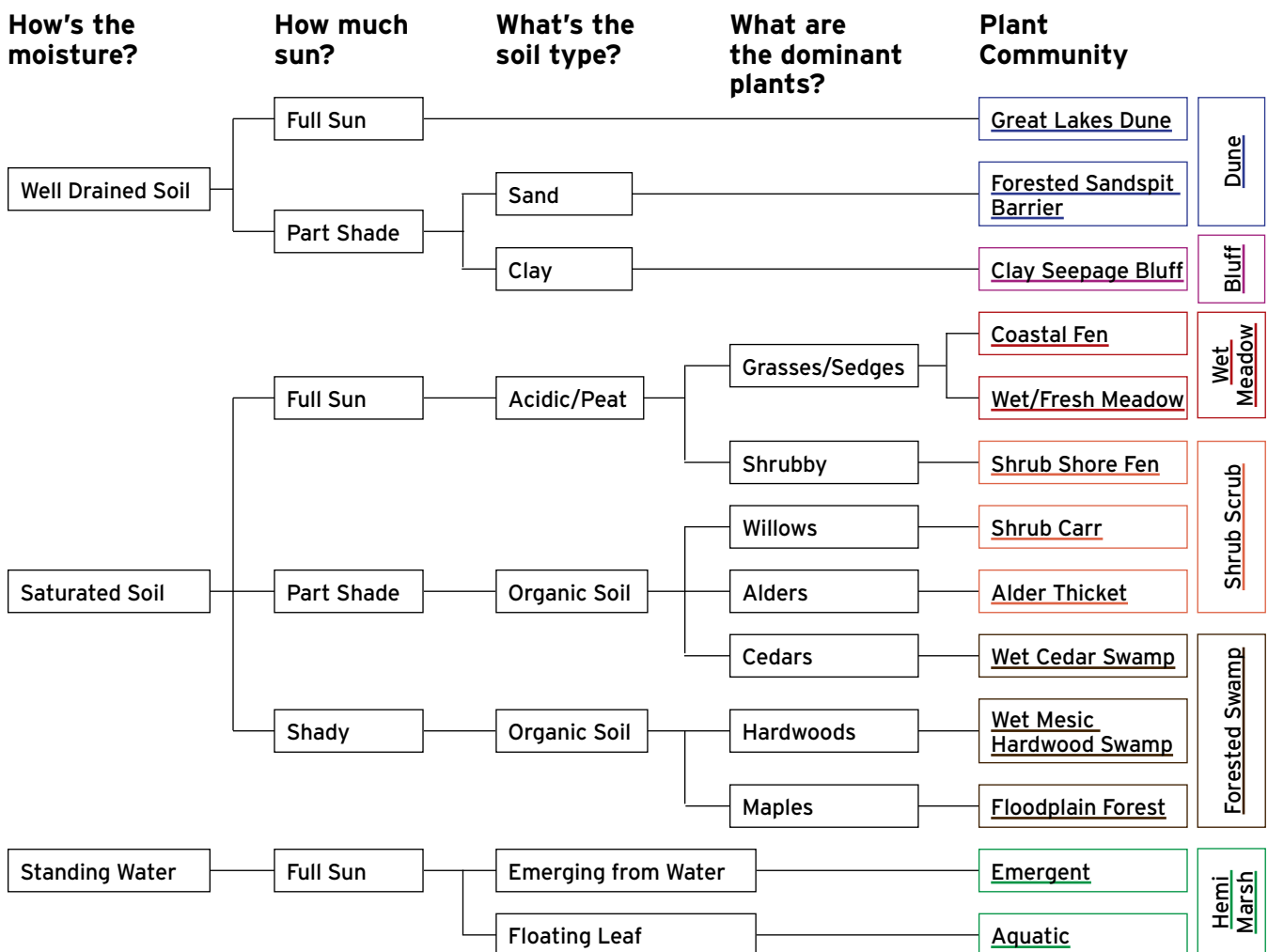


What plant communities can this land support?

Wisconsin coastal areas along Gichigami comprise a multitude of habitats and environments. Unique combinations of ground moisture, soil type, and sun exposure create the conditions necessary for distinct plant communities to grow and thrive. This guide identifies *plant communities* specific to the coastal landscape of the region and recommends approaching restoration from a plant community framework. The land around you can give you context clues to help you think about what plants and plant communities may grow and thrive there. It also helps us understand why certain plants are often found in the presence of other plants. **Observing the properties of the land you wish to plant in or restore will help you identify what coastal plant**

communities are best suited for your land and your goals. This guide provides many specific plant recommendations matched to a selection of representative Gichigami plant communities, but is not an exhaustive guide to every landscape. You may wish to also consult with a soil scientist or your local land conservation department.

While out on the land where you wish to plant, make some observations of the soil and surroundings. Investigate the moisture content of the soil, the location's exposure to sun, soil type, and (if the area is not completely disturbed) the dominant plant beings that are present. Follow the chart from left to right to determine the plant communities most suited to your landscape.



Descriptions of example plant communities

Dune

Dune communities are sparsely vegetated ecosystems occurring on mounds of sand formed by wind and water. With enough accumulation of sand over time, trees and shrubs are able to grow, further stabilizing the community. This process is common along the shores of the Great Lakes due to the change in lake levels and strong wind and wave energy.

Great Lakes Dune



Photo credit: Kelly Beaster

Existing in an environment characterized by quickly draining soil and a constantly shifting landform, Great Lakes Dune communities feature drought-resistant perennial grasses that can effectively hold onto sand with their roots and rhizomes and grow rapidly in response to sand accumulation. This plant community often includes shrubby backdune areas set back farther from Gichigami.

Forested Sandspit Barrier



Photo credit: Deanna Erickson

Sandspits and other dune ecosystems are landforms along the coast of Gichigami built up by water currents. Forested Sandspit Barrier communities differ from Great Lakes Dune communities due to the presence of shrubs and trees, typically pines. Forested Sandspit Barriers have more vegetative cover than Great Lakes Dunes, providing increased soil stability. This is the result of a natural progression from dunes into more stable, elevated plant communities in a location where sand is accumulating. Similar communities can be found in other locations, including backdune areas.



Bluff

Bluffs are steep landforms adjacent to the waterfront, exposed to waves and influenced by water level changes. The ability for vegetation to establish in bluff environments depends on the angle of bluff slope, the degree of erosion, exposure to dynamic wind and water energy, and the type of substrate. Although vast swaths of Gichigami shoreline are bedrock bluff, this guide focuses on the plant communities found amongst the erosive clay bluffs of Wisconsin's south shore.

Clay Seepage Bluff



Photo credit: Sara Rybak

Clay Seepage Bluff communities are found along the Gichigami shoreline and feature a wide range of vegetation. Depending on the stability of the bluff and the extent of recent erosion, vegetative cover will typically be dominated by pines and cedars, shrubs or grasses and early-successional herbs. This community is responsive to any small changes on the landscape that increase runoff. Logging and human development have completely altered the bluff system, making it more sensitive to increased precipitation, wind, and wave action.



Wet Meadow

Wet Meadow communities occur along lakes and rivers, and within moraines where there is groundwater movement and good drainage. This ecosystem tends to experience moderate flooding in the spring, with little to no standing water during the summer. Wet Meadow communities feature sedges and grasses as their dominant plant beings, as seasonal flooding raises water levels high enough to prevent most trees and shrubs from establishing.

Coastal Fen



Photo credit: Kelly Beaster

Coastal Fens experience higher water levels than Wet Meadows and accumulate nutrient-rich peat. Due to their rich soil, fens have historically been converted to agricultural land or sod farms. Coastal Fen communities, like Wet Meadows, feature sedges and grasses, but also include bog plants that prefer saturated soil or standing water and can be found as floating mats.

Wet/Fresh Meadow



Photo credit: Kelly Beaster

Wet Meadow plant communities are associated with streams, shallow bays, and beaver ponds. Frequent high water levels persist long enough to prevent the successful establishment of trees and shrubs. This community is composed of broad-leaved herbaceous plants and an assortment of sedges and grasses. Any organic matter that accumulates over time tends to oxidize during periods of lower water.



Shrub Scrub

Shrub Scrub plant communities are wetland communities dominated by tall shrubs. These communities occur around streams and lakes and are typically found in transitional areas between Wet Meadows and Forested Swamps. By logging Forested Swamps and draining wetlands, humans have increased the amount of Shrub Scrub wetlands. Common plants found in Shrub Scrub communities are alders, dogwoods, and willows.

Shrub Shore Fen



Photo credit: Kelly Beaster

Shrub Shore Fen communities are similar to Coastal Fen communities but are dominated by deciduous shrubs. These communities occur in slightly lower water levels than Coastal Fens and can occur on shorelines but also inland wetlands.

Shrub Carr



Photo credit: Kelly Beaster

Shrub Carr is a wetland community with a similar plant beings composition to Wet Meadows, but they feature tall shrubs such as willows and dogwoods due to less frequent or persistent high water.

Alder Thicket



Photo credit: Kelly Beaster

Alder Thicket is a minerotrophic wetland community, meaning it gets most of its nutrients from groundwater flowing through the ecosystem. Alder Thickets are dominated by tall shrubs, primarily speckled alder. These communities indicate an area of recurring disturbance such as seasonal flooding or heavy deer browse.



Forested Swamp

Forested Swamp communities occur along lakes, streams, and within shallow basins, and are characterized by wet soils and baseflow groundwater. Some may have high groundwater levels and poor drainage, which tend to be acidic and nutrient-poor bogs. Communities that are periodically inundated due to seasonal flooding have more nutrient-rich soils.

Wet Cedar Swamp



Photo credit: Deanna Erickson

Wet Cedar Swamp communities feature coniferous trees and are found along the margins of lakes, streams, and poorly drained basins with access to mineral-rich groundwater.

Wet Mesic Hardwood Forest



Photo credit: Kelly Beaster

Wet Mesic Hardwood Forest communities feature broad-leaved deciduous trees and occur in areas of lower groundwater levels than those of Wet Cedar Swamps. Many hardwood swamp forests in northern Wisconsin are currently composed primarily of black ash; yellow birch, red maple, and American elm might also be present.

Floodplain Forest



Photo credit: Kelly Beaster

Floodplain Forest communities occur along large rivers that experience periodic floods, such as the St. Louis River. Periodic floods, which typically occur in the spring, provide Floodplain Forests with nutrient-rich deposits that support flood-resilient trees such as silver maple and some birches and willows.



Hemi-marsh

Hemi-marsh communities occur in areas of shallow water and are dominated by plants that take root underwater and emerge through the surface. Common plants found in emergent/aquatic communities include cattails, wild rice, bulrushes, and reeds.

Aquatic plants serve as the vital foundation for aquatic ecosystems. They act as a natural filtering system, absorbing nutrients such as phosphorus and nitrogen that would otherwise increase the chances of algal blooms. Beds of aquatic plants stabilize lake and river bottoms and decrease shoreline erosion by decreasing the effects of waves and currents. Aquatic plants are also vital for fish, amphibians, birds, and insects, who find food and shelter within these communities.

Emergent Marsh



Photo credit: Kelly Beaster

Emergent communities are characterized by plants that take root underwater and emerge above the surface. They are found in marshes with shallow standing water and feature plants such as cattails, bur-reeds, and horsetails.

Aquatic



Photo credit: Lake Superior Reserve

Aquatic communities are dominated by open water and floating and submerged plants. They are typically found in deeper water than emergent communities and feature lily pads, water shield, and other floating-leaved and submergent plants.



Meet the plants

In this section of the guide, you will be introduced to various plant beings that you might want to consider planting in northern Wisconsin coastal environments. Each selected plant fulfills one or more ecological functions and is a plant relative known to provide gifts to people in the form of food, medicine, technology, or ceremonial use. As each individual plant is introduced, this guide indicates the plant communities in which the plant is most likely to thrive. From an Ojibwe cultural perspective, plants are relatives and care should be taken to create a relationship with them and to explain your intent before acting.

The plant recommendations and supporting information in this guide interweaves institutional science approaches (information derived from field observation, restoration practice, and a body of research literature) and Indigenous knowledge (information learned through sustained observation, relationships with beings and the natural landscape, community knowledge-sharing, and the practicing of lifeways). Ultimately, this guide emphasizes certain plants because of their importance within the plant communities in which they are found, their ability to support sensitive wildlife by providing unique habitat, and their significance to people of the region.

This guide can be used to make coordinated plant selections that support healthy plant communities for shoreline environments. Users of this guide will note that shoreline stabilization ability is just one of many characteristics listed in each plant profile. All plants profiled here are valuable beings in the greater plant world and the natural communities to which they belong. Some are recognized as strong shoreline stabilizers with deep roots or buffers of water energy, but all plants play supporting roles in their environments, such as absorbing water, providing shade or wind protection, creating habitat, and returning nutrients to the soil.



Photo credit: Lake Superior Reserve

We are grateful to the knowledge holders that gave their time and their expertise to inform the list of plants presented in this guide and to help us understand what information about plant beings is important and appropriate to share in it. This guide is careful and limited in the way that Ojibwe ecological knowledge is shared. There are sacred teachings and stories that are not appropriate to share in a written guidebook such as this and must be earned in an appropriate way. To those who wish to learn more about Indigenous ways of knowing and connecting with plants, we encourage you to seek that knowledge from the elders and the people who hold it. For guidance on interacting with tribal knowledge holders in a good way, see the Guiding Principles section of [Dibaginjigaadeg Anishinaabe Ezhitwaad: A Tribal Climate Adaptation Menu](#).



Organization: Plants are ordered by type and cultural relationships in this guide. First, you will find plants clustered by the classification of whether they are a **fern** (herbaceous non-flowering spore producers), a **forb** (herbaceous flowering plants), a **grass** (herbaceous grasses and sedges), a **shrub** (woody plants with multiple stems), or a **tree** (woody plants with a single trunk).

Plants are then ordered by the known cultural relationships that were identified in the development of this guide. You will find plants with the same relationship categories clustered together.

A note about names: Names are shared here in three formats: Ojibwemowin, common, and scientific. Ojibwemowin names often do not translate effectively to English or share the same meaning as the common or scientific names. We can only partially view these plant beings through an Ojibwe lens without the stories and meanings that underlie them, and those stories and meanings must be fully explained in a different context. For example, one of the Ojibwe words for wild sarsaparilla is “waaboozjiibik,” which translates literally to “rabbit root,” in reference to one of the legends regarding this plant being that references its root running far into the ground. Waaboozjiibik and wild sarsaparilla both refer to the same plant but they do not refer to the same cultural understanding of the plant. In some cases multiple names are shared, often representing the different relationships people have with the same plant. There may be other common or Ojibwe names and we invite users to share those with us.

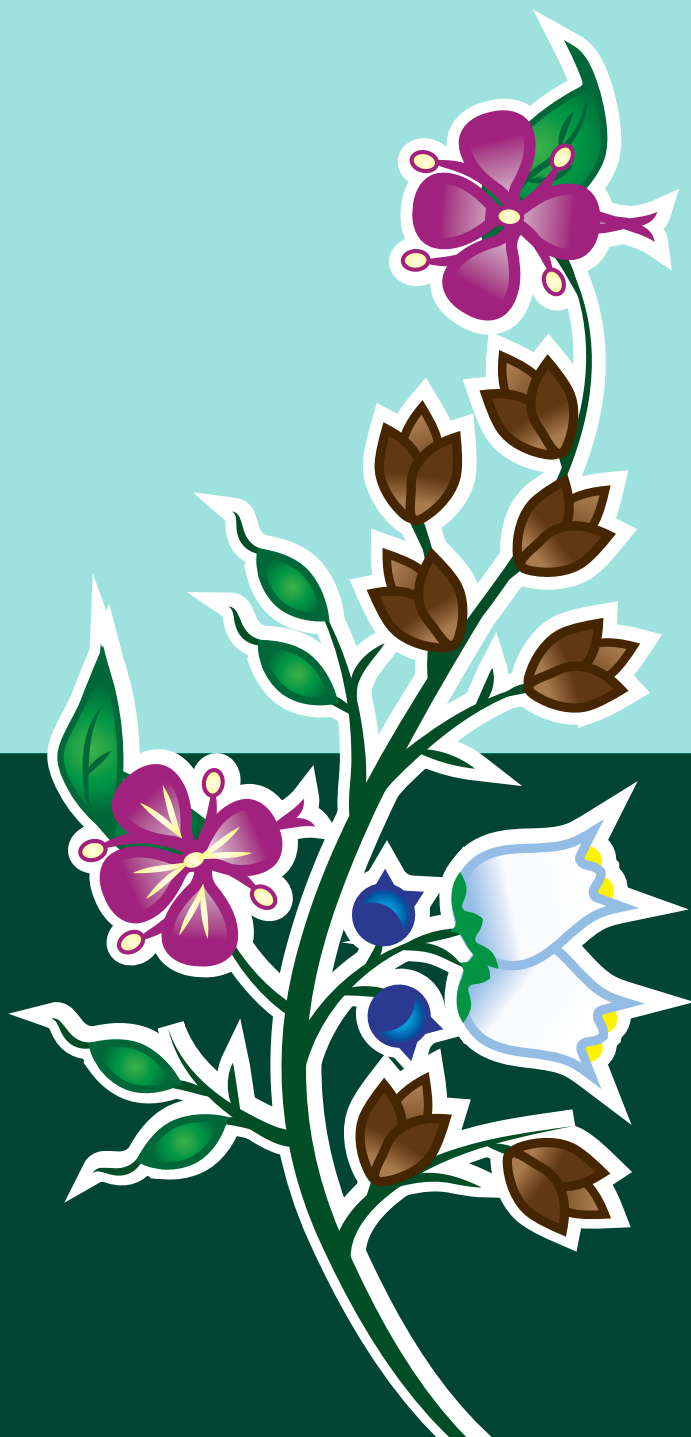


As you meet these plants, you may find these additional guide sections helpful as you are preparing for your planting project in coastal northern Wisconsin.

- **Sourcing plants (page 77)**, for information about where to find plants for your project
- **Planning your planting site (page 71)**, for information about estimating the number of plants to fill your space and preparing the land for planting
- **Know the regulations (page 75)**, for some important rules and context to know before you move any earth
- **Plant community climate survivorship (page 79)**, for some of what is currently understood about the impacts of climate change on the plant communities of coastal northern Wisconsin



Plant Profiles

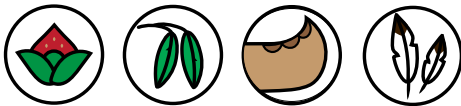


Here is the information you will find on each plant profile page.

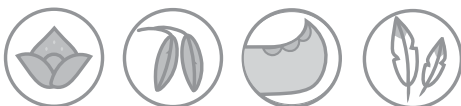
Some known name(s) in Ojibwemowin, Common name (*Scientific name*)

Plant Communities: This plant is likely to be found and/or prefers to grow in these specific Wisconsin Gichigami shoreline environments. Gichigami plant community descriptions are listed on pages 11-16.

Relationships with This Plant: Icon symbols indicate categories of known Ojibwe cultural uses of plants. Icons indicate plants that support or provide **Food** (strawberry), **Medicine** (leaf), **Technology** (canoe), and **Ceremony** (feather). Icons that are brightly colored indicate a known relationship with this plant being.



Muted icons indicate that no relationship is known to the creators of this guide. Muted icons are still present on the page, to indicate that some plant relationships may be waiting to be known or rediscovered.



Mature Height: Height of plant when mature plant growth slows.

Roots: Describes whether the root of this plant is **fibrous** (many threads of roots all reaching into the soil), **rhizomatous** (creeping, shallow roots sent off of stems that grow horizontally beneath the surface), or **taproot** (a more singular root that dives deep down). Depth is how deep into the soil a root has the potential to grow.

Soil Preference: Describes the soil types in which this plant will thrive (**Organic, Mesic, Humus, Clay, Peat, Sand**), as well as the degree of moisture preferred by this plant on a Wet-Moderate-Dry scale.

Sunlight Preference: Describes the sunlight criteria for each plant and its preference for Full Sun, Part Shade, or Full Shade.

Aggressive Behavior: An assessment of this plant's ability to grow and spread when compared to other plants in the same environment, rated as **Low** ●○○, **Moderate** ●●○, or **High** ●●●.

Bank Stabilization Abilities: An assessment of how well this plant's properties serve as functional shoreline stabilization, rated as **Low** ●○○, **Moderate** ●●○, or **High** ●●●. Properties considered include deep roots that hold soil in place or floating or emergent leaves that slow water energy as it approaches the shoreline.

Also compiled are ecological observations, such as plant parts consumed by wildlife, whether the plant is known to support pollinator species, and in some cases, information about the plant's susceptibility to animal browse.



**Bebaamaabiig, Okaadaak,
Waaboozjibik
Wild Sarsaparilla (*Aralia nudicaulis*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Taproot, 2-5 inches depth

Soil Preference: Moderate to Wet; Mesic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Seeds and nectar of wild sarsaparilla are a food source for wildlife. This plant supports pollinating honeybees, native bees, beetles, and flies.

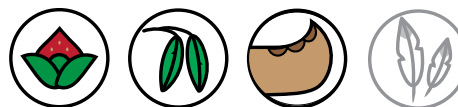
**Ininiwanzh, Zhaabozigan
Common Milkweed (*Asclepias syriaca*)**



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Taproot, 10-16 inches depth

Soil Preference: Dry, Moderate, or Wet; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●●○

Bank Stabilization Abilities: ●●○○

Seeds and nectar of common milkweed are food sources for wildlife. Common milkweed is a host plant. This plant supports pollinating honeybees, native bees, beetles, butterflies, and flies.



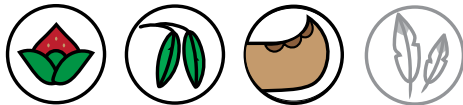
**Ozhaashijiibik, Zhooshkijiibik
Fireweed (*Epilobium angustifolium*)**



Photo credit: Marisa Lee

Plant Communities: Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 2-6 feet

Roots: Fibrous and Rhizomatous, 12-18 inches depth

Soil Preference: Moderate to Wet; Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●●○

Nectar and vegetation of fireweed are food sources for wildlife. This plant supports pollinating honeybees, native bees, butterflies, and flies.

Fireweed is susceptible to deer browsing and may benefit from fencing or protection.

**Migiziibag, Namegosibag
Large-leaved Aster (*Eurybia macrophylla*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Moderate; Mesic, Humus, Sand, or Clay

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○

Nectar and vegetation of large-leaved aster are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.

Large-leaved aster is susceptible to deer browsing and may benefit from fencing or protection.



Zesab, Mazaanaatig
Woodland Nettle (*Laportea canadensis*)



Photo credit: Marisa Lee

Plant Communities: Floodplain Forest

Relationships with This Plant:



Mature Height: 2 feet

Roots: Fibrous and Rhizomatous, 3-6 inches depth

Soil Preference: Moderate; Organic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Vegetation of woodland nettle is a food source for wildlife. Woodland nettle is used by some beings for nesting.

Mazaan, Mazaanaatig,
Bepajiishkanakazid-mazaanaatig
Common Nettle (*Urtica dioica*)



Photo credit: Marisa Lee

Plant Communities: Floodplain Forest

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Wet; Organic or Humus

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●●○

Vegetation of common nettle is a food source for wildlife. Common nettle is used by some beings for nesting.



Namepin
Wild Ginger (*Asarum canadense*)



Photo credit: Kelly Beaster

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 1-6 inches

Roots: Fibrous with corm, 3-6 inches depth

Soil Preference: Moderate; Mesic

Sunlight Preference: Part Shade to Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○

Seeds of wild ginger are a food source for wildlife. Wild ginger is a host plant. This plant supports pollinating beetles, flies, and ants.

Ogitebag
Marsh Marigold (*Caltha palustris*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest, Alder Thicket

Relationships with This Plant:



Mature Height: 1 foot

Roots: Fibrous, 3-6 inches depth

Soil Preference: Wet; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●○○

Seeds and vegetation of marsh marigold are food sources for wildlife. This plant supports pollinating honeybees, native bees, and flies.



Ode'imin
Wild Strawberry (*Fragaria virginiana*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Alder Thicket, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 1-6 inches

Roots: Fibrous, 1-3 inches depth

Soil Preference: Dry; Organic or Mesic

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○

Berries, nectar, and vegetation of wild strawberry are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.

Anangokaa
Starry Solomon's Seal (*Maianthemum stellatum*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous and Rhizomatous, 8-16 inches depth

Soil Preference: Moderate; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Seeds, nectar, and vegetation of starry solomon's seal are food sources for wildlife. Starry solomon's seal is used by some beings for nesting. This plant supports pollinating honeybees, native bees, and flies.



**Anang-bikobiise, Akandamoo
White Water-lily (*Nymphaea odorata*)**



Photo credit: Karina Heim

Plant Communities: Aquatic

Relationships with This Plant:



Mature Height:

Roots: Fibrous and Rhizomatous, 12 inches depth

Soil Preference: Wet; Organic or Clay

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Leaves, flowers, and tubers of white water-lily are edible. Roots of white water-lily are used to treat mouth sores and coughs.

Evening Primrose (*Oenothera biennis*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Taproot, 6-12 inches depth

Soil Preference: Moderate; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ○ ○

Seeds and nectar of evening primrose are food sources for wildlife. Evening primrose is used by some beings for nesting. This plant supports pollinating honeybees, native bees, beetles, butterflies, and moths.



Giizisobagoons
Green-headed or Cutleaf Coneflower
(Rudbeckia laciniata)



Photo credit: Marisa Lee

Plant Communities: Floodplain Forest

Relationships with This Plant:



Mature Height: 5 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Moderate to Wet; Organic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●●○

Seeds and nectar of green-headed coneflower are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.

Waabiziipin, Moozobag, Bagwajipin
Broadleaf Arrowhead (*Sagittaria latifolia*)



Photo credit: Karina Heim

Plant Communities: Emergent

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous, Rhizomatous, and Tuberous, 6-12 inches depth

Soil Preference: Wet; Organic, Clay, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Nectar, vegetation, and roots of broadleaf arrowhead are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and butterflies.

Broadleaf arrowhead is susceptible to muskrat browsing.



**Agongosimizh, Ginebigwashk
False Solomon's Seal (*Maianthemum racemosum*)**



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous and Rhizomatous, 3-6 inches depth

Soil Preference: Moderate; Sand

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○

Branches and vegetation of false Solomon's seal are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and flies.

**Giizisomashkiki, Ajidamoowaanow
Canada Goldenrod (*Solidago canadensis*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Shrub Shore Fen, Alder Thicket, Shrub Carr, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 2-5 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Dry to Moderate; Mesic, Humus, Clay, or Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●●○

Seeds of Canada goldenrod are a food source for wildlife. This plant supports pollinating honeybees, native bees, butterflies, flies, and wasps.



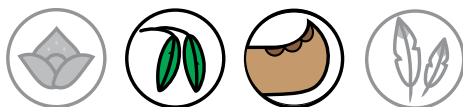
Bagizowin, Zesab
Swamp Milkweed (*Asclepias incarnata*)



Photo credit: Kelly Beaster

Plant Communities: Floodplain Forest, Wet Meadow, Shrub Carr

Relationships with This Plant:



Mature Height: 3-5 feet

Roots: Taproot, 10-16+ inches depth

Soil Preference: Wet; Mesic, Humus, or Clay

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds and nectar of swamp milkweed are food sources for wildlife. Swamp milkweed is a host plant. This plant supports pollinating honeybees, native bees, beetles, butterflies, and flies.

Aazhaabaakesing, Niiyaawibagak
Boneset (*Eupatorium perfoliatum*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Floodplain Forest, Wet Meadow, Shrub Shore Fen, Shrub Carr

Relationships with This Plant:



Mature Height: 3-4 feet

Roots: Fibrous and Rhizomatous, 12 inches depth

Soil Preference: Wet; Organic, Mesic, Humus, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ●

Seeds, nectar, and vegetation of boneset are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, and flies.

Boneset is susceptible to deer browsing and may benefit from fencing or protection.



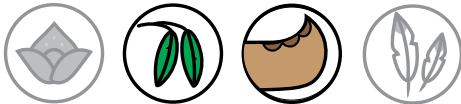
**Nabagashk, Zhaabozigan
Blue Flag (*Iris versicolor*)**



Photo credit: Kelly Beaster

Plant Communities: Emergent, Aquatic, Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest, Wet Meadow, Coastal Fen, Shrub Shore Fen, Alder Thicket, Shrub Carr

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous and Rhizomatous, 3-6 inches depth

Soil Preference: Moderate to Wet; Organic, Mesic, Humus, Clay, Peat, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Nectar and vegetation of blue flag are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, and hummingbirds.

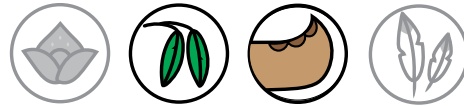
**Wiinziikens
Purple-stem Aster or Swamp Aster
(*Symphyotrichum puniceum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Wet Meadow, Alder Thicket, Shrub Carr, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous, 16+ inches depth

Soil Preference: Moderate to Wet; Organic, Humus, or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ○

Seeds and vegetation of this aster are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.



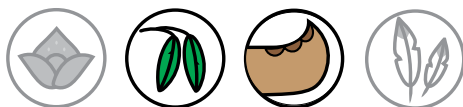
Miskojiibik
Bloodroot (*Sanguinaria canadensis*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Alder Thicket

Relationships with This Plant:



Mature Height: 1-6 inches

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Moderate; Mesic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Sap of bloodroot is a food source for wildlife. This plant supports pollinating honeybees, native bees, beetles, and flies.

Calico Aster (*Symphotrichum lateriflorum*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous, 16+ inches depth

Soil Preference: Moderate; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, vegetation, and sap of calico aster are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.



Miinikaanan
Beach Pea (*Lathyrus japonicus*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Seeds, nectar, and vegetation of beach pea are food sources for wildlife. This plant supports pollinating honeybees and native bees.

Waabiziipin
Sessile-fruited Arrowhead (*Sagittaria rigida*)



Photo credit: Karina Heim

Plant Communities: Emergent

Relationships with This Plant:



Mature Height: 6-30 inches

Roots: Fibrous, Rhizomatous, and Tuberos, 6-12 inches depth

Soil Preference: Wet; Organic, Clay, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ●

Nectar, vegetation, and roots of sessile-fruited arrowhead are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and butterflies.

Sessile-fruited arrowhead is susceptible to muskrat browsing.



Wiikenh
American Sweet Flag (*Acorus americanus*)



Photo credit: Karina Heim

Plant Communities: Emergent

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous, 8-16 inches depth

Soil Preference: Wet; Organic soil

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Seeds and roots of American sweet flag are food sources for wildlife. This plant supports pollinating beetles.

Waabigwan, Baasibagak
Pearly Everlasting (*Anaphalis margaritacea*)



Photo credit: Marisa Lee

Plant Communities: Clay Seepage Bluff, Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 3-6 inches depth

Soil Preference: Dry; Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●○○

Nectar of pearly everlasting is a food source for wildlife. Pearly everlasting is a host plant. This plant supports pollinating honeybees, native bees, beetles, and butterflies.



Zhaashaagomin
**Jack-in-the-pulpit (*Arisaema*
triphillum)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Taproot/Corm, 3-6 inches depth

Soil Preference: Wet; Mesic or Humus

Sunlight Preference: Full Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Branches, nectar, and roots of jack-in-the-pulpit are food sources for wildlife, but deer tend to avoid them because of their oxalate crystals. This plant supports pollinating flies.

Moosewijiibik
**Beach Wormwood (*Artemisia*
campestris)**



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 6+ inches depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○○

Bank Stabilization Abilities: ●○○○

Beach wormwood is a host plant.



Ozhigimizh
Blue Cohosh (*Caulophyllum thalictroides*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Wet; Mesic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Seeds, nectar, and vegetation of blue cohosh are food sources for wildlife. This plant supports pollinating honeybees, native bees, flies, and wasps.

Blue cohosh is susceptible to deer browsing and may benefit from fencing or protection.

Bagizowin, Meskwaanakwak-bagizowin
Joe-pye Weed (*Eupatorium maculatum*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Floodplain Forest, Wet Meadow, Shrub Shore Fen, Shrub Carr

Relationships with This Plant:



Mature Height: 3-7 feet

Roots: Fibrous and Rhizomatous, 12 inches depth

Soil Preference: Wet; Organic, Mesic, Humus, Clay, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○○

Bank Stabilization Abilities: ●●●○

Seeds, nectar, and vegetation of joe-pye weed are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, and flies.

Joe-pye weed is susceptible to deer browsing and may benefit from fencing or protection.



Ginebigojiibik
Black Snakeroot (*Sanicula marilandica*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous, 3-6 inches depth

Soil Preference: Moderate; Organic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Sap of black snakeroot is a food source for wildlife. This plant supports pollinating native bees and flies.

Giizisomashkiki
Bog Goldenrod (*Solidago uliginosa*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Wet Meadow, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 1-4 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Wet; Mesic, Humus, or Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds and vegetation of bog goldenrod are food sources for wildlife. This plant supports pollinating honeybees, native bees, butterflies, flies, and wasps.



Ma'iinganiminaatig
Snowberry (*Symphoricarpos albus*)



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous

Soil Preference: Dry to Moderate; Clay or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Berries, nectar, and vegetation of snowberry are food sources for wildlife. This plant supports pollinating honeybees, native bees, butterflies, hummingbirds, and wasps.

Snowberry is susceptible to rabbit and rodent browsing and requires protection.

Zhaawashkoons
Blue Vervain (*Verbena hastata*)



Photo credit: Marisa Lee

Plant Communities: Floodplain Forest, Wet Meadow, Alder Thicket, Shrub Carr

Relationships with This Plant:



Mature Height: 3-5 feet

Roots: Fibrous and Rhizomatous, 2 feet depth

Soil Preference: Moderate to Wet; Organic, Humus, or Clay

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Seeds, nectar, and vegetation of blue vervain are food sources for wildlife. Blue vervain is a host plant. This plant supports pollinating honeybees, native bees, butterflies, and wasps.



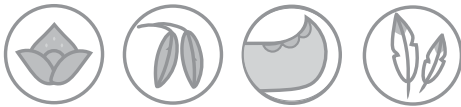
**Three-leaved False Solomon's Seal
(*Maianthemum trifolium*)**



Photo credit: Karina Heim

Plant Communities: Wet Cedar Swamp, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 6-12 inches

Roots: Fibrous and Rhizomatous, 3-6 inches depth

Soil Preference: Wet; Peat

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Seeds, nectar, and vegetation of three-leaved false solomon's seal are food sources for wildlife. Three-leaved false Solomon's seal is used by some beings for nesting. This plant supports pollinating honeybees, native bees, and flies.

**Lance-leaved Aster or White panicled Aster
(*Symphyotrichum lanceolatum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Wet Meadow, Alder Thicket, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous; 16+ inch depth

Soil Preference: Moderate; Mesic, Humus, Clay, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○○

Bank Stabilization Abilities: ●●○○

Seeds and vegetation of this aster are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.



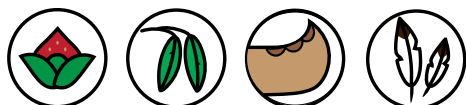
Apakwe, Apakweyashk, Apakweshkway
Broadleaf Cattail (*Typha latifolia*)



Photo credit: Karina Heim

Plant Communities: Emergent

Relationships with This Plant:



Mature Height: 4-6 feet

Roots: Fibrous and Rhizomatous, 12-18 inches depth

Soil Preference: Wet; Organic, Clay, Peat, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ● ●

Bank Stabilization Abilities: ● ● ●

Vegetation of broadleaf cattail is a food source for wildlife. Broadleaf cattail is used by some beings for nesting.

Broadleaf cattail is susceptible to muskrat browsing.

Anaakanashk, Gichigamiwashk
Soft-stem Bulrush (*Schoenoplectus tabernaemontani*)



Photo credit: Hannah Ramage

Plant Communities: Emergent, Aquatic

Relationships with This Plant:



Mature Height: 3-4 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Wet; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Vegetation and roots of soft-stem bulrush are food sources for wildlife. Soft-stem bulrush is used by some beings for nesting.



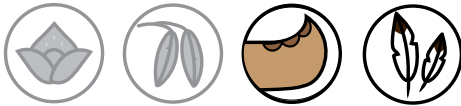
**Wiingashk, Wiishkobi-mashkosi
Sweetgrass (*Anthoxanthum hirtum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Wet Meadow

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Rhizomatous, 10 inches depth

Soil Preference: Moderate to Wet; Organic, Mesic, or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Sweet grass is used by some beings for nesting.

**Manoomin
Wild Rice (*Zizania palustris*)**



Photo credit: Karina Heim

Plant Communities: Emergent, Aquatic

Relationships with This Plant:



Mature Height: 3-9 feet

Roots: Taproot, 3 inches depth

Soil Preference: Wet; Organic, Clay, Peat, or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: Limited; dependent on life stage

Seeds and vegetation of wild rice are food sources for wildlife.

Wild rice is susceptible to goose, swan, and teal browsing.



Mashkosiw
Dune Grass (*Ammophila breviligulata*)



Photos credit: Marisa Lee

Plant Communities: Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Rhizomatous, 20 feet depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Seeds of dune grass are a food source for wildlife. Dune grass is used by some beings for nesting.

Woolly Wire Sedge (*Carex lasiocarpa*)



Photo credit: Marisa Lee

Plant Communities: Wet Meadow, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous, 6-12 inches depth

Soil Preference: Wet; Organic or Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Seeds of woolly wire sedge are a food source for wildlife. Woolly wire sedge is used by some beings for nesting.



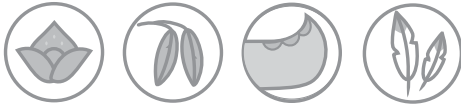
Mashkosiw
Wavy Hairgrass (*Deschampsia flexuosa*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous, 6-12 inches depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Wavy hairgrass is used by some beings for nesting. Wavy hairgrass is a host plant.

Mashkosiw
Canada Wild Rye (*Elymus canadensis*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest, Great Lakes Dune

Relationships with This Plant:



Mature Height: 3-4 feet

Roots: Fibrous, 2.5 feet depth

Soil Preference: Dry to Moderate; Mesic, Humus, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ●

Seeds and vegetation of Canada wild rye are food sources for wildlife.



**Mashkosiw
Wild Rye (*Elymus virginicus*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest, Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 3-4 feet

Roots: Fibrous, 2 feet depth

Soil Preference: Dry to Moderate; Mesic or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Seeds and vegetation of wild rye are food sources for wildlife. Wild rye is a host plant.

Podgrass (*Scheuchzeria palustris*)



Photo credit: Marisa Lee

Plant Communities: Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 6-12 inches

Roots: Rhizomatous, 3 inches depth

Soil Preference: Wet; Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●○○

Nectar of podgrass is a food source for wildlife.



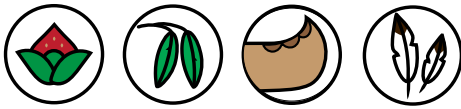
Apaakozigan, Miskwaabiimag
Bearberry (*Arctostaphylos uva-ursi*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 3-6 inches

Roots: Fibrous, 3-4 feet depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Berries, nectar, and vegetation of bearberry are food sources for wildlife. This plant supports pollinating honeybees, native bees, butterflies, and hummingbirds.

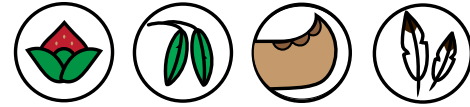
Giba'iminaanaganzh
Sweet Fern (*Comptonia peregrina*)



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous, 12-18 inches depth

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ○ ○

Vegetation of sweet fern is a food source for wildlife. Sweet fern is a host plant.



Ogaawanzh, Gaagaagiwaandag
Common Juniper (*Juniperus communis*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 2-5 feet

Roots: Fibrous and Rhizomatous, 5-14 inches depth

Soil Preference: Dry; Clay or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Berries from common juniper are a food source for wildlife.

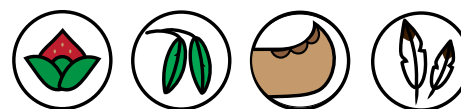
Asasaweminagaawanzh, Asasawemin
Chokecherry (*Prunus virginiana*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 10-20 feet

Roots: Fibrous

Soil Preference: Moderate; Mesic, Humus, or Sand

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Berries, nectar, and vegetation of chokecherry are food sources for wildlife. This plant supports pollinating native bees.

Chokecherry is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



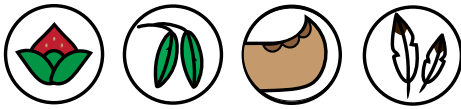
**Bibigwewanashk, Bibigwemin
Elderberry or Common Elder (*Sambucus canadensis*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 5-12 feet

Roots: Fibrous and Rhizomatous; 16 inches depth

Soil Preference: Moderate to Wet; Organic, Humus, or Mesic

Sunlight Preference: Full Sun to Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries and vegetation of elderberry are food sources for wildlife. Elderberry is used by some beings for nesting. This plant supports pollinating honeybees, native bees, butterflies, and wasps.

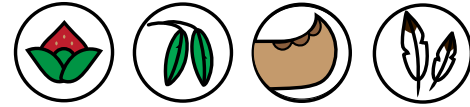
**Opwaaganaatig, Baakwaanaatig,
Baakwaanamizh
Staghorn Sumac (*Rhus typhina*)**



Photo credit: Marisa Lee

Plant Communities: Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 5-12 feet

Roots: Fibrous, 6-12 inches depth

Soil Preference: Moderate; Mesic or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ○

Seeds, branches, nectar, and vegetation of staghorn sumac are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.

Staghorn sumac is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



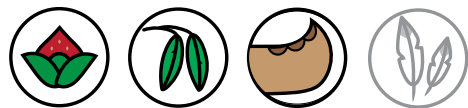
**Bagaan, Bagaanimizh, Bagaanens, Jibwebagaan
Beaked Hazelnut (*Corylus cornuta*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 6-16 feet

Roots: Fibrous and Rhizomatous, 8-16 inches depth

Soil Preference: Moderate or Wet; Clay, Mesic, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○○

Seeds, nectar, and vegetation of beaked hazelnut are food sources for wildlife. Beaked hazelnut is a host plant. This plant supports pollinating native bees and butterflies.

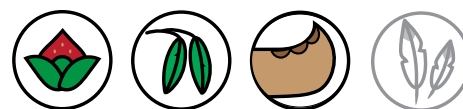
**Mashkiigobag
Labrador Tea (*Rhododendron groenlandicum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Coastal Fen, Shrub Shore Fen, Alder Thicket

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 12-18 inches depth

Soil Preference: Moderate to Wet; Peat

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●●○○

Nectar and vegetation of labrador tea are food sources for wildlife. Labrador tea is used by some beings for nesting. This plant supports pollinating honeybees, native bees, and butterflies.



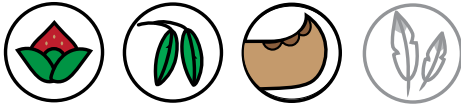
**Baapaashkiziganaatig,
Wiimbashkwaatig
Red Elderberry or Red-Berried Elder
(*Sambucus racemosa*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 8-10 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Moderate to Wet; Organic, Humus, Mesic, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries and vegetation of red elderberry are food sources for wildlife. Red elderberry is used by some beings for nesting. This plant supports pollinating honeybees, native bees, butterflies, and wasps.

Red-berried elder is susceptible to deer browsing and requires fencing or protection.

**Adjimag, Makominagaawanzh
American Mountain Ash
(*Sorbus americana*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest, Forested Sandspit Barrier, Shrub Shore Fen, Alder Thicket, Shrub Carr, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 10-30 feet

Roots: Fibrous, 3 feet depth

Soil Preference: Dry to Moderate; Organic, Mesic, Clay, Peat, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ● ○

Seeds, nectar, and vegetation of American mountain ash are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and flies.

American mountain ash is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



**Miinens, Miinensagaawanzh, Ogin
Hawthorn (*Crataegus spp.*)**

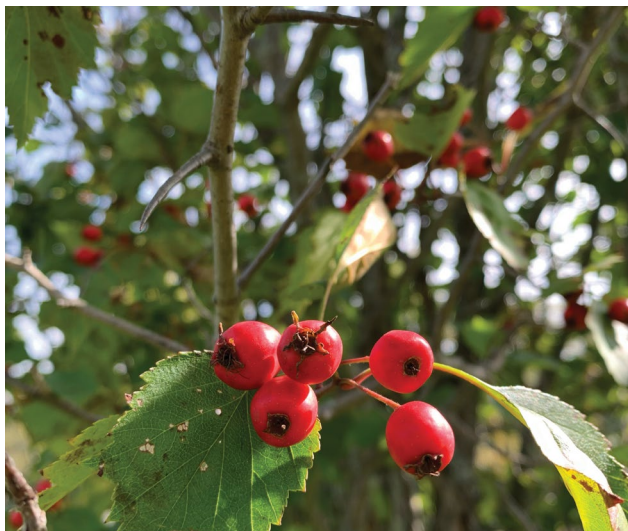
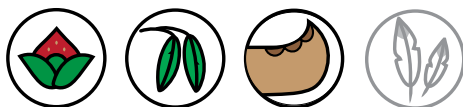


Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 6-15 feet

Roots: Fibrous, 2-4 feet depth

Soil Preference: Dry, Moderate, or Wet; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries, nectar, and vegetation of hawthorn are food sources for wildlife. Hawthorn is a host plant. This plant supports pollinating flies.

Hawthorn is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.

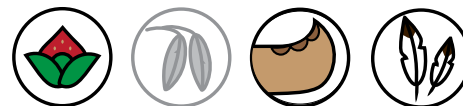
**Bagaan, Bagaanimizh, Mako-bagaanak
American Hazelnut (*Corylus americana*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 3-11 feet

Roots: Rhizomatous, 20 inches depth

Soil Preference: Dry or Moderate; Clay, Mesic, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ○ ○

Seeds, nectar, and vegetation of American hazelnut are food sources for wildlife. American hazelnut is a host plant. These plants support pollinating native bees and butterflies.



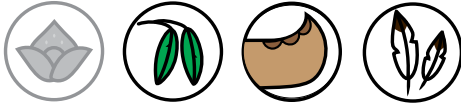
**Miskwaabiimizh
Red Osier Dogwood (*Cornus sericea*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest, Shrub Shore Fen, Alder Thicket, Shrub Carr, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 6-12 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Wet; Organic, Mesic, Humus, or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Branches, nectar, and vegetation of red osier dogwood are food sources for wildlife. Red osier dogwood is a host plant. This plant supports pollinating honeybees, native bees, beetles, flies, and wasps.

Red osier dogwood is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



**Gozigwaakominagaawanzh,
Ozagadigom, Gozigwaakomin
Smooth Serviceberry or Allegheny
Serviceberry (*Amelanchier laevis*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 30-35 feet

Roots: Rhizomatous, 30 inches depth

Soil Preference: Dry to Moderate; Mesic or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●○○

Berries, nectar, and vegetation of serviceberry are food sources for wildlife. This plant supports pollinating native bees and flies.

Serviceberry is susceptible to browsing by deer, rabbits, and rodents, and may benefit from fencing or protection.



**Waabashkikiibag, Mashkiigobagoons
Leatherleaf (*Chamaedaphne calyculata*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Coastal Fen, Shrub Shore Fen, Alder Thicket

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous and Rhizomatous, 12 inches depth

Soil Preference: Wet; Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Leatherleaf is used by some beings for nesting. This plant supports pollinating honeybees, native bees, butterflies, and flies.

**Waaboozobagoons
Creeping Snowberry
(*Gaultheria hispidula*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp

Relationships with This Plant:



Mature Height: 1-3 inches

Roots: Fibrous and Rhizomatous, 2 inches depth

Soil Preference: Moderate to Wet; Organic

Sunlight Preference: Part Shade to Full Shade

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●○○

Berries, nectar, vegetation, and sap of creeping snowberry are food sources for wildlife. This plant supports pollinating honeybees and native bees.



**Wiinisiibag, Wiinisiibagoons,
Wiinisiibagad
Wintergreen (*Gaultheria procumbens*)**



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 2-6 inches

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Dry to Moderate; Sand

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

This plant supports pollinating honeybees and native bees.

**Zhaaboomin, Ozhaaboomin
Wild Gooseberry (*Ribes hirtellum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Moderate to Wet; Mesic or Humus

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Berries, branches, nectar, and vegetation of wild gooseberry are food sources for wildlife. Wild gooseberry is used by some beings for nesting. This plant supports pollinating honeybees, native bees, beetles, and butterflies.



**Zhaabomin, Miishijiiminagaawanzh
Wild Red Currant (*Ribes triste*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 2-3 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Moderate to Wet; Mesic or Humus

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Berries, branches, nectar, and vegetation of wild red currant are food sources for wildlife. Wild red currant is used by some beings for nesting. This plant supports pollinating honeybees, native bees, beetles, and butterflies.

**Oginiiminagaawanzh, Oginiig
Meadow Rose (*Rosa blanda*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Coastal Fen, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Taproot and Rhizomatous

Soil Preference: Dry to Moderate; Humus, Sand, Peat, or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●●○○

Seeds, branches, and vegetation of meadow rose are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and butterflies.



**Mashkode-bizhikiwimin
Buffaloberry (*Shepherdia canadensis*)**



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 3-10 feet

Roots: Fibrous, 2-3 feet depth

Soil Preference: Dry; Clay or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Berries of buffaloberry are a food source for wildlife. This plant supports pollinating honeybees, native bees, and flies.



**Miin, Miinagaawanzh
Lowbush Blueberry
(*Vaccinium angustifolium*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Forested Sandspit Barrier, Shrub Shore Fen, Alder Thicket

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Dry; Humus, Peat, or Sand

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Berries, branches, nectar, and vegetation of lowbush blueberry are food sources for wildlife. Lowbush blueberry is used by some beings for nesting. This plant supports pollinating honeybees and native bees.

Lowbush blueberry is susceptible to rabbit and rodent browsing and requires protection.



Miin
Velvet-leaf Blueberry
(Vaccinium myrtilloides)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Forested Sandspit Barrier, Shrub Shore Fen, Alder Thicket

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Dry; Humus, Peat, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Berries, branches, nectar, and vegetation of velvet-leaf blueberry are food sources for wildlife. Velvet-leaf blueberry is used by some beings for nesting. This plant supports pollinating honeybees and native bees.

Velvet-leaf blueberry is susceptible to rabbit and rodent browsing and requires protection.

Mashkiigomin, Mashkiigominagaawanzh
Small Cranberry (*Vaccinium oxycoccos*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 1-3 inches

Roots: Fibrous, 1-2 inches depth

Soil Preference: Moderate; Peat

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Berries and nectar of small cranberry are food sources for wildlife. This plant supports pollinating native bees.



**Aditeamin, Aditeaminagaawanzh
Nannyberry (*Viburnum lentago*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp,
Floodplain Forest

Relationships with This Plant:



Mature Height: 10-20 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Moderate to Wet; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries, nectar, and vegetation of nannyberry are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and flies.

Nannyberry is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.

**Aniibimin, Aniibiminagaawanzh
Highbush Cranberry (*Viburnum trilobum*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 8-15 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Moderate; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries, branches, nectar, and vegetation of highbush cranberry are food sources for wildlife. Highbush cranberry is used by some beings for nesting. This plant supports pollinating honeybees, native bees, and butterflies.

Highbush cranberry is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



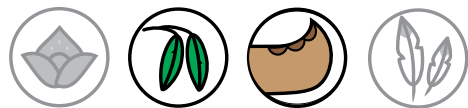
Binemizh, Binemizhiins
Bog Birch (*Betula pumila*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Coastal Fen, Shrub Shore Fen, Alder Thicket, Shrub Carr

Relationships with This Plant:



Mature Height: 4-12 feet

Roots: Fibrous, 6-12 inches depth

Soil Preference: Wet; Mesic, Humus, or Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Seeds, bark, and vegetation of bog birch are food sources for wildlife.

Bog birch is susceptible to browsing by deer, rabbits, and rodents, and may benefit from fencing or protection.

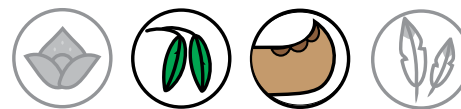
Maananoons
Ironwood (*Ostrya virginiana*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest

Relationships with This Plant:



Mature Height: 30-50 feet

Roots: Fibrous, 2-3 feet depth

Soil Preference: Dry to Moderate; Mesic or Humus

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●○○

Seeds, branches, and vegetation of ironwood are food sources for wildlife. Ironwood is a host plant. This plant supports pollinating honeybees and native bees.

Ironwood is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



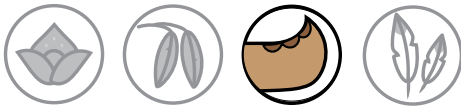
Wadoop
Green Alder (*Alnus alnobetula*)



Photo credit: Kelly Beaster

Plant Communities: Great Lakes Dune, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 6-12 feet

Roots: Fibrous, 3-20 feet depth

Soil Preference: Moderate; Sand or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●○

Seeds, bark, and vegetation of green alder are food sources for wildlife. Green alder is used by some beings for nesting.

Bine-mashkiigimin
Bog Rosemary (*Andromeda glaucophylla*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 1-2 feet

Roots: Fibrous, 17+ inches depth

Soil Preference: Wet; Mesic, Humus, or Peat

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●●○

This plant supports pollinating honeybees, native bees, butterflies, and flies.



Nigigoonsimin
Sand Cherry (*Prunus pumila*)



Photo credit: Marisa Lee

Plant Communities: Great Lakes Dune

Relationships with This Plant:



Mature Height: 1-6 feet

Roots: Fibrous

Soil Preference: Dry; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Berries, branches, and vegetation of sand cherry are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, and butterflies.

Oshkiinzhigomin
Dwarf Raspberry (*Rubus pubescens*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Shrub Shore Fen, Alder Thicket, Shrub Carr

Relationships with This Plant:



Mature Height: 6-12 inches

Roots: Fibrous and Rhizomatous, 3 inches depth

Soil Preference: Moderate; Mesic or Humus

Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Berries of dwarf raspberry are a food source for wildlife. Dwarf raspberry is used by some beings for nesting. This plant supports pollinating honeybees and native bees.



**Ozaawaaskined
Lowbush Honeysuckle
(*Diervilla lonicera*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Alder Thicket, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 1-3 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Dry to Moderate; Mesic, Humus, or Clay

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●●●

Bank Stabilization Abilities: ●●○

Seeds, nectar, and vegetation of lowbush honeysuckle are food sources for wildlife. Lowbush honeysuckle is used by some beings for nesting. This plant supports pollinating honeybees, native bees, and butterflies.

Lowbush honeysuckle is susceptible to deer browsing and may benefit from fencing or protection.



**Animoshimin
Winterberry (*Ilex verticillata*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Floodplain Forest, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 6-8 feet

Roots: Fibrous, 1-2 feet depth

Soil Preference: Moderate to Wet; Organic, Humus, or Peat

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○

Bank Stabilization Abilities: ●●○

Berries, nectar, and vegetation of winterberry are food sources for wildlife. Winterberry is a host plant. This plant supports pollinating honeybees, native bees, butterflies, and flies.

Winterberry is susceptible to deer browsing and may benefit from fencing or protection.



Ozaawaaskined
Fly Honeysuckle (*Lonicera canadensis*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest, Forested Sandspit Barrier, Shrub Shore Fen, Alder Thicket

Relationships with This Plant:



Mature Height: 2-5 feet

Roots: Fibrous, 12 inches depth

Soil Preference: Moderate; Organic, Mesic, or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Seeds and nectar of fly honeysuckle are food sources for wildlife. This plant supports pollinating honeybees, native bees, and hummingbirds.

Miskoziwashk
Ninebark (*Physocarpus opulifolius*)



Photo credit: Marisa Lee

Plant Communities: Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 4-8 feet

Roots: Fibrous, 10-16 feet depth

Soil Preference: Dry to Moderate; Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○○

Bank Stabilization Abilities: ●●○○

Seeds, nectar, and vegetation of ninebark are food sources for wildlife. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.



Oziisigobimizh, Oziisigobiminzh
Bog Willow (*Salix pedicellaris*)



Photo credit: Kelly Beaster

Plant Communities: Coastal Fen, Shrub Shore Fen, Shrub Carr

Relationships with This Plant:



Mature Height: 1-5 feet

Roots: Fibrous and Rhizomatous, 6-12 inches depth

Soil Preference: Wet; Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Bark, nectar, vegetation, and sap of bog willow are food sources for wildlife. Bog willow is used by some beings for nesting. Bog willow is a host plant. This plant supports pollinating honeybees, native bees, beetles, butterflies, flies, and wasps.

Bebaamaabid-zhingob, Nibaagaandag
Canada Yew (*Taxus canadensis*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 1-4 feet

Roots: Fibrous, 3-4 feet depth

Soil Preference: Moderate; Mesic or Clay

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Seeds and vegetation of Canada yew are food sources for wildlife.

Canada yew is susceptible to deer browsing and may benefit from fencing or protection.



Wiinizik
Yellow Birch (*Betula alleghaniensis*)

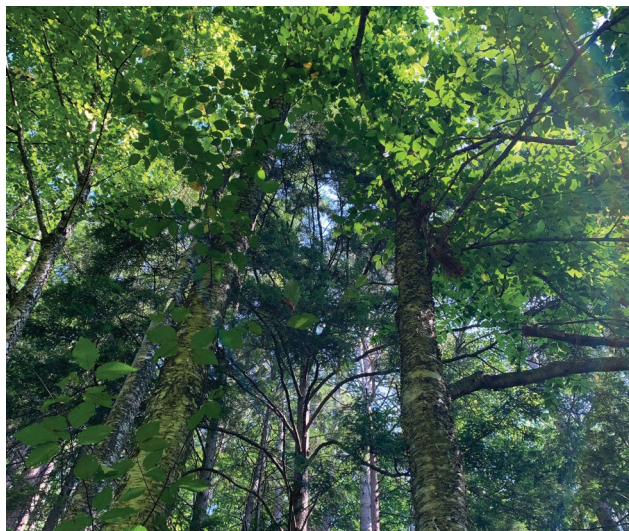


Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 50-85 feet

Roots: Fibrous, 5 feet depth

Soil Preference: Moderate to Wet; Organic, Mesic or Humus

Sunlight Preference: Part Shade or Full Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, bark, and vegetation of yellow birch are food sources for wildlife.

Yellow birch is susceptible to browsing by deer, rabbits, and rodents, and may benefit from fencing or protection.

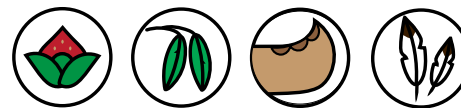
Wiigwaas, wiigwaasaatig
Paper Birch (*Betula papyrifera*)



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 40-60 feet

Roots: Fibrous, 1-2 feet depth

Soil Preference: Moderate; Mesic, Humus, Sand, or Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ● ○

Bank Stabilization Abilities: ● ○ ○

Seeds, bark, and vegetation of paper birch are food sources for wildlife.

Paper birch is susceptible to browsing by deer, rabbits, and rodents, and may benefit from fencing or protection.



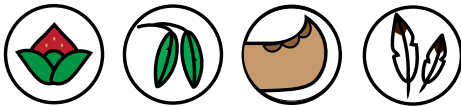
**Giizhikaatig
Northern White Cedar
(*Thuja occidentalis*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Floodplain Forest, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 30-70 feet

Roots: Fibrous, 1-2 feet depth

Soil Preference: Moderate to Wet; Organic, Humus, Clay

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ●

Seeds and other components of white cedar are food sources for wildlife.

White cedar may take 3 years to establish. White cedar is susceptible to deer, rabbit, and rodent browse and may require fencing for protection. White cedar is exceptionally long-lived, with an expected lifespan of 200 to 1,000 years.

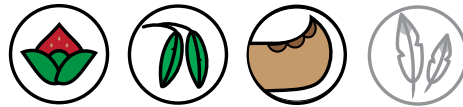
**Zhingwaak
White Pine (*Pinus strobus*)**



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 80-120 feet

Roots: Fibrous, 3-20 feet depth

Soil Preference: Moderate; Clay or Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, bark, and vegetation of white pine are food sources for wildlife. White pine is used by some beings for nesting.

White pine is susceptible to deer browsing and may benefit from fencing or protection. When rough bark starts to form, trimming bottom boughs allows for air flow to prevent blister rust.



**Ininaandag, Zhingob, Bigiwaandag,
Baapaashkwaatig
Balsam Fir (*Abies balsamea*)**

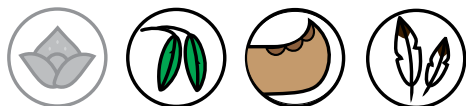


Photo credit: Marisa Lee

Plant Communities:

Wet Cedar Swamp, Wet Mesic Hardwood Forest,
Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 50-85 feet

Roots: Tap, 16-20 inches depth

Soil Preference: Dry to Moderate; Mesic, Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●○○○

Bank Stabilization Abilities: ●○○○

Seeds of balsam fir are food sources for wildlife.

As a young tree, balsam fir is susceptible to deer browsing and may benefit from fencing or protection. Balsam fir is highly susceptible to spruce budworm, which is a growing concern in the area.

**Maanazaadi
Balsam Poplar (*Populus balsamifera*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Clay Seepage Bluff

Relationships with This Plant:



Mature Height: 40-80 feet

Roots: Fibrous

Soil Preference: Moderate; Mesic, Humus, Clay, or Sand

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ●●○○

Bank Stabilization Abilities: ●●○○

Bark and vegetation of balsam poplar are food sources for wildlife. Balsam poplar is used by some beings for nesting.



**Wiigob, Wiigobaatig, Wiigobimizh
Basswood (*Tilia americana*)**



Photo credit: Marisa Lee

Plant Communities: Wet Mesic Hardwood Forest, Floodplain Forest

Relationships with This Plant:



Mature Height: 60-100 feet

Roots: Fibrous and Rhizomatous

Soil Preference: Moderate; Mesic or Humus

Sunlight Preference: Full Sun or Part Shade

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, bark, nectar, and vegetation of basswood are food sources for wildlife. This plant supports pollinating honeybees, native bees, and flies.

Basswood is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.

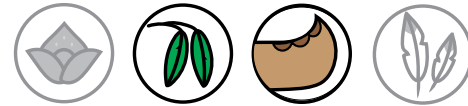
**Mashkiigwaatig
Tamarack (*Larix laricina*)**



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Wet Mesic Hardwood Forest, Floodplain Forest, Coastal Fen, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 50-75 feet

Roots: Fibrous, 12 inches depth

Soil Preference: Moderate to Wet; Organic, Mesic, Humus, or Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds and vegetation of tamarack are food sources for wildlife. Tamarack is used by some beings for nesting.

Tamarack is susceptible to deer, rabbit, and rodent browsing and may benefit from fencing or protection.



Gaagaagiwanzh, Zesegaandag
Black Spruce (*Picea mariana*)



Photo credit: Marisa Lee

Plant Communities: Wet Cedar Swamp, Shrub Shore Fen

Relationships with This Plant:



Mature Height: 30-70 feet

Roots: Fibrous, 2-3 feet depth

Soil Preference: Moderate to Wet; Peat

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ○ ○

Seeds of black spruce are a food source for wildlife. Black spruce is used by some beings for nesting.

Akikaandag
Jack Pine (*Pinus banksiana*)



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 30-100 feet

Roots: Taproot, 2-9 feet depth

Soil Preference: Moderate; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, bark, and vegetation of jack pine are food sources for wildlife. Jack pine is used by some beings for nesting.

Jack pine is susceptible to deer browsing and may benefit from fencing or protection.



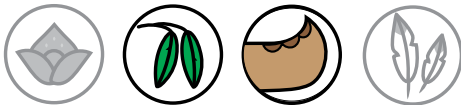
Apakwanagemag, Wenda-zhingwaak Red Pine (*Pinus resinosa*)



Photo credit: Marisa Lee

Plant Communities: Forested Sandspit Barrier

Relationships with This Plant:



Mature Height: 60-120 feet

Roots: Fibrous, 8-20 feet depth

Soil Preference: Dry to Moderate; Sand

Sunlight Preference: Full Sun

Aggressive Behavior: ● ○ ○

Bank Stabilization Abilities: ● ● ○

Seeds, bark, and vegetation of red pine are food sources for wildlife. Red pine is used by some beings for nesting.

Red pine is susceptible to deer browsing and may benefit from fencing or protection.



**Ginebigowazh, Gichi-aniibiish,
Anaaganabag
Ostrich Fern (*Matteuccia struthiopteris*)**



Photo credit: Marisa Lee

Plant Communities: Floodplain Forest

Relationships with This Plant:



Mature Height: 2-4 feet

Roots: Fibrous and Rhizomatous, 6 inches depth

Soil Preference: Moderate to Wet; Organic or Humus

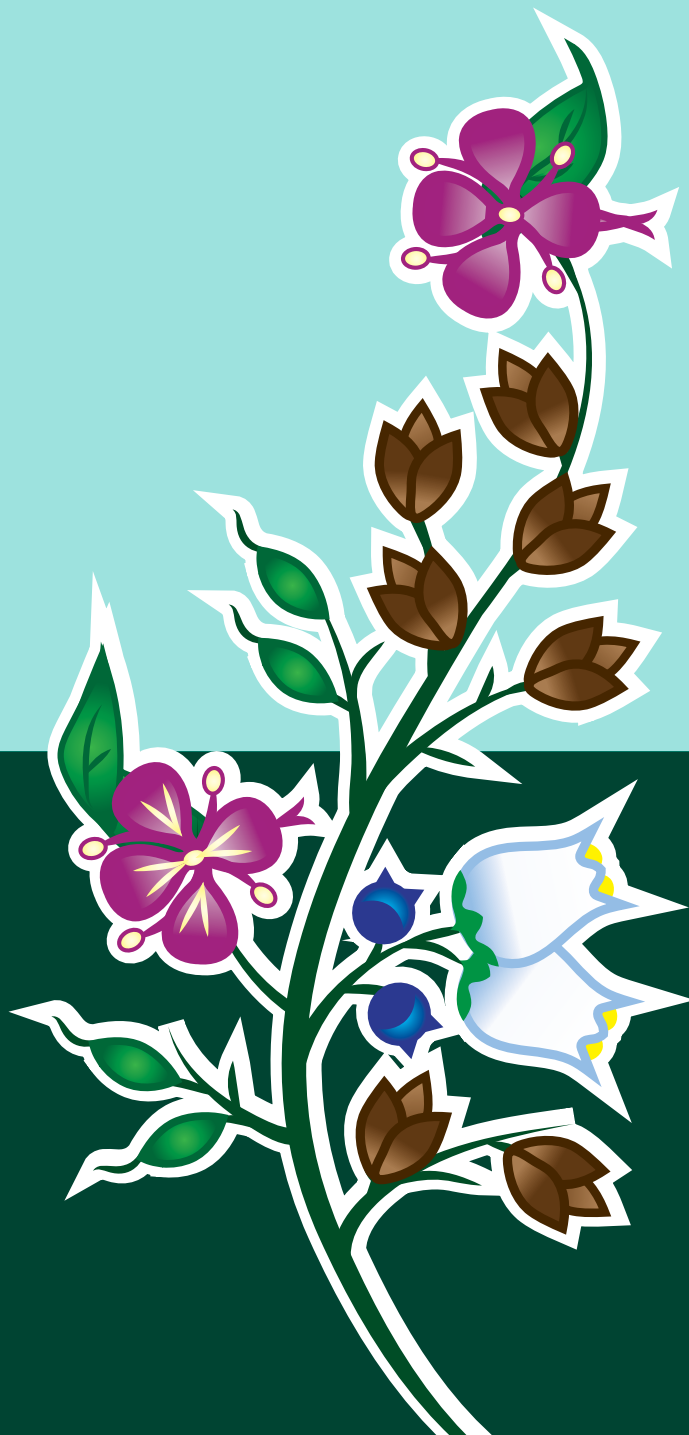
Sunlight Preference: Full Sun, Part Shade, or Full Shade

Aggressive Behavior: ●●○

Bank Stabilization Abilities: ●●●

Vegetation of ostrich fern is a food source for wildlife. Ostrich fern is used by some beings for nesting. Ostrich fern is a host plant.





Planning your planting site

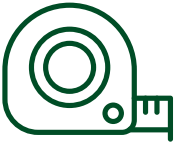
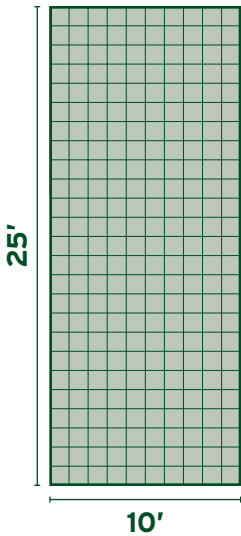
There are many ways to approach laying out plants in a planting area. This section is an example of how to plan a planting site, beginning with visiting and observing the designated area and selecting appropriate plants before calculating their spacing and quantities.

1. Whether your goals involve stabilizing an erosive shoreline, reviving critical habitat, supporting harvest, or beautifying a site, consider visiting with the land before you plant to introduce yourself to the plant relatives that are there and begin the process of developing a relationship with them and explaining your intent to plant other plant relatives.
2. Using the chart and guidance on page 10, characterize the site based on observed sunlight availability, soil composition, and water drainage or retention. If plants already exist on site, do they fit into one of the plant communities outlined in the chart? **Make a determination of the plant community or communities your planting area will support.**
3. Once the desired plant community has been identified through careful observation of your site, **make plant selections based on the community your planting area will support.** Reference the plant profiles on pages 20-69 that suggest plant beings for the various plant communities. You can also base your decision on criteria that are important to you, including the cultural relationships with each plant that are shown on each plant profile.
 - a. The number of distinct plant beings you choose to plant varies depending on the plant community and the objectives of the planting. Selecting a general range of 10-25 different kinds of beings per plant community in your project area is common.
 - b. Certain plants on your selection list may be easy to source from local growers in any given year, while others may be difficult to find. Some nurseries and plant suppliers may be willing to work with you to source or grow a particular kind of plant being.

PLANT COMMUNITIES

- Dune
- Bluff
- Wet Meadow
- Shrub Scrub
- Forested Swamp
- Hemi-marsh

4. Determine the boundaries of the site to be planted, measure and **estimate the approximate square footage of the site.**



Total square footage

Spacing area required
for each plant



Total number of plants
your site can
accommodate

5. To calculate the number of plants needed for the site, use recommended plant spacing distances to imagine a “planting grid” overlaying the area of the site. Divide the total square footage by the spacing area required for each plant to get the total number of plants your site can accommodate.

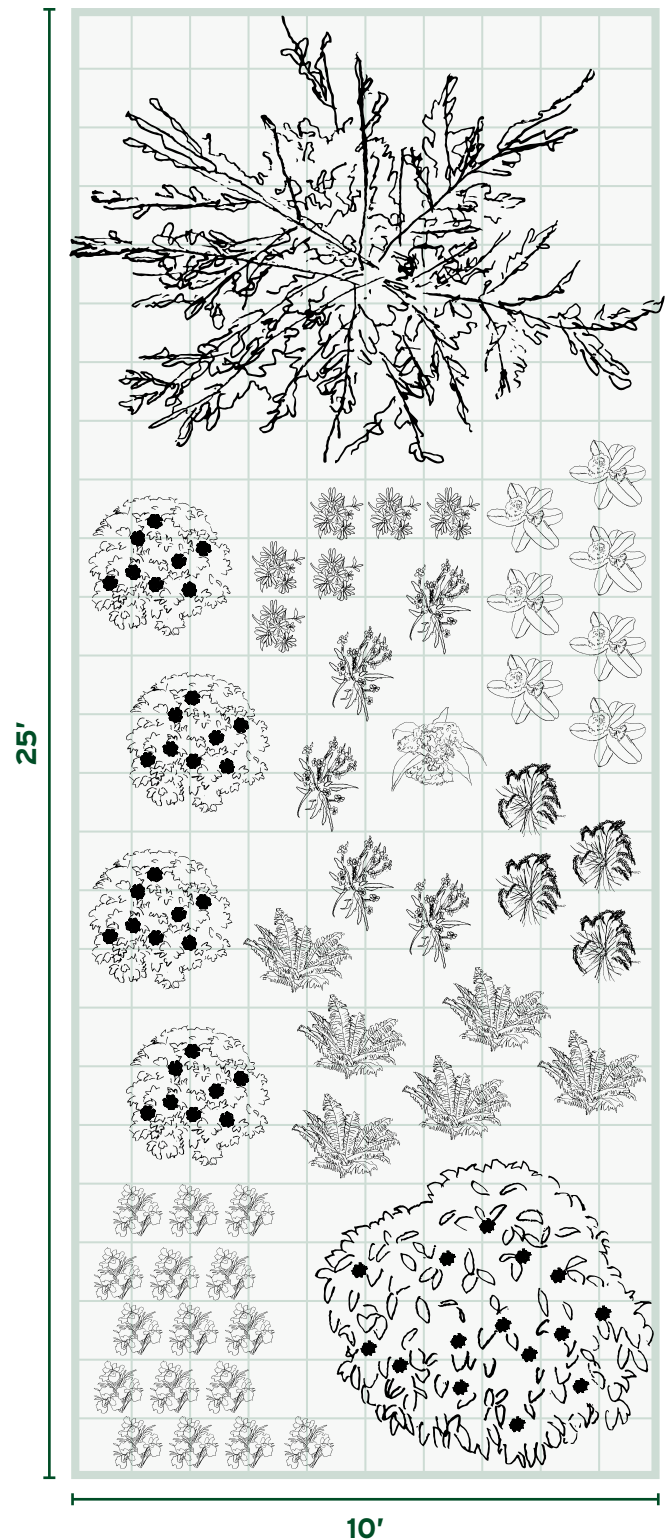
a. For example: If your total planting area is 250 square feet, and each plant requires 1 square foot to grow, divide 250 by 1 to calculate that your planting site can accommodate 250 plants.

If your total planting area is 250 square feet and each plant requires 1.5 square feet to grow, divide 250 by 1.5 to calculate that your planting site can accommodate 167 plants.

b. *Herbaceous plugs*—A spacing of 1 to 2 feet between individual plants is recommended because they will spread quickly. Plant 1.5 feet apart when including native seeding of the site as well. Plant 1 foot apart when not including seed or when non-local beings were present prior to the restoration effort.

c. *Larger woody plant beings*—Should be spaced out greater distances, 10-30 feet for trees and shrubs.

You may decide you want an even distribution between plant beings, or you may prioritize some beings over others depending on your landscape and desired outcomes. Although a grid pattern can be a helpful tool for calculation, when planting you may want to consider more fluid and natural spacing arrangements. Consider that plants will mature and spread in their own way and will not necessarily maintain their original planting pattern over time.



Using a grid overlay and plant spacing requirements can help you calculate how many plants your space can accommodate. This example shows a sketch of selected forested wetland plants laid out in a 250 square foot area.



How to prep a site for planting

1. Any unwanted vegetation should first be removed by hand digging or other methods to remove all root fragments and remnant plant matter.
2. If a site has natural soils or sediments with limited human impact, plants from plant communities that fit the characteristics of the site can be planted without soil amendment. Highly altered areas or sites with known contamination may need additional preparation. Consult soil specialists and consider soil testing.



Photo credit: Keeweenaw Bay Indian Community

3. Plant the site in the early spring (especially before buds on trees have begun to leaf out) or fall (early fall for herbaceous plants or after leaves have fallen for woody plant beings). This targeted approach will have the highest rate of survival when transplanting dormant beings to their new home. If you cannot follow that timeline, consider avoiding July, the hottest month of the season, for large planting projects and always have a plan to water soon after planting.

Always dig a hole that is larger than the pot of the plant or tree that is being put into the ground.

- a. In compacted soils, it can be difficult for roots of a plant to penetrate beyond the hole that was dug. Digging a larger hole and filling it with looser soil offers a more hospitable space while the plant is still vulnerable for the first 1-3 years.

- b. Before placing the plant in the hole, loosen the roots gently with fingers to spread out the space and encourage outward root growth. Make sure the main stem/trunk is placed as upright as possible before replacing soil around roots. Cover all roots completely and tamp soil down firmly.
4. Water soon after planting even if soil is already moist from recent rains or if the site is regularly saturated, since watering distributes the soil and covers roots in sediment, an important factor for successful planting.
 5. Straw mulch can be added to a site when seed is scattered to ensure smaller forb seed does not get washed away during any rainfall prior to germination. If the site has competitive plants nearby that might begin to revegetate faster than the new plants, a light mulch might also assist in keeping those plants out.
 6. Install wire cages or tree tubes when necessary to protect plants.



When and why to add protective fencing

Fencing significantly increases the success and survival rate of some plant beings, although it also increases cost. Refer to the plant profiles for information about whether a plant may be susceptible to animal browse. Consider how many deer, rabbits, and small rodents are present near the planting, as these animals can kill young plants. Browse pressure is much higher in urban areas, especially since wild spaces are fewer and many more open spaces exist. With few or no predators, deer and rabbits are much more emboldened in town. If the planting is in an urban setting or in an area with high deer populations, cages and tree tubes are strongly recommended. Even larger saplings are vulnerable to girdling from small rodents and antler rubs.

What kinds of maintenance should follow planting

Native plants do not require pruning, mulching, or other forms of common garden maintenance unless desired by the caretaker. Some native plants will readily resprout or respond to pruning in a similar way to cultivated trees such as apple and plum trees. If more aggressive native plants, such as wild rose, are growing rapidly, pruning would be the suggested maintenance. If a site supported non-native plants before planting, viable seeds of some of these plants may still be in the soil. These seeds may continue to germinate for years after the mature plants have been removed. You may need to continue to control of non-local beings for several years.



Photo credit: Lake Superior Reserve



Know the regulations

Before beginning a planting project or putting any shovels in the earth, it is important to know and understand relevant regulatory guidelines for the land you are on. In Wisconsin's Gichigami coastal areas, regulations at the tribal, federal, state, county, and local government scales may influence what is permitted in terms of land-disturbing activities. Depending on where and what you intend to plant, certain activities may require a regulatory review, a consultation, or a permit. **Consult with all applicable land regulatory entities before you begin your project.** Reaching out to your local city, township, or county land use permitting office is often a good first step. While this chart focuses on land in Wisconsin, there will be other jurisdictional entities and regulations to consider in other states.

Local

Local jurisdictions (cities, villages, and some towns) have regulatory authority over certain elements of land use and construction. These may include activities that involve earth-moving or take place within specific districts, particularly in areas in close proximity to shorelines. Counties, cities, and villages are required under Wisconsin state statute to adopt shoreland-wetland zoning ordinances to regulate activities in wetlands in the shoreland zone. Contact your local zoning regulatory authority (often your community's planning department) to inquire about relevant regulations before you plant.

Within cities, towns, and residential areas, it is often necessary to locate any underground services such as electric, gas, oil, petroleum, communications, sewer, and potable water lines prior to any digging. [These services are free to the public.](#)

County

Counties are the land use regulatory authority for most towns and all unincorporated areas in Wisconsin. Counties have responsibilities related to management of land and water stewardship. Counties, cities, and villages are required to adopt shoreland-wetland zoning ordinances to regulate activities in wetlands in the shoreland zone. Contact your county planning and zoning office to inquire about relevant land use regulations before you plant, and to ensure you are taking appropriate measures in areas in close proximity to a shoreline. Your county's Land Conservation Department and Extension office may be able to advise or offer resources to support your shoreline planting project.



State

Wetlands, shorelands, and waterways are protected by specific regulations in the state of Wisconsin. Regulatory consultation with the Wisconsin Department of Natural Resources (DNR) is highly recommended before planning to plant in or beside a waterway. Treating non-local beings and planting into wetlands [requires a permit](#) issued from Wisconsin DNR, as do certain activities involving in-water plantings. Activities such as planting native beings are generally easier to attain than modifications to sediment or wetland structure. Any use of chemicals within a wetland is also highly regulated, and some counties and towns forbid the use of chemical treatments on any land within their boundary and listed within their ownership.

Projects taking place on ceded territory may have impacts on treaty-guaranteed off-reservation hunting, fishing, or gathering. Many of these permits will also be reviewed by the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) prior to granting approval for the activities. A representative from GLIFWC may reach out and ask questions about the project.

Federal

The U.S. Army Corps of Engineers requires permits for any work affecting the waters of the United States. The U.S. Environmental Protection Agency regulates water-related actions under the Clean Water Act. Permits are required for actions that may affect endangered or threatened beings. There may be other federal permits that apply to your project.

Tribal

As sovereign nations, tribes exercise regulatory authority on reservation land and tribal member-owned inholdings. Activities on nonmember-owned lands within reservation boundaries, and on some off-reservation lands that impact on-reservation tribal health and safety, may also be subject to some level of tribal jurisdiction. No land-disturbing activity or project that could impact tribal lands should be undertaken without consulting tribal resource management departments and acquiring the proper permits.



Photo credit: Lake Superior Reserve



Sourcing plants for your project

You can purchase plant, tree, and shrub seedlings, and sometimes seeds, from plant suppliers and landscape professionals that specialize in the cultivation of plants native to this region. County native plant sales happen annually, typically in the spring. It is important to recognize that some of the plants you desire for your coastal environment planting efforts may be rare or difficult to find. Plant availability can depend on how difficult it is for a nursery or supplier to locate and cultivate a particular plant being, as well as how commonly requested a plant is. Some nurseries and plant suppliers may be willing to work with you to source or grow a particular plant being.

This guide is not affiliated with nor endorses any particular plant supplier or professional service. We recommend selecting a plant supplier who understands native plants and landscape management in Gichigami coastal environments. Here are lists of some native plant suppliers maintained by Minnesota and Wisconsin natural resource agencies:

Wisconsin Native Plant Nurseries (Wisconsin DNR): <https://widnr.widen.net/s/rfsbfc22w6/nh0698>

Native Plant Nurseries and native vegetation consultants for northeast Minnesota (Minnesota DNR): https://files.dnr.state.mn.us/assistance/backyard/gardens/native_plant/suppliers-northeast.pdf

Contact the Ashland, Bayfield, Douglas, or Iron County Land Conservation Departments for more information about local native plant suppliers.



Questions to ask local nurseries

Where and how seed is collected is very important in preserving local plant populations, supporting genetic diversity, and maintaining plant beings that have adapted to the specific climate of the region. Ethical growers will follow thoughtful seed collection guidelines, even though they are collecting on a commercial scale. By asking the following questions, a buyer can learn more about how local native plant populations are being cared for and protected.

1. Do you grow all your plants from seed?
2. Where do you obtain your seed?
What guidelines do you use when collecting seed?
3. How do you treat soil to remove non-native plant material, and how do you manage pests?
4. How do you propagate your plants?
Are they cultivars (selectively bred) or descended directly from a wild plant?



A note about seed collection

This guide does not provide specific guidance on the collection of plant seed nor propagation of plants from seed. If you elect to grow plants from seed, we recommend you seek additional resources and guidance. Seed collection must be undertaken with extreme care and respect for the plants and the land on which they are growing. It is critical to understand the rules and best practices governing seed collection, which are established to ensure the health of plant communities, especially where rare and threatened plant beings are concerned. Seed collection guidance will vary depending on what entity stewards the land on which you intend to collect. **Under no circumstances should seed be collected on tribal reservation land or other lands under tribal jurisdiction without the express permission of the tribe.**

READ MORE ABOUT GUIDANCE GOVERNING SEED COLLECTION:

Guidelines for Seed Collecting on Department of Natural Resources Land - Instructions for Collectors:

https://dnr.wisconsin.gov/sites/default/files/topic/EndangeredResources/SeedCollecting_Guidelines.pdf

U.S. Forest Service - Native Seed Collection Guide for Ecosystem Restoration:

https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_023948.pdf



Photo credit: Lake Superior Reserve



Plant community climate survivorship

As the Wisconsin Initiative on Climate Change Impacts (WICCI) 2021 report observes, Wisconsin has seen a 3-degree increase in average daily temperature and a 17 percent increase in average annual rainfall since 1950. Conditions are expected to become warmer and wetter by the year 2050, with northern Wisconsin expected to experience some of the more extreme changes. Each plant community has a different projected response to a change in the climate of the region. Some plant communities will suffer from the projected warmer summers and harsher storm events, shrinking their overall presence on the landscape, while others will thrive and cover larger areas. The information shown here, from WICCI's Plant and Natural Communities Working Group, summarizes projected impacts to plant communities featured in this resource. There are also several resources available about how

individual plants may respond to climate change in the region. [Aanji-bimaadiziimagak o'ow aki](#), the Great Lakes Indian Fish and Wildlife Commission Vulnerability Assessment Version 2, describes the climate change vulnerability of 66 culturally important beings in the Ceded Territories, including 24 plants. For trees, there is also the [Forest Ecosystem Vulnerability Assessment and Synthesis for Northern Wisconsin and Western Upper Michigan: A Report from the Northwoods Climate Change Response Framework Project](#). A [shorter handout](#) of the report is also available. Keep in mind that projections can be more difficult on an individual-being level due to varying local conditions. In some cases, plant beings projected to do poorly under climate change in the region may thrive at your site due to its physical characteristics or other variables.



Photo credit: Deanna Erickson



Expected impacts to Wisconsin natural communities by end of the 21st century, from the [WICCI Climate Vulnerability Ratings for Wisconsin Natural Communities report \(revised in 2020\)](#)

Wisconsin Natural Community	Climate Vulnerability	Potential Impact	Adaptive Capacity
Great Lakes Dune	Mod. to Mod. High	Mod. Neg. to Neg.	Mod. to Mod. High
Forested Sandspit	High	Mod. Neg. to Neg.	Moderately Low
Clay Seepage Bluff	Mod. to Mod. High*	Mod. Neg. to Neg.*	Moderately Low*
Coastal Fen	High	Moderately Negative	Low
Wet/Fresh Meadow	Moderate to High	Neutral to Mod. Neg.	Mod. Low to Mod.
Shrub Shore Fen	High	Negative	Moderately Low
Shrub Carr	Low to Mod. Low	Mod. Supportive	Moderately High
Alder Thicket	Low to Mod. Low	Mod. Supportive	Moderately High
Wet Cedar Swamp	High	Negative	Moderately Low
Wet Mesic Hardwood Swamp	Moderately High	Moderately Negative	Moderate
Floodplain Forest	Moderate	Mod. to Mod. Neg.	Moderately High
Emergent Marsh	Low to Mod. Low	Neutral to Mod. Sup.	High
Aquatic	Low to Mod. Low*	Neutral to Mod. Neg.*	Moderate*

* Indicates plant community not depicted in **Plants and Natural Communities Working Group** consideration, and ratings given were inferred from other sources, such as U.S. Forest Service research on Impacts of [“Climate Change on Submerged and Emergent Wetland Plants”](#)

Note on plant community inclusion

Plant communities and the plants within those communities in this guide were selected from both the Wisconsin Department of Natural Resources Natural Communities of Wisconsin and the Minnesota Department of Natural Resources Field Guide to the Native Plant Communities of Minnesota – the Laurentian Mixed Forest Province. Names were also cross-referenced with known conventions within the WDNR Surface Water Data Viewer and Minnesota Pollution Control Agency’s plant community classifications. The plant beings composition for each plant community was derived from botanical surveys in coastal wetland communities and otherwise supplemented from the Field Guide to the Native Plant Communities of Minnesota – the Laurentian Mixed Forest Province, which contains diagnostic keys to assist in determining a plant community based on the presence of particular plant beings and associates. Plant community names were selected based on most-commonly used or most-descriptive name among the listed resources. Plant communities that are broken down into two or more specific plant communities are given a broader name that encompasses all plant communities represented in this guide under that name, and would not be represented as its own community in any guide.



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Additional resources:

Aanji bimaadiziimagak o'ow aki: Climate Change Vulnerability Assessment Version 2, Great Lakes Indian Fish and Wildlife Commission: <http://glifwc.org/ClimateChange/VulnerabilityAssessment.html>

Dibaginjigaadeg Anishinaabe Ezhitwaad: A Tribal Climate Adaptation Menu: <https://glifwc.org/ClimateChange/TribalAdaptationMenuV1.pdf>

Minnesota Wetland Restoration Plant ID Guide: https://bwsr.state.mn.us/sites/default/files/2019-01/MN%20Plant%20ID%20Guide%2008_09_10%20-%20updated.pdf

Northern Institute of Applied Climate Science: <https://www.niacs.org/>

United States Department of Agriculture Natural Resources Conservation Service, Web Soil Survey: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

Wisconsin Initiative on Climate Change Impacts: <https://wicci.wisc.edu/>









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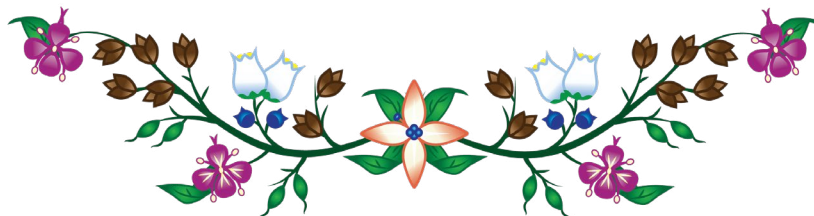
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GANAWENINDIWAG

Working with plant relatives to heal
and protect Gichigami shorelines



This guide empowers users to grow, promote, and use plant beings specifically from natural plant communities adapted to coastal areas of Gichigami (Lake Superior) to heal and protect Gichigami shorelines.



Extension
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