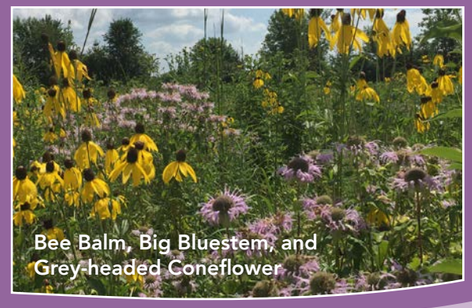
Wild Geranium

New England Aster



Bee Balm, Big Bluestem, and Grey-headed Coneflower

Benefits of NATIVE LANDSCAPING

Native plants are considered indigenous plants, here prior to European settlement. Even though Iowa's landscape has been drastically altered, native plants can be easily integrated into urban landscapes. Native plants are hardy and adapted to Iowa's fluctuations in seasonal temperatures, rainfall, and soils.

The roots of native plants can be five to ten feet deep. This helps improve soil quality over time and results in more rainfall infiltrating into soils, generating less stormwater runoff from urban surfaces.

Once established, native plants are aesthetically pleasing, require no irrigation or frequent mowing. This reduced maintenance can lead to significant cost savings when compared to labor-intensive formal gardens and turf grass lawns.

Another huge benefit of native landscaping is pollinator habitat. They attract songbirds, bees, dragonflies, butterflies, and other desirable pollinators. When planted around urban stormwater ponds, native landscaping can also reduce the problems associated with geese.

Native Gardens

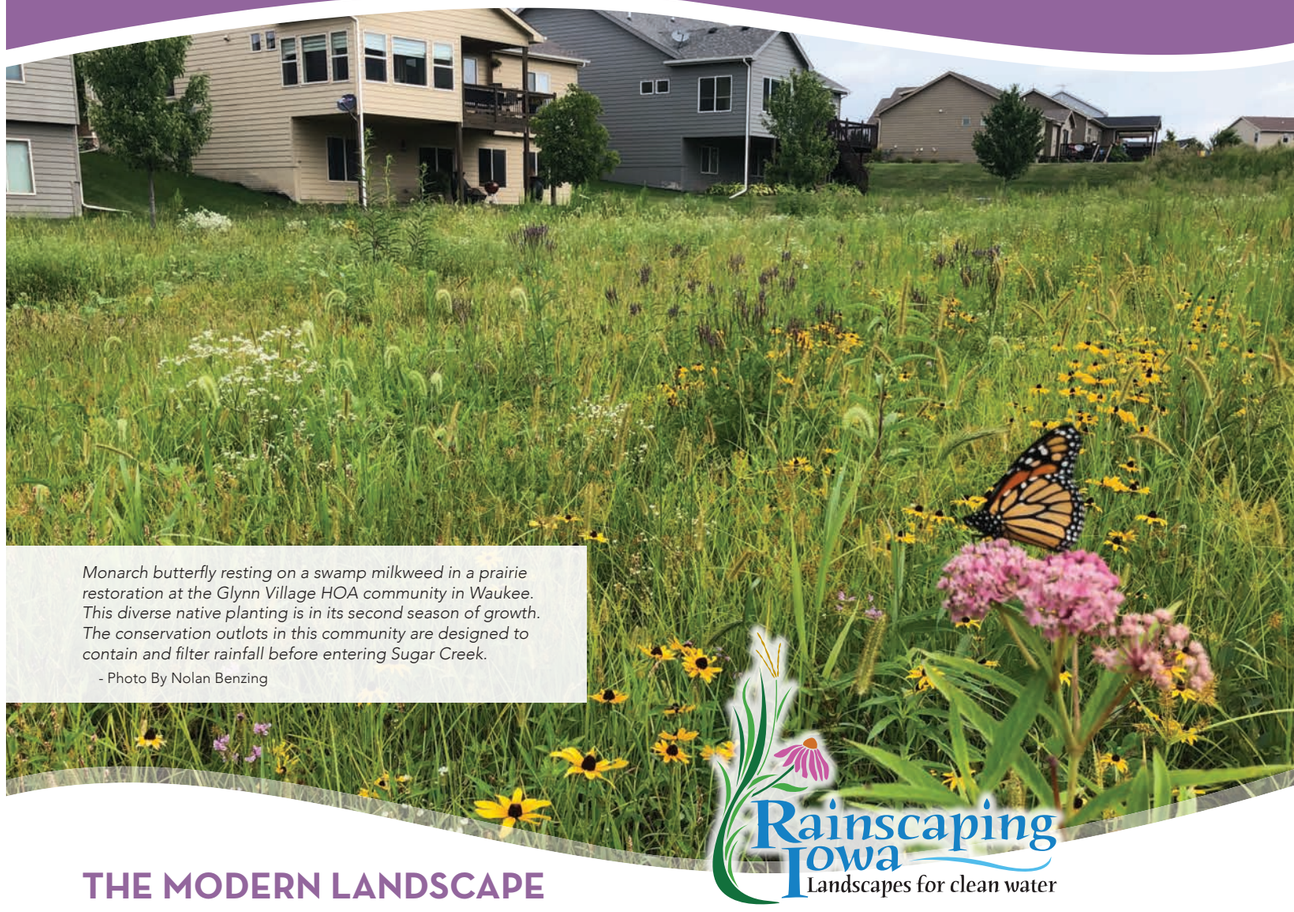
PLUGS, PLANTS, SEEDS

Use plugs or potted plants for faster establishment. Plugs are small, economical plants that require some nurturing until established. They will need to be watered regularly until the deep roots are established, at least through the first growing season.

Plants are available in pots that range from three inches to one gallon. They provide showy blooms in the first year. They will need to be watered periodically just after planting, especially during dry periods. Seeding is used when establishing native plants in large gardens and areas such as parks and corporate campuses. It isn't recommended in a small garden setting because it takes roughly three years for the plants to become established and showy. Seeded gardens appear more random and less groomed than traditional landscaping.

NATIVE LANDSCAPING

Integrating Iowa's Prairie Vegetation in Urban Areas



Monarch butterfly resting on a swamp milkweed in a prairie restoration at the Glynn Village HOA community in Waukee. This diverse native planting is in its second season of growth. The conservation outlots in this community are designed to contain and filter rainfall before entering Sugar Creek.

- Photo By Nolan Benzing

Rainscaping Iowa
Landscapes for clean water

THE MODERN LANDSCAPE SHEDS MORE RAIN

Iowa's historic landscape was dominated by tallgrass prairie vegetation with extensive root systems that helped form deep, rich soils. Prairie soils had high organic matter content and ample pore space between soil particles. These soil characteristics helped the prairie absorb and infiltrate most rainfall, while shedding little stormwater runoff.

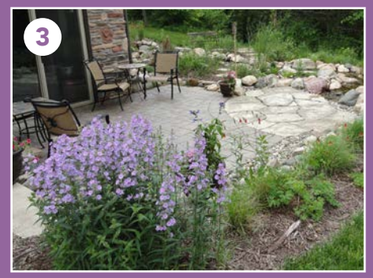
As the prairie was converted to agriculture and cities were established, the ability of Iowa's land to absorb and infiltrate rainfall decreased. Tillage-based practices reduced the organic matter content that had developed under the prairie, which gave the landscape the ability to act like a sponge.

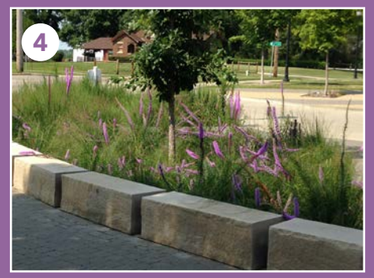
As organic matter declined, runoff increased. Modern soils also have less pore space for water storage, and less storage capacity means more runoff.

Urban landscapes have impervious surfaces, including streets, parking lots, and rooftops. In addition, urban soils have a high probability of having compacted soils due to grading activities. Impervious and compacted urban landscapes prevent infiltration of rainfall and increase the amount of runoff. Almost every rainfall in urban areas generates runoff that rapidly reaches streams causing stream corridor erosion and increased flood potential. As the runoff moves across the landscape it captures pollutants that may cause water quality problems.

Native Landscaping

IOWA'S PRAIRIE HERITAGE





1. Vintage Lake at Prairie Trail in Ankeny manages stormwater and is buffered by a native prairie planting.
2. Ames City Hall utilized native plants in their landscaping and stormwater features.
3. A backyard garden featuring native plants that provide a colorful display to the neighboring surroundings.
4. A mix of prairie plants are used in gardens at Central College in Pella.
5. Natives planted by a business along their sidewalk provides colorful interest and habitat.
6. Prairie reconstruction along Interstate 35 as part of Iowa's Living Roadways.

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May 2020

Learn More! **www.IowaStormwater.org/Rainscaping**

SELECTING SPECIES

Select species adapted to the soils, moisture conditions, and sunlight characteristics of a specific area. Open and sunny areas support a large variety of prairie plants, while shady sites are limited to woodland species. Consider placing native plants in wet areas or along steep slopes that are difficult to mow. Also, a strip could be placed on the downslope side of a yard to filter and soak up runoff from the lawn. Generally, it's best to select shorter species (three feet or less). Some native species grow to six or eight feet tall. In a smaller garden setting, some of the taller species flop over and become unsightly. Contact your community to find out if there are restrictions on plant heights and placement in the right of way if that is a desired location.

INSTALLATION & MAINTENANCE

Plants should typically be spaced about one foot apart. Kill off turf before planting using weighted tarps or a systemic, broad-spectrum herbicide. Till soils, plant, and then place two inches of mulch around the base of the plants and uniformly across the garden area. If using plugs, spread two inches of mulch first and then plant into the soil beneath the mulch. Mulch helps suppress weeds. Be prepared to weed until plants are fully established.

After establishment, maintenance will be minimal. Periodic weeding will be necessary. No fertilization is needed. Carefully selected herbicides may be needed for spot treatment of weeds. Remove dead vegetation each year by mowing, raking, or burning dead residue.

Small native prairie grass that will be planted in a garden.

Native Prairie Reconstruction

To reduce the costs of mowing large expanses of turf, such as a corporate campus, establish a diverse native planting using a mixture of native seeds. It will take roughly three years for the native planting to become fully established.

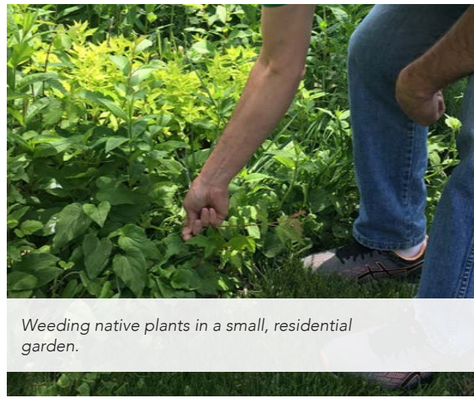
SITE PREPARATION

Mow the existing vegetation short. This vegetation must then be killed off prior to seeding natives. This is usually done using a systemic, broad-spectrum herbicide. Often multiple herbicide applications are needed over multiple growing seasons. When eliminating prior plantings, leave a border of turf. Maintaining a mowed border will provide a managed look to the landscape and will serve as a fire break for prescribed burn management. Broadcast or drill in the seed.

MANAGEMENT

Native plants spend the first two years developing roots. Annual weeds may dominate a new planting. Keep competing vegetation mowed to a height of six to eight inches, allowing sunlight to reach the smaller natives. By the third year the natives should start to flourish and out-compete most weeds.

Native landscaping reduces maintenance but is not maintenance-free. Certain activities need to be performed on an annual or semi-annual basis, including prescribed burning or grazing, spot treating, or mowing for weed control. Cut and stump-treat woody species. Excessive woody species will encroach if fire, mowing, or grazing management is not used. The result of these efforts is an attractive native prairie planting.



Weeding native plants in a small, residential garden.

Prescribed burns are used at Ada Hayden Park in Ames to maintain the prairie areas.