

Introduction

The demand for clean water is growing exponentially as supplies dwindle, so it has become increasingly more important for homeowners to manage and conserve rainfall on their properties.

You've seen heavy rain fall on your driveway, sidewalks, and yard. When it pools, it starts to flow downhill with increased velocity. This runoff can quickly cause flooding and erosion damage. You may also have noticed the poor quality of the runoff water which is due to the sediment, chemicals and other pollutants that are washed off bare soil areas and streets.

Have you ever wondered how you can more effectively control rainwater on your property? Sustainable landscaping emphasizes the capture and reuse of water from residential and commercial landscapes. Sustainable landscapes help manage runoff and provide beauty and value to your property. Basic design principles such as integrating well-adapted plants and working with the natural features of your yard can help enhance water quality, reduce water, chemical, and fertilizer usage, and even ease landscape management chores. Along the way, you'll probably also save money!

Prairie Crossing is a noteworthy residential subdivision in Illinois that has implemented many sustainable design principles.





1. Rain garden at the Iowa School for the Deaf.
 2. The landscape at the National Park Service Headquarters Office in Omaha is a good example of an Eastern Nebraska sustainable landscape.

What are Sustainable Landscapes?

Sustainable landscapes are those that nurture and preserve themselves over time and don't require any additional amounts of water, chemical fertilizers or pesticides. In the Omaha area, sustainable landscapes include rain gardens, bioswales and xeric gardens. They are typically constructed with plants native to Eastern Nebraska or plants adapted to this region.

Rain gardens are designed to manage stormwater in urban environments. They are built as shallow depressions in yards designed to collect runoff, maximize infiltration and channel excess water slowly to the nearest outlet. In addition, they are intended to be attractive amenities that can complement the landscape of your home and the community.

Similarly, bioswales are shallow depressions, but are open-ended to direct water in a more natural manner. Bioswales can be natural extensions of rain gardens, or part of your sustainable landscape.

Gardens not intended to collect or direct rainfall are called xeric gardens, and they are designed for drier parts of a yard. They filter rainwater where it falls and help conserve our water resources.

Omaha's Unique Environment and Prairie Heritage

Omaha and other communities in this region were built on grassland prairies and upland forests formed in deep, rich soils. We experience cold winters, very warm and sometimes dry summers, and typically wet springs. Intense thunderstorms and heavy rains are common in the spring, and rainfall is common throughout the summer and autumn.

We also have unique deep wind-blown soil known as "loess." Loess soil is characterized by high silt content and is easily eroded if not protected by deep-rooted plants. When left unprotected by vegetation, exposed loess soil erodes easily, especially in developed areas, and can have a significant impact on soil resources and public safety.



A bioswale along a residential street collects and filters stormwater runoff without curb and gutters.



Extensive erosion results when large amounts of stormwater runoff no longer infiltrates soils in urbanized developed areas.



Omaha's natural environment was formed by rich prairie vegetation and soils.

