With only 1/1,000 of 1 percent of Illinois' presettlement prairies remaining, many people opt to create their own.

Building a Large-Scale Prairie

Story By Tom Hintz
Photos BY Adele Hodde

Every generation of people, from the time of the hunters and gatherers to the present day, have been confronted with problems that threaten their everyday lives in one way or another.

These problems have always seemed insurmountable at first, but humans are blessed with superior intellect and a strong will to survive as a species. The issues of global warming, air pollution, soil erosion and water conservation are no longer a debate. These issues are now confronting us and threatening our survival and today's youth will have to address these problems—either proactively or confronting them at our door step.

One proactive approach is to reflect on how we manage our own property, whether we have a quarter acre lot or several thousand acres. Global warming, atmospheric carbon fixation, water conservation, air quality and soil erosion can be confronted right where you live with one action—planting a prairie. That simple statement sounds like a simple task, but it is not. This article will help get you started, and then you, too, can be part of the solution.

Re-created prairies where you live and work have many benefits to you and the environment. Most prairie plants are perennial, meaning that they continue to live and grow at their roots even while dormant in the winter months. Native perennial prairie plants have extensive root systems that can reach down deep into the soil, sometimes several feet, to provide the best erosion control known to man.

It is said that 85 percent of a prairie plant is below ground, meaning that the majority of the plant is roots. These roots absorb a tremendous amount of water, which helps filter water and improve water quality. Prairie plants also absorb carbon dioxide from the atmosphere and, through photosynthesis, produce sugars and more roots. As the years go by your prairie re-creation will absorb a tremendous amount of atmospheric carbon and release oxygen, improving the air we breathe and reducing the threat of global warming.

The old saying "there is more than one way to skin a cat," can be applied when planning a prairie re-creation.

Many different opinions exist on how to go about this task and there are many prairie success stories throughout

Benefits of a large-scale prairie restoration include erosion control, water conservation and countering global warming.

The vibrant, violet-blossomed ironweed (*Veronia* sp.) brightens a late-summer prairie planting.

the Prairie State. The main thing to remember is that there are several different soil types and several unique conditions to your land, and that no standard method exists.

Soil preparation is very important and will help jumpstart your prairie in the first growing season. Soil preparation also will help to prevent an outbreak of noxious weeds which are the enemy of all prairies. Some people simply mow real low, remove the clippings and apply herbicide, such as Roundup, to the grass.

Seed can be spread mechanically, by hand or with a hydro-seeder. Keep in mind that prairie plant seeds come in all different shapes, weights and sizes, so plan accordingly with your distribution method. Be careful not to sow too many of the same seeds in one spot, but evenly distribute the complement of seeds throughout the project area.

Jubilee College State Park, located 15 miles northwest of Peoria, has several areas of prairie restoration developed by Department of Natural Resources staff and members of the volunteer group the Prairie Dawgs. Several different seeding techniques have been employed there, including farming corn and soy bean crops for three to five years. Farming is an excellent way to rid an old fallow field of brome grass and other resilient weeds. Once the rotation of crops is done, the soil is ready for prairie plants.

Many opinions of when to plant your prairie recreation exist. Some say that a spring planting is best because the frequency of rain will provide enough moisture to help growth of prairie seedlings. Others say that a fall or winter planting is best because it mimics nature, when prairie plants naturally distribute their seeds. Many prairie plants need cold or cold-moist conditions to germinate. One thing is for certain, planting seed in the dry heat of the summer is not recommended because, although some seeds may go dormant, the majority will dry up and die.

Now that you have planted your prairie, you have to begin the most important and most time-consuming steps, stewardship. The biggest threats to your new prairie are weeds. Weeds are aggressive, unwanted and uninvited plants that tend to take over your prairie re-creation, forcing the native plants to die.

Many people hand pull or weed whack these plants as they sprout, but it takes a keen eye to know the difference between the good and bad plants. There are many field guides that would be a good resource for you in this task.

Be as careful as possible when walking or operating equipment in a new prairie planting. Prairie seedlings are very delicate at first, but as they mature they will become the strongest and most resilient plants in Illinois history.

Consider mowing portions of your prairie recreation to keep annual weeds controlled. Keep a watchful eye on the

Re-created prairies will attract a diversity of animals, especially where enhanced with nest boxes.

When flowering, the stout, 6-foot-tall rosinweed (*Silphium interfrifolium*, above) has a fragrant resin. Leaves of the native, perennial grass Canada rye (*Elymus canadensis*, right) are semi-evergreen.

weed populations and mow them about 1 foot off the ground when they are just about going to seed to kill both the developing seed head and the annual plant.

The use of herbicide is sometimes necessary. Many types of herbicides exist, with some more effective than others for weed control. Many weeds can be spot sprayed with the use of Roundup, which is sold over the counter at many hardware stores. Other herbicides require a license to apply or can only be sold or applied by a licensed applicator. The list of possible weeds is too long to mention. The best action is to be ready to research the plant and the latest control methods, and be vigilant.

Historical records show that Native Americans often used fire for hunting and land-clearing purposes. After thousands of years of this practice, and natural wild fires, prairies not only became fire-tolerant, they also became fire-dependent. Through years of experimentation and management, ecologists have found that fire is the best tool for management of prairie re-creations.

There is much debate on when, how and how often to burn. Many ecologists recommend burning prairie re-creations at least every three years. Depending on how big your prairie is, you may want to consider burning half or one-third at a time for insect conservation and natural cover for wildlife.

Prairies historically burned in autumn during "Indian Summer," but spring burns are common. All species of animals and plants must be considered when deciding which season to plan a burn. Spring burns benefit some winter resident birds that need unburned prairies for cover throughout the winter, and spring burns also kill off many annual weed seedlings. At times, fall burns can be difficult to conduct due to wet weather.

Illinois' remaining prairies are precious and a top conservation priority.

Whichever season you choose, know that prairie fires can be dangerous if conducted by inexperienced personnel.

Monitor the progress of the native plant populations before you start burning. Burning a new prairie recreation too soon can encourage weed growth, so many ecologists recommend waiting until the third full growing season to start the burning process. With time, you will find that many prairie plants are prolific and produce an abundant seed crop.

The health of a new prairie can be evaluated by the diversity of plants and how prolific those plants are. Thousands of different prairie plants exist, and the seeds of each are harvested and processed differently, thus you must not collect seeds too soon or too late. The outer covering of some prairie plants are hard and brittle and must be broken with a mallet or "stomped" on with your boots. Some plants, such as the mountain mint, have small, fragrant seeds, while other species, such as prairie dock, have very large seeds. Some seeds have unique fragrances, such as beard-tongue which smells like dirty feet.

While the opinions on how to re-create a prairie may differ, and creating a prairie where you live is admirable work, re-created prairies are nothing like the real thing. Unfortunately, Illinois' original prairies were almost wiped out and only small remnants remain to be studied for details on their ecological function.

One fact that none will argue: Illinois' remaining prairies are precious and must be a top conservation priority.

These last remaining remnants give us a small clue as to what life was like long ago before the plow, when Illinois truly was the Prairie State.

Tom Hintz is the site superintendent at Jubilee College State Park.