

Hennepin County Landowner Guide

for
Conserving
Natural
Resources

<i>Getting Started – Assess Your Land</i>	1
<i>Identifying and Protecting Natural Areas</i>	6
<i>Protecting and Establishing Prairies</i>	9
<i>Managing Forest and Woodland Areas</i>	13
<i>Plants that Need to be Controlled</i>	18
<i>Protecting Water Resources</i>	22
<i>Preserving Wetlands</i>	27
<i>Providing Habitat for Wildlife</i>	30
<i>Managing Pastures and Livestock</i>	34
<i>Maintaining Wells</i>	39
<i>Maintaining Septic Systems</i>	42
<i>Managing Your Waste</i>	46
<i>Resources</i>	51



This guide is intended to help landowners care for their land and the natural resources on their property. The guide recommends practices that can be implemented to protect and enhance natural systems. Each section also suggests resources and publications that offer additional, more specific information for each subject area.

This guide provides information regarding natural areas such as prairies, wetlands, water resources and woodlands. Information about the control of noxious weeds and invasive plants, management of pastures and livestock, maintenance of private wells and septic systems, care of wildlife habitat, and management of household wastes is also included. By promoting environmental stewardship, we hope to preserve and enhance the environment in Hennepin County for current and future generations.

This resource was produced by Hennepin County Environmental Services in partnership with the University of Minnesota Extension Service of Hennepin County.



Hennepin County
Environmental Services
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www.hennepin.us/landownerguide



Protecting and Establishing Prairies

North American prairies are one of the rarest ecosystems in the world – only one percent are still intact. By protecting existing prairies or choosing to establish a prairie, landowners can help restore natural heritage and promote ecological diversity.

Protect existing prairies

Pre-existing, remnant or pre-settlement prairies are quite rare in Hennepin County. If a landowner has an existing native prairie, care should be taken to preserve and maintain the prairie in its natural state.

If there are areas of weeds in a prairie, spot treatments for weeds and undesirable plants can be done after consulting with a prairie expert. Avoid plowing or spraying large sections of remnant prairies as this can seriously affect existing biological diversity.

Remnant prairies may be protected under conservation programs that place management restrictions on the land. These programs are the Conservation Reserve Program (CRP), Reinvest in Minnesota (RIM) or the Natural Resources Critical Habitat program (NRICH). If there is an existing prairie on CRP land on your property, contact the Natural Resources Conservation Service (NRCS) to identify any restrictions or management schedule. Contact Hennepin County for information about planted prairies on RIM or NRICH contracted lands.

Establish a prairie

Native prairie plants can be established on sites ranging in size from a small garden to hundreds of acres. Because of their hardiness, prairie plants are a good option on sites where other plants may not have been successful.

Establishing a prairie is an exciting and ever-changing process that requires an initial commitment of time and resources. It typically takes three to five years to establish a prairie. Once established, the prairie will require periodic maintenance, and you will be able to observe how the land changes subtly throughout the growing seasons and over the years.

There are several steps to establishing a prairie.

1. Select and assess your site

Assess the amount of moisture and light that the land receives, the soil type, the slope, drainage issues, and existing and adjacent vegetation. Prairie plants will grow best in areas that receive full sunlight most of the day. Be sure to identify any existing weeds or undesirable plants that will need to be reduced or eliminated.

2. Prepare the site

The goal of site preparation is to reduce weed competition before planting. Identify weed problems and, based on the weed species, decide if you will use an herbicide or a mechanical method, such as plowing or disking, or a combination of control methods to remove existing, unwanted vegetation (*See Plants that Need to be Controlled, pg. 18*).

3. Select your plants species

Choose plants that are suitable for the soil type and moisture and light conditions of your location. To ensure that your prairie is ecologically diverse, choose a minimum of 15 plant species. This should include five to seven different types of grass, of which two to three should be cool season varieties, and eight to ten wildflowers species. You can work with Hennepin County or a local nursery, landscaping professional or seed supplier to develop a seed mix for your site.

4. Seeding

You can seed the site once unwanted vegetation has been reduced or eliminated. Seeding can be done in the spring from mid-May to mid-June or in the fall from mid-October to when the ground freezes.

On smaller sites, seeds can be spread by hand and raked into the soil to a depth of 1/8 inch. For larger sites, seeds can be planted with a no-till drill or broadcasted with a seeder and then cultipacked.

In most cases watering should be avoided as it can be detrimental to the establishment of a drought-resistant prairie.

If the site has large existing weed populations, you may want to consider a two-step approach to planting in which wildflower species, the most expensive component of the seed mix, are added after weeds are under control. In the first few years, only seed prairie grasses and perform ongoing management of weeds with chemical and mechanical methods. Burn the prairie in the third year to further reduce weed populations. Native wildflower species can be seeded after burning once the weeds are under control.

General management steps for prairie establishment

YEAR 0	Site prep to remove perennial vegetation and reduce weed species.
YEAR 0 Fall	If good control of weeds and introduced species is attained, seed native grasses and flowers after Oct. 15. Mow during the year when required to prevent weeds from seeding.
YEAR 1 Spring / Summer	Seed grasses and flowers if not seeded the previous fall. Keep site mowed to a height of 6 inches throughout the year. Control weeds as needed.
YEAR 2 Spring	Mow to a height of 6 to 8 inches at least once when growth reaches 12 to 16 inches. Another mowing may be required in late summer to prevent weeds from producing seeds.
YEAR 3 April 15 to May 15	If plant residue is evident, burn or mow the area before growth begins. If forbs (flowers) were not planted for reasons of weed control in year one, plant them following the burn and drag or cultipack them in if broadcasting.
FUTURE YEARS	Spot treat perennial weeds. Burn or early mow every three to five years, or burn one-third of the site every year.

(excerpts from MN DNR brochure Establishing Prairie Grasses and Wildflowers)

5. Manage your prairie

Good weed control is especially important during the first five years to help prairie plants out-compete weeds. After the prairie is well-established, you will need to implement some ongoing management and control of noxious weeds and/or invasive plants.

Depending on the size of the site, weeds can be removed with an herbicide application, mechanical methods or with hand-pulling if the number of weeds is small.

Periodic burning or mowing can also be used to control unwanted plants. Burning or mowing is usually done in April and May. Fall burns can be beneficial to the establishment of wildflower species.

Before burning, be sure to obtain all necessary permits and follow local regulations. Check with your local fire station or city hall about necessary burn permits. Training on prescribed burns and equipment may be available through your local Minnesota DNR office.

For more information

- *A Quick Reference Guide to Earth-Friendly Home Landscaping* has information about incorporating native prairie plants and wildflowers into landscaping projects. Hennepin County Environmental Services. www.hennepin.us/sustainablelandscaping 612-348-3777
- *A Practical Guide to Prairie Reconstruction* Kurtz, Carl. University of Iowa Press Iowa City, Iowa. 2001.
- *Establishing prairie grasses and wildflowers* Minnesota Department of Natural Resources, St. Paul, Minnesota. files.dnr.state.mn.us/assistance/backyard/privatelandscaping/est-prairie-grasses-wildflowers.pdf
- *Going Native: A Prairie Restoration Handbook for Minnesota Landowners* Kilde, Rebecca. Minnesota Department of Natural Resources, St. Paul, Minnesota. 2000. files.dnr.state.mn.us/assistance/backyard/prairierestoration/goingnative.pdf
- *Landscaping with Native Plants of Minnesota* Steiner, Lynn M. Voyageur Press. Stillwater, Minnesota. 2005.
- *Native Plant Communities of Minnesota* (Field Guide Series) Minnesota Department of Natural Resources, St. Paul, Minnesota. 2005. www.dnr.state.mn.us/npc/index.html
- *Native Plants for Northern Gardens* Snyder, Leon C., Andersen Horticultural Library University of Minnesota, St. Paul, Minnesota. 1991.
- *The Tallgrass Restoration Handbook for Prairies, Savannas, and Woodlands* Packard, Stephen and Cornelia F. Mutel, Island Press, Washington, D.C. 1997.



Resources

Resources

- Hennepin County Environmental Services
www.hennepin.us/naturalresources
612-348-3777
Hennepin County provides a variety of information and technical assistance for managing your land.
- University of Minnesota Extension – Hennepin County
www.extension.umn.edu/county/hennepin
612-596-2110
The University of Minnesota Extension provides outreach for the University of Minnesota and delivers educational programs and technical assistance on a variety of land management topics.
- Minnesota Department of Agriculture
www.mda.state.mn.us
651-201-6000
- Minnesota Department of Natural Resources (DNR)
www.dnr.state.mn.us
651-296-6157
- USDA – Natural Resources Conservation Service (NRCS)
www.mn.nrcs.usda.gov
763-241-1150, ext. 3
- Minnesota's bookstore
www.minnesotasbookstore.com
Minnesota's bookstore sells a variety of publications from Minnesota state agencies including many of the publications listed in this guide.
- Midwest Plan Services
www.mwps.org
Midwest Plan Services, based out of Iowa State University, sells a variety of low-cost agricultural publications.

Books & publications

- *A Quick Reference Guide for Earth Friendly Home Landscaping*
Hennepin County Environmental Services.
www.hennepin.us/sustainablelandscaping
- *Beyond the suburbs – A landowner's guide to conservation management*
Preece, Kathleen. Minnesota Department of Natural Resources, St. Paul, Minnesota. 2001.
- *Guide to Rural Living*
University of Minnesota Extension, St. Paul, Minnesota. 2001.
www.extension.umn.//ruralliving
- *Living on Acreages*
Carroll, Natalie and Don Jones.
Midwest Plan Services, Ames, Iowa. 2006.
- *Small Scale/Small Field Conservation*
NRCS, Washington, D.C.
landcare.sc.egov.usda.gov



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