



**The City That Soars!**

## REQUEST FOR PLANNING COMMISSION ACTION

<b>Meeting Date</b>	May 22, 2012
<b>Agenda Item</b>	Workshop
<b>Title</b>	Ordinance amending the Falcon Heights code to regulate natural landscaping.
<b>Submitted By</b>	Deborah Jones, Staff Liaison

<b>Description</b>	The Falcon Heights Environment Commission recommends adoption of an ordinance allowing and regulating varied landscaping styles in Falcon Heights, including prairie gardens, meadow gardens and rain gardens.
<b>Background</b>	<p>Fairview Avenue resident Todd Miller has approached the City about converting part of his yard to a prairie garden. Because the Falcon Heights city code does not address this kind of landscaping specifically (other than a restriction of grass height to six inches) and assumes that yards will be landscaped with traditional turf grass, and because there is potential for abuse and neighborhood disagreement with respect to non-traditional yards, staff suggested that Mr. Miller look for support from the Environment Commission and the City Council.</p> <p>The Environment Commission took up this discussion at the March, 2012, meeting, which Mr. Miller attended. In April, the Environment Commission developed a consensus to take an approach similar to the City of Minnetonka's ordinance: explicitly allowing these types of yards within limits, as long as they are well-maintained, but declining to impose an up-front permitting requirement as certain other cities have done. Environment Commissioners acknowledged that some public education would have to be undertaken by the city if this ordinance is adopted.</p> <p>Based on the Commission's changes to the Minnetonka model, the city attorney created a draft which was submitted to the City Council on May 9. The proposed ordinance provides a significant addition to Chapter 54 Vegetation and removes parts of the nuisance and blight ordinance in Chapter 22 that would now be covered by the new sections in Chapter 54.</p> <p>The City Council had concerns about neighborhood impacts from the proposed ordinance as written and decided to refer the matter to the Planning Commission for study and recommendation, with special attention to potential impacts on neighborhood character and implications for the comprehensive plan.</p>

<b>Budget Impact</b>	Unknown
<b>Attachment(s)</b>	<ul style="list-style-type: none"><li>• Falcon Heights City Code Chapter 54 Vegetation (existing)</li><li>• Draft Ordinance 12-0_ regulating prairie gardens and other natural landscaping.</li><li>• City of Minnetonka original ordinance used as a model by the Environment Commission.</li><li>• For comparison, native plant ordinance from the City of Golden Valley, which does require permitting for this type of landscaping.</li><li>• “Establishing and Maintaining a Prairie Garden” from the University of Minnesota Extension Service, provided for background information.</li></ul>
<b>Action(s) Requested</b>	<ul style="list-style-type: none"><li>• Discuss planning and zoning aspects of the proposed ordinance, especially possible neighborhood impacts and implications for the comprehensive plan</li><li>• Provide feedback and recommendations to the City Council</li></ul>

**ORDINANCE NO. 12-04**  
**CITY OF FALCON HEIGHTS**  
**RAMSEY COUNTY, MINNESOTA**

**AN ORDINANCE AMENDING CHAPTERS 22 AND 54 OF  
THE CITY CODE CONCERNING VEGETATION**

THE CITY COUNCIL OF FALCON HEIGHTS ORDAINS:

**SECTION 1.** Chapter 54 of the Falcon Heights City Code is amended by adding Section 54-41 to provide as follows:

**Sec. 54-41. Vegetation Maintenance.**

(1) Intent and Purpose. The city council finds that there are a variety of landscapes in the city that add diversity and richness to the quality of life. Certain areas in the city have been left, or allowed to go, unmaintained. These have been accepted by the vast majority of the city residents as appropriate and as part of the unique quality of life in this community. There are community expectations, however, that once an area has been disturbed, landscaped, or otherwise maintained, that area will continue to be maintained in a consistent manner. When vegetation in that area is not continually maintained, it becomes aesthetically unpleasing and violates community standards. Property that appears neglected may decrease the value of adjacent properties. In addition, if vegetation is not properly maintained, there may be the following adverse impacts on public health, safety, and welfare:

- a. undesirable vegetation such as common buckthorn, quackgrass, and other weeds may invade and threaten to supplant other more desirable vegetation;
- b. vegetation that causes allergic reactions, such as ragweed, may develop; and
- c. tall vegetation along driveways and public roads may impair visibility when entering or exiting public roads.

The city council also finds that it is in the public interest to allow citizens to choose the type of landscaping on their properties and to make changes in that vegetation. As a protection for the larger community, however, this change in vegetation must be properly managed and maintained and the length of the transition period must be minimized.

The council finds that the establishment of prairie and meadow plant communities is an acceptable landscape treatment in the city. This requires special consideration, however, because weeds will grow during the first few years of transition before the new vegetation predominates and will appear like neglect. Therefore, the council finds that this type of vegetation is acceptable if it is properly maintained to shorten the transition period and if notice is given of the intended result.

In contrast, the transition to trees and other woody species does not require special consideration because untended grass or weeds are not a necessary part of that transition period. Rather, the transition period is shortened by eliminating competition around the seedlings through such techniques as organic mulch.

The city council enacts this section to balance the public interest in a variety of vegetation with the public need to ensure proper maintenance of that vegetation. The council finds that establishing a height limitation for certain vegetation is in the best interest of the public health, safety, and welfare as outlined above and is a reasonable maintenance standard.

(2) Definitions. For purposes of this section the following words have the meanings specified below.

a. "Meadow vegetation" is grasses and flowering broad-leaf plants that are native to, or adapted to, the state of Minnesota, and that are commonly found in meadow and prairie plant communities, except weeds.

b. "Noxious weeds" are those plants so designated by the state of Minnesota under Minn. Stat. § 18.171, subd. 5.

c. "Regularly cut" means mowing or otherwise cutting the vegetation so that it does not exceed 6 inches in height.

d. "Turf grasses" are grasses commonly used in regularly cut lawn areas, such as bluegrass, fescue and rye grass blends, and non-woody vegetation interspersed with them.

e. "Weeds" include all noxious weeds, buffalobur, burdock, common cocklebur, jimsonweed, quackgrass, common and giant ragweed, and velvetleaf. Weeds also include anything that is horticulturally out of place. For example, a tree seedling is a weed in a vegetable garden. A property owner may establish that a plant or plants are not horticulturally out of place by providing a written landscape plan to the City for the area in question, complete with a listing and locations of plant species. The plants specifically listed above may not be included within the landscape plan. Vegetation that does not comply with this plan are weeds.

(3) Maintenance standard. The maintenance standard in this section applies to property that has been developed with a building as defined in the building code,

including vacant property combined with developed property for tax purposes, and a parcel of property that has been completely or partially disturbed by demolition, grading or other means in preparation for development or redevelopment.

a. All turf grasses and weeds must not exceed a height of 6 inches, measured from the base at ground level to the tip of each stalk, stem, blade, or leaf.

b. This requirement does not apply to the following:

(1) a wetland or floodplain designated in the zoning ordinance and wetland buffers voluntarily created by a private land owner when compatible with the character of the neighborhood;

(2) a drainage pond or ditch that stores or conveys stormwater;

(3) an area in which the land and vegetation appears not to have been graded, landscaped, mowed, or otherwise disturbed by human or mechanical means at any time. Determination of what constitutes this type of area will be based on a reasonable judgment of the present appearance of the area. The recent history of the area may be relevant to this determination; and

(4) an area established with meadow vegetation if:

(a) the prior vegetation is eliminated and the meadow vegetation is planted through transplanting or seed by human or mechanical means;

(b) the area is cut at least once per year to a height of no more than 6 inches;

(c) a sign is posted on the property in a location likely to be seen by the public, advising that a meadow or prairie is being established. This sign is required only if the meadow vegetation is in an area likely to be seen by the public. This sign must be in addition to any sign permitted by the sign ordinance but must be no smaller than ten inches square, no larger than one square foot, and no higher than three feet tall; and

(d) the area is set back a minimum of 10 feet from the street curb.

(4) Declaration of public nuisance. The following are public nuisances subject to abatement under this chapter:

a. noxious weeds; and

b. vegetation that does not meet the maintenance standard specified in paragraph 3 above.

**SECTION 2.** Subsection 22-19, Subdivision 4 of the Falcon Heights City Code is amended to provide as follows:

No owner agent or occupant of any premises shall permit upon his or her premises fallen trees, dead trees, tree limbs or items which are a fire hazard or otherwise detrimental to the health or appearance of the neighborhood.

**SECTION 3. Effective Date.** This ordinance shall take effect from and after its passage.

**ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2012, by the City Council of Falcon Heights, Minnesota.

CITY OF FALCON HEIGHTS

BY: \_\_\_\_\_  
Peter Lindstrom, Mayor

ATTEST:

\_\_\_\_\_  
Bart Fischer, City Administrator/Clerk

## Minnetonka Code of Ordinances

### **845.030. Special Provisions - Lawn Maintenance.**

1. Preamble. The city council finds that there are a variety of landscapes in the city that add diversity and a richness to the quality of life. Certain areas in the city have been left, or allowed to go, unmaintained. These have been accepted by the vast majority of the city residents as appropriate and as part of the unique quality of life in this community. There are community expectations, however, that once an area has been disturbed, landscaped, or otherwise maintained, that area will continue to be maintained in a consistent manner. When vegetation in that area is not continually maintained, it becomes aesthetically unpleasing and violates community standards. Property that appears neglected may decrease the value of adjacent properties. In addition, if vegetation is not properly maintained, there may be the following adverse impacts on public health, safety, and welfare:

- a. undesirable vegetation such as common buckthorn, quackgrass, and other weeds may invade and threaten to supplant other more desirable vegetation;
- b. vegetation that causes allergic reactions, such as ragweed, may develop; and
- c. tall vegetation along driveways and public roads may impair visibility when entering or exiting public roads.

The city council also finds that it is in the public interest to allow citizens to choose the type of landscaping on their properties and to make changes in that vegetation. As a protection for the larger community, however, this change in vegetation must be properly managed and maintained and the length of the transition period must be minimized.

The council finds that the establishment of prairie and meadow plant communities is an acceptable landscape treatment in the city. This requires special consideration, however, because weeds will grow during the first few years of transition before the new vegetation predominates and will appear like neglect. Therefore, the council finds that this type of vegetation is acceptable if it is properly maintained to shorten the transition period and if notice is given of the intended result.

In contrast, the transition to trees and other woody species does not require special consideration because untended grass or weeds are not a necessary part of that transition period. Rather, the transition period is shortened by eliminating competition around the seedlings through such techniques as organic mulch.

The city council enacts this ordinance to balance the public interest in a variety of vegetation with the public need to ensure proper maintenance of that vegetation. The council finds that establishing a height limitation for certain vegetation is in the best interest of the public health, safety, and welfare as outlined above and is a reasonable maintenance standard.

2. Definitions. For purposes of this section the following words have the meanings specified below.

- a. "Meadow vegetation" is grasses and flowering broad-leaf plants that are native to, or adapted to, the state of Minnesota, and that are commonly found in meadow and prairie plant communities, except weeds.
- b. "Noxious weeds" are those plants so designated by the state of Minnesota under Minn. Stat. §

18.171, subd. 5.

c. “Regularly cut” means mowing or otherwise cutting the vegetation so that it does not exceed 10 inches in height.

d. “Turf grasses” are grasses commonly used in regularly cut lawn areas, such as bluegrass, fescue and rye grass blends, and non-woody vegetation interspersed with them.

e. “Weeds” include all noxious weeds, buffalobur, burdock, common cocklebur, crabgrass, dandelions, jimsonweed, quackgrass, common and giant ragweed, field sandbur, velvetleaf, and wild sunflower. Weeds also include anything that is horticulturally out of place. For example, a tree seedling is a weed in a vegetable garden. A property owner may establish that a plant or plants are not horticulturally out of place by providing a written landscape plan for the area in question, complete with a listing and locations of plant species. The plants specifically listed above may not be included within the landscape plan. Vegetation that does not comply with this plan are weeds.

3. Maintenance standard. The maintenance standard in this section applies to property that has been developed with a building as defined in the building code, including vacant property combined with developed property for tax purposes, and a parcel of property that has been completely or partially disturbed by demolition, grading or other means in preparation for development or redevelopment.

a. All turf grasses and weeds must not exceed a height of 10 inches, measured from the base at ground level to the tip of each stalk, stem, blade, or leaf.

b. This requirement does not apply to the following:

(1) a wetland or floodplain designated in the zoning ordinance and required wetland buffers or those voluntarily created by a private land owner when compatible with the character of the neighborhood and the intent of the wetland ordinance, Section 300.23;

(2) a drainage pond or ditch that stores or conveys stormwater;

(3) a pasture that is (a) currently being used only for the exercise or feeding of domestic hoofed animals, (b) physically surrounded by a permanent fence that separates the pasture from property used for other purposes, (c) at least one-half acre in size, and (d) undeveloped with any habitable buildings;

(4) an area in which the land and vegetation appears not to have been graded, landscaped, mowed, or otherwise disturbed by human or mechanical means at any time. Determination of what constitutes this type of area will be based on a reasonable judgment of the present appearance of the area. The recent history of the area may be relevant to this determination; and

(5) an area established with meadow vegetation if:

(a) the prior vegetation is eliminated and the meadow vegetation is planted through transplanting or seed by human or mechanical means;

(b) the area is cut at least once per year to a height of no more than 10 inches, if weeds cover more than 25 percent of the area; and

(c) a sign is posted on the property in a location likely to be seen by the public, advising that



a meadow or prairie is being established. This sign is required only if the meadow vegetation is in an area likely to be seen by the public. This sign must be in addition to any sign permitted by the sign ordinance but must be no smaller than ten inches square, no larger than one square foot, and no higher than three feet tall. The sign is no longer required when weeds cover 25 percent or less of the area.

4. Declaration of public nuisance. The following are public nuisances subject to abatement under this chapter:

- a. noxious weeds;
- b. vegetation that does not meet the maintenance standard specified in paragraph 3 above; and
- c. vegetation that violates the sight-distance standards in section 300.15, subd. 9(e) and section 300.28, subd. 20 of this code.

(Amended by Ord. #99-28, adopted November 8, 1999)

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## Section 10.51: Lawn Maintenance

### Subdivision 1. Purpose

The purpose of this Section is to establish minimum standards for lawn maintenance while recognizing that a variety of landscapes within a community adds diversity and richness to the quality of life for all residents. Turf grass lawns continue to be recognized as the dominant feature in the landscape; however, alternatives to this traditional type of lawn are recognized as important parts of a diverse and successful landscape.

### Subdivision 2. Definitions

- A. **Maintenance Plan:** A document submitted with an application for a Native Vegetation Permit demonstrating a precise course of maintenance for numerous individual plants in a landscape over months and seasons.
- B. **Native Vegetation:** Those indigenous trees, shrubs, wildflowers, grasses and other plants that have naturally adapted themselves to the climate and soils of the area but require cultivation and maintenance to remain viable.
- C. **Native Vegetation Permit:** A permit issued by the City pursuant to this Section allowing an owner or occupant to cultivate Native Vegetation upon his/her property, subject to the restrictions of this Section. A Native Vegetation Permit exempts an owner or occupant from Subdivision 3(C) of this Section.
- D. **Natural Habitat:** Specially uncultivated valued and sensitive habitat whereupon native vegetation exists in a pristine state and provides habitat for a variety of species native to the area. Such vegetation shall maintain itself in a stable condition with minimal human intervention.
- E. **Noxious Weeds:** An annual, biennial, or perennial plant designated by the MN Commissioner of Agriculture or the Council as injurious to public health, the environment, public roads, crops, livestock, or other property.
- F. **Rank Vegetation:** Uncultivated vegetation growing at a rapid rate due to unplanned, unintentional, or accidental circumstances.
- G. **Turf Grass:** Cultivated vegetation consisting of a highly maintained surface of dense grass underlain by a thick root system.
- H. **Weeds:** Unsuitable, unwanted, or uncultivated vegetation, often causing injury to the desired vegetation type.

**Subdivision 3. General Requirements**

- A. All lot areas not designated for buildings, pedestrian or vehicle, parking, recreation, and storage shall be provided with Turf Grass, Native Vegetation, or combined ground cover of cultivated vegetation, garden, hedges, trees, and shrubbery.
- B. No owner or occupant of any lot shall allow to grow any Noxious Weeds on any part or portion of said lot as designated by Minn. Stat. Sec. 18.78.
- C. No owner or occupant shall allow any Turf Grass, Weeds, Native Vegetation or Rank Vegetation to grow to a height greater than eight (8) inches on a majority of any lot or parcel of land.

**Subdivision 4. Exemptions**

- A. Vacant Land. The owner of vacant and unoccupied land consisting of a contiguous tract of one (1) acre or more is exempt from Subdivision 3(C) of this Section, provided that Weeds, Turf Grass, Native Vegetation, and Rank Vegetation thereon are cut twice annually. The first cutting shall not be later than June 1, and the second cutting shall be made between July 15 and September 15.
- B. Natural Habitat.
  - 1. All private lands designated by the Council as Natural Habitat shall be exempt from Subdivision 3(C) of this Section.
  - 2. All public lands designated in the City's Comprehensive Plan as Natural Habitat shall be exempt from Subdivision 3(C) of this Section.
- C. Native Vegetation.
  - 1. Native Vegetation Permit. Upon satisfaction and completion of all the requirements of this Section, the City Manager or designee shall approve all applications for a Native Vegetation Permit and issue such permit. A Native Vegetation Permit shall grant any property owner or occupant so interested the ability to cultivate Native Vegetation on his/her property and exempt the owner and occupant from the requirements of Subdivision 3(C) of this Section. A Native Vegetation Permit shall be valid for five (5) years from the date of approval. The City Manager or designee shall approve no Native Vegetation Permit for any owner or occupant having unresolved City code violations or administrative citations.
  - 2. Application. The Application for a Native Vegetation Permit and Renewal Application, which shall be provided by the City Manager or designee shall contain the following:

- a. Statement of intent and purpose in cultivating Native Vegetation;
  - b. Site plan showing lot lines, buildings, location of proposed Native Vegetation, the property's legal description, corner visibility requirements as defined by Section 7.04 of City Code, and right-of-way requirements as defined by Section 7.05 of City Code.
  - c. Latin and common names of the species the property owner or occupant plans to cultivate;
  - d. Maintenance requirements for said species;
  - e. Name and address of a Professional Landscaping Company which has been hired to perform maintenance on the Native Vegetation; or the name, address, and qualifications of the person(s) who will be responsible for maintenance of the Native Vegetation.
  - f. A Maintenance Plan, which shall contain the following:
    - 1.) Planting diagram showing the location and mature height of all specimens of Native Vegetation; and
    - 2.) Detailed information on the upkeep of each specimen; and
    - 3.) Details of any long-term maintenance required for the Native Vegetation.
3. Revocation. The City Manager or designee may regularly inspect any property holding a Native Vegetation Permit for compliance with the Maintenance Plan on file with the City for the property. For any property out of compliance with the Maintenance Plan, the City Manager or designee shall give notice to the holder of the Native Vegetation Permit by US Mail stating that the property must be in compliance with the Maintenance Plan within thirty (30) days. Should that period pass without action by the holder of the Native Vegetation Permit, the City Manager or designee shall:
- a. Revoke the Native Vegetation Permit;
  - b. Remove all improperly maintained Native Vegetation;
  - c. Declare the property ineligible for a Native Vegetation Permit, unless sold, for a period of two (2) years; and
  - d. Assess the property for all fees associated with inspection of the property and any removal of improperly maintained Native Vegetation in accordance with Subdivision 5 of this Section.

**Subdivision 5. Violations**

- A. On or before May 1 of each year, the Clerk shall publish once in the official newspaper a notice directing owners and occupants of property within the City to remove all Turf Grass, Weeds, Noxious Weeds, Rank Vegetation, and Native Vegetation not covered by a Native Vegetation Permit exceeding eight (8) inches in height. Said notice shall state that if such vegetation is not removed within ten (10) days after publication of said notice, it may be removed by the Weed Inspector or his/her designee at the expense of the property owner which may be assessed against the property in accordance with Minn. Stat. Sec. 429.101.

*Source: Ordinance No. 324, 2nd Series  
Effective Date: 3-25-05*

- B. The Weed Inspector or his/her designee shall, seven (7) days prior to removing any Turf Grass, Weeds, Noxious Weeds, Rank Vegetation, or and Native Vegetation not covered by a Native Vegetation Permit send by U.S. Mail a letter notifying the property owner of the upcoming removal and stating that unless such is removed in accordance with this Section, such shall be removed and the costs of removal shall be assessed against the property in accordance with Minn. Stat. Sect. 429.101. Notwithstanding the foregoing, any failure of the Weed Inspector or his/her designee to send such a letter or for such a letter to be received by the property owner shall not make notice ineffective. For properties for which there have been two (2) or more notices issued within the prior twelve (12) month period, a mailed notice is not required. For those properties, the second notice issued within a twelve (12) month period shall contain a general notice that the City may abate future violations without providing additional specific notice of violation.

*Source: Ordinance No. 407, 2nd Series  
Effective Date: 8-29-08*

- C. Property owners shall be notified by U.S. Mail immediately thereafter of any work performed and all administrative and removal work costs involved and that such will be assessed against the property. The Weed Inspector or his/her designee shall keep a record of all properties whereupon removal was necessary and the number of times it was necessary, and, by October 1 of each year, he/she shall give copies of such records to the Clerk to file as special assessments against each said property which shall become liens on such lots or lands. This shall be an additional remedy and not in lieu of any other penalty provided for in City Code or state law.

*Source: Ordinance No. 324, 2nd Series  
Effective Date: 3-25-05*

# Establishing and Maintaining a Prairie Garden

**John F. Kyhl, graduate student, Entomology**  
**Mary H. Meyer, assistant professor, Horticulture**  
**Vera A. Krischik, assistant professor, Entomology**

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**NOTE: Figures only available in printed publication.**

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## Introduction

Over the last 150 years more than 99% of the midwestern tallgrass prairies were converted to homesteads, agricultural fields, cities, and highways. In recent years, however, interest in prairies has soared, since people realized the beauty of native grasses and wildflowers. Much of the charm and appeal of prairies comes from wildflowers, such as coneflowers, prairie phlox, false indigo, and orchids. The great beauty of prairie wildflowers and grasses has prompted many people to create prairie gardens in their landscapes. People find prairie gardens attractive, as do many types of birds, butterflies, and other native wildlife. Over the years, prairie gardens may take less time and expense to maintain than conventional lawns, since they reduce the use of pesticides, fertilizers, and mowing.

Even though prairies aren't native to all regions, they can be created in most areas. Prairie management includes removal of weeds and volunteer woody plants that compete with prairie plants for water, light, and space.

## Contents:

- What is a prairie?
- Planting a prairie garden
  - Site selection
  - Site preparation
  - Plant selection
  - Seeds vs. plants
  - Planting dates
- Prairie maintenance
- For further information
- Sources of seeds, plants, and information for prairie plantings
- Table 1: Prairie Wildflowers and Grasses

# Planting a prairie garden

## 1. Site selection:

Prairie plants grow best in full sun and in open spaces. When selecting a site, look for areas with the maximum sun exposure with minimal root competition from trees. Ash, basswood, and maple trees provide more competition for prairie plants because they have many surface roots which compete for water and nutrients. Prairie plants often are more compatible with bur or white oak.

Knowing your soil type and surface drainage is quite important when selecting plants for your prairie. Native prairie soils vary greatly in composition, from dry, gravelly, sandy soils which hold little moisture to silty or heavy clay soils that can hold excessive water. Standing water on a site or water that does not drain from a 1' deep hole within 24 hours are indicators of wet and poorly drained soils. Knowing the soil drainage of your site is really more critical than taking a soil test which is typically done in planting a garden. Although you may have a soil test done, (soil test information is available from your county extension agent or from the University of Minnesota soil testing labs\*) it is not critical in establishing a successful prairie garden. Understanding the drainage and sun/shade exposure of your site is essential for selecting plants that thrive in your location.

Determine if there are weed ordinances in your city. These ordinances were originally designed to keep yards more attractive and to control the spread of noxious weeds by keeping lawns cut to a certain height. Ordinances vary from one city to another, so call your city government to find out the specifics on the weed ordinances in your community. Consider using some "elements of care" such as mowed edges, signs, bird houses, edging fences, etc., near your prairie to show the area is meant to be there.

Also, prairies can be fire hazards during dry weather. Leave at least 20 feet of conventional lawn or noncombustible surface between the prairie and buildings or any other combustible items.

## 2. Site preparation:

The first step in preparing the site for a prairie garden is removing all existing vegetation. If you try to scatter seeds or put young plants into existing vegetation, you will have a very low likelihood of success. Maximize your success by reducing the existing plant competition.

There are three commonly used procedures to establish a prairie in an existing lawn or area of other vegetation. The first method is to put a dark plastic sheet, tarp, or pieces of plywood over the grass for at least two months before you begin planting. This kills the grass, making it much easier to remove, although tough perennial weeds, such as thistles and quackgrass can survive. Once the vegetation is dead, till the area thoroughly. This

method often works best when begun in the summer or fall to prepare for a spring planting.

The second procedure is to turn the soil and cultivate the area every few weeks for a complete growing season. Turning the soil brings weed seeds to the surface, and cultivating kills the seeds that have germinated since the soil was last turned. Over time, many of the weed seeds present in the soil will germinate and die. If possible, till to a depth of 12" or more and rake the area to create a uniform fine seedbed.

A third method, and probably the most common method of establishment, involves using a nonselective herbicide containing the active ingredient glyphosate, such as Round Up® or Kleenup®, to kill all existing vegetation. As with all herbicides, be sure to read and follow all label directions. When the vegetation has died in about two weeks, till to a depth of 12" or more. If a slit seeder will be used, tilling may be eliminated and the now dead vegetation can be mowed to a 1"- 2" stubble. This dead mat of roots and sod may actually act as a mulch and prevent excessive weed growth.

### **3. Plant selection:**

Always select plants with the characteristics of your particular site in mind, because plants vary in their tolerance of light and moisture. Include grasses because they provide physical support, weed competition, protection for wildflowers, and a source of food and shelter for birds during the winter. Prairies typically consist of 60% - 80% grasses. A brief list of common prairie plants can be found in [Table 1](#). For a more complete list see Minnesota Extension Service publication [Plants in Prairie Communities \(FO-3238\)](#).

### **4. Seeds vs. plants:**

You can start a prairie from seeds or plants; each has its own benefits. Starting from seed is more economical, but it will take two to five years for the plants to reach full size. Plants are more expensive, but establish quickly and may flower the first year. Also, some species are available only as live plants. You can control placement of plants, and they can easily be planted anytime from spring through fall. "Prairie-in-a-can" mixes are available from a wide variety of sources, but often contain marginally hardy perennial and annual species that don't return in subsequent years. Better results may be achieved by using seed mixes created for your area by local seed dealers. Be sure that any seeds you purchase are packaged for the year that you will sow them.

### **5. Planting dates:**

The best time to direct sow seeds outdoors is after frost and before the heat of summer. For example, in central Minnesota this is between May 20th and June 20th, although seeds can be sown as soon as the soil can be worked. Dormant seeding in the fall, between mid-October and freezing, is another option.



**Even seed distribution** and **good seed-to-soil contact** are vital for successful seed germination. Broadcast seed by hand or use a spreader. For small seeds, mix with a bulking agent such as clean sand or dry sawdust for a more uniform seeding. Seed slowly and make passes from two different directions to cover the area completely. Flower seed can be concentrated in high-priority areas or spread evenly throughout the site. Many seeds are very small and should be spread thinly to achieve the best results. Seeding rates vary due to seed size and germination. As a general rule, use 1/2 lb. of grass seed per 1000 square feet, and 2 ounces of wildflower seed per 1000 square feet. More specific instructions on seeding rates can be obtained from the information provided when purchasing seeds.

Watering after seeding improves germination, but is not essential. Covering with a thin mulch of clean, weed-free straw prevents drying out, reduces exposure to wind and animals, and is important in preventing erosion on slopes. Grouping several plants of the same species together can make a showy display and can increase pollination and seed set.

## **Prairie Maintenance**

Your biggest task in the first few years of a prairie planting is **weed control**. Weeding, burning, and mowing are the most effective ways to control weeds.

In small areas, removing and cutting back weeds are the most efficient methods. The most challenging aspect of these tasks is distinguishing between prairie plants and weeds. If you aren't sure what a seedling is, wait a week and look again, but be sure to remove the suspected weeds before they flower and set seed. See references for obtaining the slide set, *Prairie Seeds and Seedling Identification* (EP-6725).

The best way to manage a large prairie is through the use of controlled burns. Fire promotes plant growth by keeping down competition from trees and weeds, and by recycling nutrients. Burning is not practical or possible in all situations, as in small lots or within the city limits. Check with your local fire department to see if burning is allowed, and to get the required permits. Burning in April or early May is most advantageous to warm-season prairie plants, because it reduces competition with weeds and the soil heats up more quickly. Most prairies have only portions burned yearly in a cycle where complete burning takes several years. This partial burning fosters survival of overwintering insects that are lying dormant in the form of eggs or cocoons. It also leaves food and shelter for birds. Though burning is quite effective, it is not recommended until at least the third year after planting.

Mowing and removing clippings is a good substitute for burning, particularly on smaller sites. If you start a prairie from seed, mowing is recommended during the first year to control weeds which grow more quickly than prairie plants. For the first few years, set the mower high (4" to 8") to avoid cutting desirable prairie plants. After 4 or 5 years, mowing once a year after the seeds have fallen, or preferably, in the early spring. Remove clippings to expose crowns for regrowth.

Prairie usually needs no herbicides, insecticides, or fertilizers. Dense prairie vegetation will discourage invading weeds although perennial grasses from adjacent turf can invade along the edges of the planting. The wildflowers will provide food for beneficial insects which will aid in controlling pest insect populations.

For additional help in establishing and maintaining your prairie, consult the references below as well as private landscaping companies and, in some midwestern states, the Department of Transportation. For your own enjoyment, take photos from of same spot, on the same dates, several times a year, for several years. This will show you how far your prairie garden has progressed. Note how it changes through the year, including new and different creatures that your garden has attracted. Don't be surprised to see butterflies and native birds like goldfinches. Enjoy the benefits of restoring part of the landscape to what it was not so long ago.

## **For further information**

Art, H. 1991. *The Wildflower Gardener's Guide: Midwest, Great Plains, and Canadian prairies edition*. Garden Way Publishing: Story Communications, Pownal, Vt.

Bohnen, J., and A. Hanchek. 1996. *Prairie Seeds and Seedling Identification*. MES Slide Set, University of Minnesota, St. Paul, Minn.

Daniels, S. 1995. *The Wild Lawn Handbook: alternatives to the traditional lawn*. MacMillan Co., N.Y.

Henderson, C.L. 1987. *Landscaping for Wildlife*. Minnesota Department of Natural Resources. St. Paul, Minn.

Madson, J., and F. Oberle. 1993. *Tallgrass Prairie*. Falcon Press Publishing Company, Inc. Helena, Mont.

Moyle J., and E. Moyle. 1977. *Northern Wildflowers, a guide to the Minnesota Region*. University of Minnesota Press. Minneapolis, Minn.

Peterson, R. T., and M. McKenny. 1968. *A Field Guide to Wildflowers*, Northeastern/North Central North America. Houghton Mifflin Company, Boston, Mass.

Robison, R., D. B. White and M. H. Meyer. 1995. *Plants in Prairie Communities*. FO-3238. Minnesota Extension Service, University of Minnesota, St. Paul, Minn.

Rock, H. 1971. *Prairie Propagation Handbook*. Wehr Nature Center, 5879 S. 92nd, St. Hales Corners, Wis.

Runkel, S. T., and D. M. Roosa. 1989. *Wildflowers of the Tallgrass Prairie*. Iowa State University. Ames, Ia.

Shirley, S. 1994. *Restoring the Tallgrass Prairie; an illustrated manual for Iowa and the Upper Midwest*. University of Iowa Press, Iowa City, Ia.

Smith, J. R., and B. Smith. 1980. *The Prairie Garden: 70 Native Plants You Can Grow in Town or Country*. The University of Wisconsin Press, Madison, Wis.

Smith, W. 1993. *Orchids of Minnesota*. Department of Natural Resources. St. Paul, Minn.

Van Breuggen, T. 1992. *Wildflowers, grasses, and other plants of the Northern Plains and Black Hills*, 4th edition. Fenske Printing Company, Rapid City, S. Dak.

Vance, F. R., J. L. Jowsey, and J. S. McLean. 1984. *Wildflowers of the Northern Great Plains*. University of Minnesota Press, St. Paul, Minn.

Weaver, J. E. 1954. *The North American Prairie*. Johnsen Publishing Company, Lincoln, Neb.

Wilson, J. 1992. *Landscaping with Wildflowers*. Houghton Mifflin Co., N.Y.

**Table 1. Prarie wildflowers and grasses.**

<b>Name</b>	<b>flower color</b>	<b>flowering date</b>	<b>height</b>
wild lupine ( <i>Lupinus perennis</i> )	blue	May - June	1-2'
purple coneflower ( <i>Echinacea purpurea</i> )	purple	June - Sept.	2-4'
meadow blazing star ( <i>Liatris pycnostachya</i> )	purple	Aug. - Sept.	2-4'
prairie phlox ( <i>Phlox pilosa</i> )	pink/purple	May - July	1-3'
blue false indigo ( <i>Baptisia australis</i> ) tralis)	blue	June - July	2-5'
butterfly weed ( <i>Asclepias tuberosa</i> )	orange-red	July - Aug.	1-2'
black-eyed Susan ( <i>Rudbeckia hirta</i> )	yellow	July - Aug.	2-3'
grey-headed coneflower ( <i>Ratibida pinnata</i> )	yellow	July - Sept.	3-6'
large-flowered beardtongue ( <i>Penstemon grandiflorus</i> )	pink/purple	May - June	2-3'
hoary puccoon ( <i>Lithospermum canescens</i> )	orange	May - June	1-2'
big bluestem ( <i>Andropogon gerardii</i> )	bronze; bluish stems	Aug. - Sept.	3-8'
little bluestem ( <i>Schizachyrium scoparium</i> )	white; bluish stems	Aug. - Sept.	2-4'
sideoats grama ( <i>Bouteloua curtipendula</i> )	orange-purple	July - Sept.	1-3'
Indian grass ( <i>Sorghastrum nutans</i> )	golden-brown	Aug. - Sept.	3-6'

\* Contact the University of Minnesota soil testing labs by phone at 612-625-3101, or by mail at 1529 Gortner Avenue, St. Paul, MN 55108.