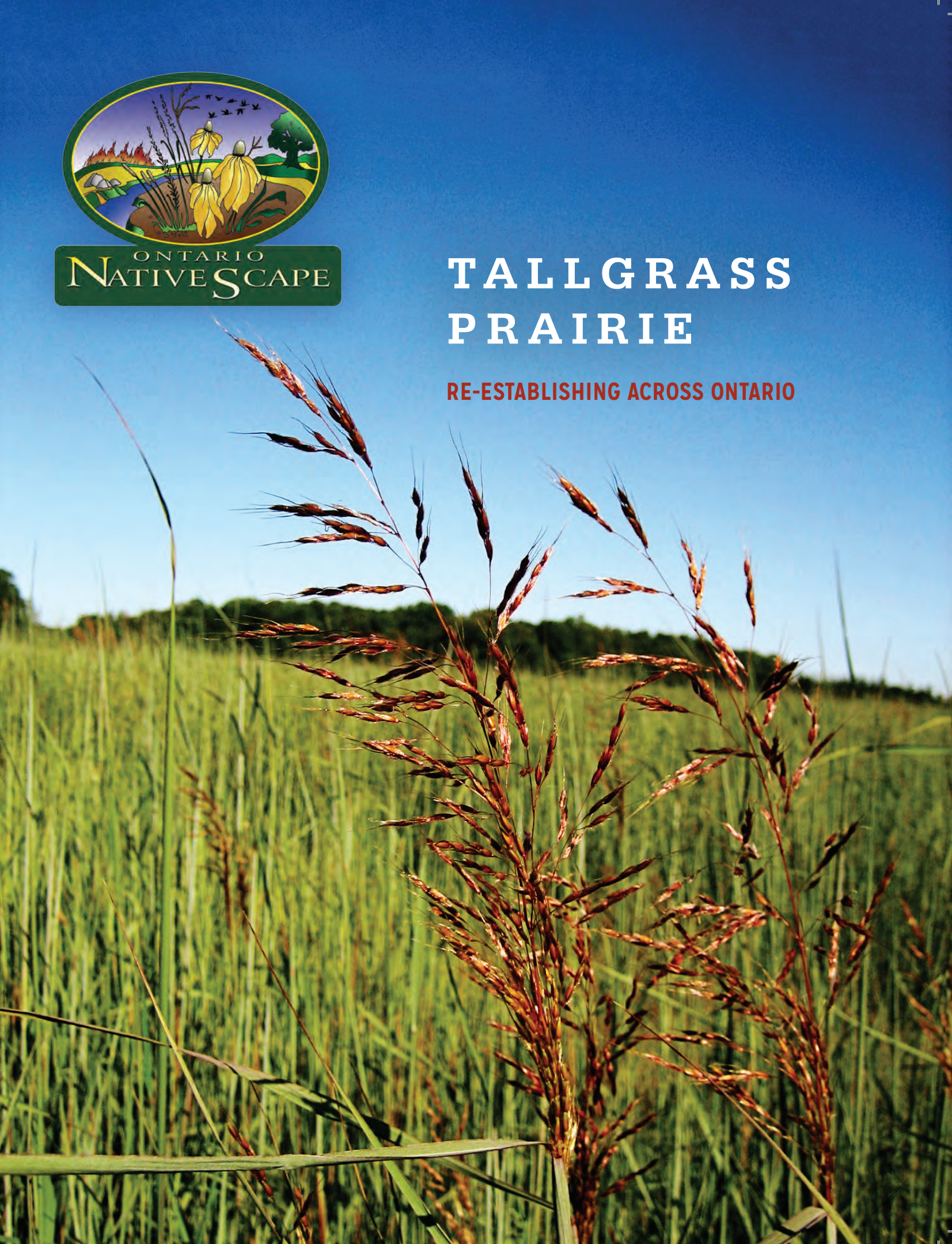
ONTARIO NATIVESCAPE

TALLGRASS PRAIRIE

RE-ESTABLISHING ACROSS ONTARIO



RE-ESTABLISHING ACROSS ONTARIO

Tallgrass prairie and savannas, also known as native grasslands, are unique habitats comprised of roughly a dozen species of native grasses and upwards of 200 forbs (flowers). As a habitat, it meets the needs of a diversity of wildlife including mammals, songbirds and key pollinating insects such as bees, butterflies, and ants.

Tallgrass communities once covered a significant part of southern Ontario's landscape. Now they are some of the most endangered ecological communities in Canada, with approximately 1 percent of their original extent remaining. Degradation and destruction of these areas is attributed to urban development, agriculture, pollution and mismanagement, leaving remaining grassland habitat as remnants in small, isolated patches. As these highly diverse communities themselves are rare and threatened, so too are many of the wildlife species which depend on these communities for their survival.

Photo Credit: Rural Lambton Stewardship Network

WHY NATIVE GRASSES?

Tallgrass communities are mostly made up of native grasses called warm season grasses which are very different than the cool season grasses such as smooth brome, Kentucky bluegrass and quack grass mixtures that are planted along roadsides and in pastures. Warm season grasses actively grow during the warm, dry months and since they are native, are more adapted to our climatic and soil conditions.

Some benefits include:

Improved Soil Health - Tallgrass prairie has extensive dense fibrous root systems (not taproots) extending 2.5 metres that are highly absorbent. This enables them to re-develop organic topsoil and withstand harsh climatic conditions by accessing water and nutrients that are unable to be utilized by shallow rooting cool season grasses. Tallgrass prairie also outcompetes invasive and non-native vegetation and stabilizes slopes.

Water Quality Protection - Some tallgrass prairie grasses grow to over 2 metres in height and in clumps rather than dense mats like non-native grasses trapping nutrients, sediment and increasing water filtration helping to protect water quality; act as a living snow fence; and provide nesting and rearing habitat for wildlife.

Quality Wildlife Habitat - Tallgrass prairie creates open ground spaces through their growing structure allowing room for broadleaf forbs and legumes (wildflowers), supporting a diverse wildlife community of insects, birds and mammals. Alternatively, most non-native species rapidly out-compete the broadleaf plants, thus reducing the diversity and habitat value of the planting. It is also not unusual for one species of non-native grass to eventually dominate a mixed planting, resulting in a monoculture.

PLANTS AND WILDLIFE OF TALLGRASS PRAIRIE

Wild Bergamot *(Monarda fistulosa)*

Little bluestem *(Schizachyrium scoparium)* - Named for its blue tint seen in the spring, in fall its predominant colour is red.

Photo Credit: Cathy Quinlan

Photo Credit: Allen Woodliffe

Bobolink *(Dolichonyx oryzivorus)* - Dependent on grassland habitat, you will find males often perched on grass stems or displaying above the field. Currently listed as a species at risk in Ontario due to the reduction in native grassland habitat and pastureland.

Monarch *(Danaus plexippus)* - Known for its striking colours and long migration, Monarchs are decreasing in numbers due to lack of habitat. In the larval stage, caterpillars feed exclusively on the leaves of milkweed plants.

Photo Credit: Cathy Quinlan

Photo Credit: Allen Woodliffe

Eastern Foxsnake *(Elaphe vulpine gloydi)* - The second-largest snake in Ontario, is generally confined to shoreline areas around the Great Lakes. This harmless snake may have a copper-coloured head and vibrate its tail when disturbed; thus often mistaken for a venomous snake and needlessly persecuted. Historical and ongoing habitat destruction, persecution and road fatalities have greatly reduced its numbers in the Carolinian population.

TALLGRASS PRAIRIE APPLICATIONS

Tallgrass prairie has many applications on the landscape including:

Along roadsides - instead of seeding non-native grass mixes, roadsides can be planted with native tallgrass prairie providing quality habitat for pollinators and other wildlife. It is a cost effective tool for road managers, and once established it can outcompete non-native and noxious weeds, reducing mowing and spraying costs. Furthermore, it can act like a living snow fence trapping blowing snow, improving road safety and reducing winter maintenance costs.

Photo Credit: Rural Lambton Stewardship Network

Along streams - drains and ditches. Native grasses have extensive roots systems up to 2.5 meters in length which holds soil in place preventing deposition into waterways. Planting tallgrass prairie along drains and ditches will stabilize banks; act as a filter strip protecting water quality and prevent costly long-term maintenance costs while creating wildlife habitat.

On rural lands - tallgrass prairie can complement agricultural operations as a riparian buffer strip, field borders to increase pollinator habitat or as a pasture. Warm season grass pastures have been proven to improve the efficiency of a rotational grazing system.

Photo Credit: Kim Delaney

Around wetlands - tallgrass prairie will improve water quality, buffer and provide critical nesting and foraging habitat for many wildlife species.

Photo Credit: Rural Lambton Stewardship Network

Within utility corridors - Tallgrass prairie can be established along utility corridors to promote environmental stewardship while ensuring safe and reliable power service. With plants growing to a maximum 2.5 metres, native grasses and wildflowers create habitat without interfering with power lines. Maintenance costs are reduced once established, as no mowing is required and noxious or unwanted weeds are reduced thus minimizing spraying.

On industrial lands - the open lands around industrial facilities are ideal locations for the establishment of tallgrass prairie habitat. Tallgrass prairie can be quickly established creating a low maintenance scenic buffer around industrial facilities.

Photo Credit: Rural Lambton Stewardship Network

Within parks or any open spaces - any open space can be complemented with tallgrass prairie establishment to benefit wildlife as well as improve aesthetics. Previously mowed grass areas can be converted to tallgrass prairie habitat, reducing maintenance costs, and from an aesthetic point of view, produce a constantly changing pattern of striking colours and textures throughout the seasons.

RESTORATIVE AGRICULTURAL PRACTICES

High Quality Forage and Bedding

Combining warm season grasses into a rotational grazing system will provide high quality forage for livestock during the warmer months of the year, extending the time frame of grazing and minimizing supplemental feeding. Warm season grasses have a high digestibility providing a nutritious forage during the hot months of the year. Also, they can provide superior bedding and absorption properties when cut later in the season.

Pest Control

It is a common misconception that natural vegetation near cropland or pasture harbours potentially damaging insects. In fact, when managed properly, permanent vegetation actually hosts predators such as beneficial insects and birds. These predators prevent pest insects from developing large populations that are potentially damaging to crops or forage. Keeping these pest insects in check reduces the need for costly insecticide treatments.

Pollinator Paradise

Buffer strips or borders seeded with tallgrass prairie also attract pollinators which can benefit grain and forage crops. The diversity of wildflowers of tallgrass prairie create a consistent blooming period across multiple seasons. Some plants begin to bloom as early as April with others flowering as late as October, providing an extended timeframe for pollinators and other insects to use the area as a nectar source. It is this diversity of wildflowers that supports a diverse web of life and provides a food source for variety of beneficial insects and birds, as well as other wildlife.

Sustainable Biofuel Crop

Tallgrass prairie is a viable source for bioenergy production. The diversity of perennials will produce a substantial amount of biomass yearly and can provide more usable energy per acre than corn grain ethanol or soybean biodiesel. If properly managed, this annually renewable biomass source can be easily harvested and used to create energy for years to come.

Photo Credit: Tallgrass Ontario

Photo Credit: Cathy Quinlan

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If you would like more information on creating tallgrass prairie on your property, please contact Ontario NativeScape.

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Ontario NativeScape is a division of the Rural Lambton Stewardship Network and a not-for-profit organization that specializes in managing and completing habitat restoration projects that achieve and maintain a healthy and sustainable environment. Focused on restoring and safeguarding Ontario's native ecosystems and biodiversity, we have 20 years of experience planning, implementing and managing habitat and water quality restoration projects. As leaders in tallgrass prairie restoration to date we have managed and restored over 1600 hectares of tallgrass prairie habitat in Ontario.

For more information please contact or check out our website at: http://www.ontarionativescape.ca/