

Proposal to Create a Native Landscape at the Triangle Park Spring Lake Park, MN

Prepared for:

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Prepared by:

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Project Area:

12,000 square feet

Prairie Restorations, Inc. 

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A. Company Background:

Prairie Restorations, Inc. (PRI) has been dedicated to the restoration and management of native plant communities for over 40 years. We are fortunate to have worked with thousands of clients on a wide variety of projects in both the public and private sectors throughout the Upper Midwest.

The PRI staff currently consists of 54 full-time professionals and about an equal number of seasonal employees which operate out of five Minnesota locations. Most of the staff has B.S. degrees in natural resource related fields such as biology, forestry, horticulture or wildlife. As a full service restoration company, PRI is able to provide our clients expertise and service in all facets of native landscape restoration. Along with consulting, design, installation and land management services, we also produce our own local ecotype seed and plant materials which are used on all of our projects.

The PRI Team is committed to and passionate about protecting and enhancing our valuable natural resources. It is this dedication that is brought to each and every one of our projects. We are proud to offer the best expertise, services and products available in the industry and appreciate the opportunity to provide you with this proposal.

B. Project Overview:

1. Establishing a native landscape in this area will provide a long term, ecologically sound landscape that is adapted to the existing conditions of the site. This native landscape will not require irrigation or other soil amendments. It will add a distinctive look to the property as well as provide valuable habitat for songbirds, butterflies, bees and other pollinators.
2. The shoreline buffer areas will be seeded with native shoreline/mesic grasses and wildflowers that are adapted to the well-drained conditions. A few areas closer to the sidewalks and northeast pond will be seeded with a blend of short/dry grasses and wildflowers.
3. To establish this planting, the site will be treated with herbicide to kill existing weeds and grass, lightly tilled, harrowed where feasible and hand raked to provide a smooth seedbed. All areas will be seeded with native grasses and wildflowers, and covered with straw/coconut erosion blanket to protect the seeding and enhance germination.
4. Native wildflower and grass plugs will be planted to enhance the diversity and aesthetics of the project.
5. An "estimate" for 3 years of Establishment Period Vegetation Management is included in this proposal.

C. Site preparation:

1. In areas with actively growing vegetation, apply an aquatic approved glyphosate herbicide (Rodeo® or equivalent) and a triclopyr herbicide (Garlon 3A® or equivalent) with appropriate surfactants, as per manufacturer’s directions. Allow a minimum of 30 days before disturbing the vegetation with other procedures.
2. Maintenance staff from the city of Spring Lake Park will bring in topsoil to address the undercutting of the sidewalk in the Northwest pond as discussed during the site evaluation with Kay Okey. *(To be completed by the City of Spring Lake Park)*
3. Scarify the soil surface with a minitiller/dethatcher to prepare the seedbed.
4. Harrow where feasible and rake the soil to create a firm, smooth seedbed.

D. Seed and Seeding:

1. Acceptable seeding dates for native species are in the spring or summer before August 10th or in the fall between September 20th and freeze-up. This project would likely be seeded in summer of 2023.
2. The grass seed will be spread by hand broadcasting throughout the project areas.
3. A raking will follow to incorporate the seed into the soil.
4. Following the raking, flower seed will be spread by hand broadcasting onto the soil surface.
5. The seed mixes will consist of the following species and amounts:

Grass Seed	lbs./ project area
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Blue grama (<i>Bouteloua gracilis</i>).....	1.0
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Short Dry Grass Mix:

45% Little bluestem, 47% Side oats grama, 5% Slender wheatgrass, 1% June grass, 2% Prairie dropseed, all by PLS weight.....	0.50
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Wet Grass Mix:

42% Big bluestem, 5% Fringed brome, 10% Indian grass, 10% Fowl bluegrass, 5% Canada wild rye, 8% Virginia wild rye, 5% Red river cord grass, 5% American manna grass, 4% Switchgrass, 3% Green bulrush, 2% Wool grass, 1% Blue joint grass, all by PLS weight.	2.0
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PRI Shoreline Grass Mix:

19% Fringed brome, 10% Virginia wild rye, 13% American manna grass, 10% Fowl bluegrass,	
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G. Plants and Planting:

1. Immediately following the implementation of any erosion control measures, the planting will be further diversified with native wildflower and/or grass plants (plugs). These will be planted individually in appropriate microhabitats throughout, or in designated areas of the project. The plants used will consist primarily of species other than those previously seeded.
2. From the following list a minimum of 15 species will be used.
3. Plant a total of 1,500 plugs.

Wildflowers

Yarrow (<i>Achillea millefolium</i>)	Silky prairie clover (<i>Dalea villosa</i>)
Sweet flag (<i>Acorus americanus</i>)	Prairie larkspur (<i>Delphinium virescens</i>)
Red baneberry (<i>Actaea rubra</i>)	Flat-topped aster (<i>Doellingeria umbellata</i>)
Pearly everlasting (<i>Anaphalis margaritacea</i>)	Pale purple coneflower (<i>Echinacea angustifolia</i>)
Fragrant giant hyssop (<i>Agastache foeniculum</i>)	Purple coneflower (<i>Echinacea purpurea</i>)
Water plantain (<i>Alisma subcordatum</i>)	False rue anemone (<i>Enemion biternatum</i>)
Meadow garlic (<i>Allium canadense</i>)	Fireweed (<i>Epilobium angustifolium</i>)
Prairie onion (<i>Allium stellatum</i>)	Willow-herb (<i>Epilobium coloratum</i>)
Wild leek (<i>Allium tricoccum</i>)	Rattlesnake master (<i>Eryngium yuccifolium</i>)
Leadplant (<i>Amorpha canescens</i>)	Trout lily (<i>Erythronium albidum</i>)
Canada anemone (<i>Anemone canadensis</i>)	Boneset (<i>Eupatorium perfoliatum</i>)
Thimbleweed (<i>Anemone cylindrica</i>)	Large-leaved aster (<i>Eurybia macrophylla</i>)
Wood anemone (<i>Anemone quinquefolia</i>)	Grass-leaved goldenrod (<i>Euthamia graminifolia</i>)
Pasque flower (<i>Anemone patens</i>)	Joe-Pye weed (<i>Eutrochium maculatum</i>)
Pussytoes (<i>Antennaria neglecta</i>)	Wild strawberry (<i>Fragaria virginiana</i>)
Columbine (<i>Aquilegia canadensis</i>)	Northern bedstraw (<i>Galium boreale</i>)
Wild sarsaparilla (<i>Aralia nudicaulis</i>)	Yellowish gentian (<i>Gentiana alba</i>)
American spikenard (<i>Aralia racemosa</i>)	Bottle gentian (<i>Gentiana andrewsii</i>)
Jack-in-the-pulpit (<i>Arisaema triphyllum</i>)	Wild geranium (<i>Geranium maculatum</i>)
Prairie sage (<i>Artemisia ludoviciana</i>)	Purple avens (<i>Geum rivale</i>)
Wild ginger (<i>Asarum canadense</i>)	Prairie smoke (<i>Geum triflorum</i>)
Swamp milkweed (<i>Asclepias incarnata</i>)	Sneezeweed (<i>Helenium autumnale</i>)
Butterfly weed (<i>Asclepias tuberosa</i>)	Frostweed (<i>Helianthemum bicknellii</i>)
Whorled milkweed (<i>Asclepias verticillata</i>)	Giant sunflower (<i>Helianthus giganteus</i>)
Wild indigo (<i>Baptisia alba</i>)	Hispid sunflower (<i>Helianthus hirsutus</i>)
Marsh marigold (<i>Caltha palustris</i>)	Maximilian's sunflower (<i>Helianthus maximiliani</i>)
Tooth-leaved primrose (<i>Calylophus serrulatus</i>)	Stiff sunflower (<i>Helianthus pauciflorus</i>)
Harebell (<i>Campanula rotundifolia</i>)	Common ox-eye (<i>Heliopsis helianthoides</i>)
New Jersey tea (<i>Ceanothus americanus</i>)	Sharp-lobed hepatica (<i>Hepatica acutiloba</i>)
Turtlehead (<i>Chelone glabra</i>)	Golden aster (<i>Heterotheca villosa</i>)
Spring beauty (<i>Claytonia virginica</i>)	Alum-root (<i>Heuchera richardsonii</i>)
Bead lily (<i>Clintonia borealis</i>)	Long-leaved bluets (<i>Houstonia longifolia</i>)
Stiff tickseed (<i>Coreopsis palmata</i>)	Virginia waterleaf (<i>Hydrophyllum virginianum</i>)
Bunchberry (<i>Cornus canadensis</i>)	Wild iris (<i>Iris versicolor</i>)
Slender penstemon (<i>Penstemon gracilis</i>)	Dwarf dandelion (<i>Krigia biflora</i>)
Showy penstemon (<i>Penstemon grandiflorus</i>)	Rough blazing star (<i>Liatris aspera</i>)
White prairie clover (<i>Dalea candida</i>)	Cylindric blazing star (<i>Liatris cylindracea</i>)
Purple prairie clover (<i>Dalea purpurea</i>)	Meadow blazing star (<i>Liatris ligulistylis</i>)

Dotted blazing star (*Liatris punctata*)
 Tall blazing star (*Liatris pycnostachya*)
 Turk's cap lily (*Lilium michiganense*)
 Twinflower (*Linnaea borealis*)
 Carolina puccoon (*Lithospermum carolinense*)
 Cardinal flower (*Lobelia cardinalis*)
 Great blue lobelia (*Lobelia siphilitica*)
 Pale lobelia (*Lobelia spicata*)
 Wild lupine (*Lupinus perennis*)
 Fringed loosestrife (*Lysimachia ciliata*)
 Starflower (*Lysimachia borealis*)
 Swamp candles (*Lysimachia terrestris*)
 False lily of the valley (*Maianthemum canadense*)
 False solomon's seal (*Maianthemum racemosum*)
 Starry false solomon's seal (*Maianthemum stellatum*)
 Northern lungwort (*Mertensia paniculata*)
 Monkey flower (*Mimulus ringens*)
 Bishop's cap (*Mitella diphylla*)
 Wild bergamot (*Monarda fistulosa*)
 Downy sweet cicily (*Osmorhiza claytonii*)
 Woodland phlox (*Phlox divaricata*)
 Prairie phlox (*Phlox pilosa*)
 Obedient plant (*Physostegia virginia*)
 Jacob's ladder (*Polemonium reptans*)
 Solomon's seal (*Polygonatum biflorum*)
 Prairie cinquefoil (*Potentilla arguta*)
 Rattlesnake root (*Prenanthes alba*)
 Mountain mint (*Pycnanthemum virginianum*)
 Prairie buttercup (*Ranunculus fascicularis*)
 Long-headed coneflower (*Ratibida columnifera*)
 Yellow coneflower (*Ratibida pinnata*)
 Prairie rose (*Rosa arkansana*)
 Meadow rose (*Rosa blanda*)
 Dwarf raspberry (*Rubus pubescens*)
 Black-eyed Susan (*Rudbeckia hirta*)
 Green-headed coneflower (*R. laciniata*)
 Arrow-head (*Sagittaria latifolia*)
 Early Figwort (*Scrophularia lanceolata*)
 Golden ragwort (*Senecio aureus*)
 Balsam ragwort (*Senecio paupercaulis*)
 Wineleaf cinquefoil (*Sibbaldiopsis tridentata*)

Compass plant (*Silphium laciniatum*)
 Cup plant (*Silphium perfoliatum*)
 Blue-eyed grass (*Sisyrinchium campestre*)
 Wood blue-eyed grass (*Sisyrinchium montanum*)
 Zig zag goldenrod (*Solidago flexicaulis*)
 Hairy goldenrod (*Solidago hispida*)
 Gray goldenrod (*Solidago nemoralis*)
 Upland goldenrod (*Solidago ptarmicoides*)
 Stiff goldenrod (*Solidago rigida*)
 Showy goldenrod (*Solidago speciosa*)
 Bog goldenrod (*Solidago uliginosa*)
 Bur reed (*Sparganium eurycarpum*)
 Woundwort (*Stachys palustris*)
 Rosy twisted stalk (*Streptopus roseus*)
 Lindley's aster (*Symphotrichum ciliolatum*)
 Heath aster (*Symphotrichum ericoides*)
 Smooth aster (*Symphotrichum laeve*)
 Calico aster (*Symphotrichum lateriflorum*)
 New England aster (*Symphotrichum novae-angliae*)
 Aromatic aster (*Symphotrichum oblongifolium*)
 Azure aster (*Symphotrichum oolentangiense*)
 Red-stalked aster (*Symphotrichum puniceum*)
 Silky aster (*Symphotrichum sericeum*)
 Arrow-leaved aster (*Symphotrichum urophyllum*)
 Tall meadow rue (*Thalictrum dasycarpum*)
 Early meadow rue (*Thalictrum dioicum*)
 Western spiderwort (*Tradescantia occidentalis*)
 Large-flowered bellwort (*Uvularia grandiflora*)
 Sessile-leaf bellwort (*Uvularia sessifolia*)
 Blue vervain (*Verbena hastata*)
 Hoary vervain (*Verbena stricta*)
 Ironweed (*Vernonia fasciculata*)
 Culver's root (*Veronicastrum virginicum*)
 Canada white violet (*Viola canadensis*)
 Blue marsh violet (*Viola cucullata*)
 Prairie violet (*Viola pedatifida*)
 Downy yellow violet (*Viola pubescens*)
 Arrow leaved violet (*Viola sagittata*)
 Downy blue violet (*Viola sororia*)
 Heart-leaved Alexander (*Zizia aptera*)
 Golden alexanders (*Zizia aurea*)

Grasses and Sedges

Big bluestem (*Andropogon gerardii*)
 Sweetgrass (*Anthoxanthum nitens*)
 Side oats grama (*Bouteloua curtipendula*)
 Blue grama (*Bouteloua gracilis*)
 Hairy grama (*Bouteloua hirsuta*)
 Fringed brome (*Bromus ciliatus*)
 Kalm's brome (*Bromus kalmii*)
 Blue joint grass (*Calamagrostis canadensis*)
 Prairie sandreed grass (*Calamovilfa longifolia*)
 Bebb's sedge (*Carex bebbii*)
 Plains oval sedge (*Carex brevior*)

Bottlebrush sedge (*Carex comosa*)
 Fringed sedge (*Carex crinita*)
 Dewey's sedge (*Carex deweyana*)
 Graceful sedge (*Carex gracillima*)
 Lake sedge (*Carex lacustris*)
 Hop sedge (*Carex lupulina*)
 Pennsylvania sedge (*Carex pennsylvanica*)
 Wood sedge (*Carex rosea*)
 Pointed broom sedge (*Carex scoparia*)
 Sprengel's sedge (*Carex sprengelii*)
 Stalk-grained sedge (*Carex stipata*)

Tussock sedge (*Carex stricta*)
 Fox sedge (*Carex vulpinoidea*)
 Poverty oats grass (*Danthonia spicata*)
 Spike rush (*Eleocharis ovata*)
 Canada wild rye (*Elymus canadensis*)
 Bottlebrush grass (*Elymus hystrix*)
 Slender wheatgrass (*Elymus trachycaulum*)
 Rattlesnake manna grass (*Glyceria canadensis*)
 Tall manna grass (*Glyceria grandis*)
 Fowl manna grass (*Glyceria striata*)
 Porcupine grass (*Hesperostipa spartea*)
 Soft rush (*Juncus effuses*)
 Greene's rush (*Juncus greenei*)
 Path rush (*Juncus tenuis*)
 June grass (*Koeleria macrantha*)

Wood rush (*Luzula accuminata*)
 Many-flowered wood rush (*Luzula multiflora*)
 Rough mountain rice (*Oryzopsis asperifolia*)
 Switch grass (*Panicum virgatum*)
 False melic grass (*Schizachne purpurascens*)
 Little bluestem (*Schizachyrium scoparium*)
 Hardstem bulrush (*Schoenoplectus acutus*)
 Three-square bulrush (*Schoenoplectus pungens*)
 Soft-stem bulrush (*Schoenoplectus tabernaemontani*)
 Green bulrush (*Scirpus atrovirens*)
 Wool grass (*Scirpus cyperinus*)
 River bulrush (*Scirpus fluviatilis*)
 Indian grass (*Sorghastrum nutans*)
 Cord grass (*Spartina pectinata*)
 Prairie dropseed (*Sporobolus heterolepis*)

H. Protective Fencing:

1. A protective fence will be installed to protect the planting from foot traffic and herbivory by deer, rabbits and geese. *(To be completed by Spring Lake Park Staff)*
2. The fence will be installed around the perimeter of the entire planting area.
3. The fence should be removed after approximately one growing season.

I. Management:

1. Management (maintenance) plays a vital role in the eventual success of any native landscape installation, especially during the establishment period. Active management of your native landscape is highly recommended to give the project the best opportunity for long term success.
2. During the germination year, the project area may need to be mowed to control annual weed development. If a “closed” canopy of weed cover develops, it should be mowed to aid in the growth of the prairie seedlings by reducing competition. Mowing may also be necessary if the weeds are about to set seed. Optimum cutting height, depending on the wildflower species present, is typically 4 to 6 inches. It is important that the clippings are finely mulched in order to prevent smothering. PRI can provide the mowing services if desired. Please refer to the cost section of this proposal for a mowing quote.
3. In years following the first growing season, Integrated Plant Management (IPM) services are utilized to control annual, biennial and perennial weed species within the developing native landscape. Typical IPM services include spot herbicide spraying, spot mowing, herbicide wicking or hand weeding. These services are billed on a per trip cost agreed upon prior to the growing season. Rough estimates are provided in the cost section of this proposal for these future management activities.
4. Prescribed burning is a highly effective management tool and may be recommended

for your project as it matures. Burning stimulates native species to grow more robustly and also help to deter the presence of many non-native and/or woody species. Prescribed burning, when recommended, will be provided as a separate lump sum cost.

- 5. In lieu of burning, or during years when the site is not burned, a Spring Dormant Mowing can be used to “clean up” previous year’s growth and set the table for the new growing season. This mowing would occur early in the spring, as soon as conditions permit. Spring Dormant Mowing, when recommended, will be provided as a separate lump sum cost.

J. Anticipated Management:

The following table conveys the anticipated management procedures for your project during the first 3 growing seasons. Estimates for these procedures are provided in the cost section of this proposal.

Year	Projected Management Procedures
1	Complete site mowings to control annual weed canopy (2 or 3 mowings as needed). Project monitoring
2	Complete site mowing Integrated Plant Management (IPM) – includes spot spraying, spot mowing, wicking, hand weeding, and other techniques to control weeds and invasive species (3 to 4 visits are typical) Project monitoring
3	Spring burn to encourage native plant growth and to help deter the presence of non-native and woody species. Integrated Plant Management (IPM) – 3 to 4 visits are typical Project monitoring

K. Costs:

Project Installation:

Project set up and mobilization	\$2,337.00
Site preparation (<i>includes spraying, tillage, harrowing or raking</i>)	\$4,388.00
Seed and seeding as specified	\$2,720.00
Erosion blanket and coir logs as specified	\$12,335.00
Wildflower seedlings (<i>1,500 installed</i>)	\$6,308.00
Native Restoration Signs (<i>8 installed</i>)	\$320.00
Total	\$28,408.00

Vegetation Management*(IPM Estimates NOT included within Installation Quote):

Germination year management quote:

Complete site mowings as needed (*1 to 3 mowings are typical*).... **\$900/mowing**

Future Management Estimates:

Growing season 1 (<i>assumes 3 IPM visits</i>).....	\$3,000
Growing season 2 (<i>assumes 3 IPM visits</i>).....	\$3,000
Growing season 3 (<i>assumes 3 IPM visits</i>).....	\$2,500

Please note: The **Future Management Estimates** are meant to convey typical management costs for projects of similar size and characteristics. Prior to each growing season, you will receive a specified quote from your project manager detailing the recommended management strategies and associated costs for your project.

L. Contract:

If you accept the proposal as written and want to proceed with the project, please sign the contract below and return via mail or email (asoltau@prairieresto.com).

A 50% down payment is required at this time. Please return a copy of the signed contract, along with payment for 50% of the total project cost. The remainder of the contract will be billed upon completion.

Owner: _____ **Date:** _____

Signed: _____ **Title:** _____

Project: *Triangle Park, City of Spring Lake Park Install 2022*

Contract Value: *\$28,408.00*

Contractor: *Prairie Restorations, Inc.*

Signed: Aaron Soltau

Date: *9/14/2022*

– Restorationist/sales
Prairie Restorations, Inc.
31646 128th Street
Princeton, MN 55371

- M. Notes:** Please note that this proposal is valid for 2 month (from the date on the proposal). If the proposal is accepted after the 2-month period, PRI reserves the right to modify the proposal based on cost fluctuations and material availability.

Restoration outline prepared by Prairie Restorations, Inc. (PRI), Princeton, Minnesota