A stormwater wetland is a man made management practice that provides a natural way to treat and remove pollutants from stormwater runoff before it enters a stream, river, or lake. As stormwater is captured in the wetland, pollutant removal is achieved through various mechanisms. Vegetation aids in this process helping to slow, settle and uptake nutrients through biochemical reactions.

**WHAT ARE STORMWATER WETLANDS?**
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**WHY INSTALL STORMWATER WETLANDS?**
Urbanized landscapes generate large quantities of stormwater runoff during rain storms. As stormwater flows off buildings and homes, into streets, down storm drains, and into local water bodies, it picks up pollutants that negatively affect water quality. Stormwater wetlands provide an opportunity to manage the quantity and quality of stormwater runoff from a large area of urban development. Without the use of stormwater wetlands or other stormwater management practices, polluted water would flow directly into water bodies.
STORMWATER WETLAND COMPONENTS

1 **Forebay:** Eroded soil is captured from incoming runoff before entering the wetland. Over time, buildup of eroded soils can be removed from the forebay allowing for easier maintenance. This prevents damage to the wetland and plants and increases overall longevity of the wetland.

2 **Microtopography:** A series of small berms and depressions designed to increase the distance water has to travel. This “stormwater maze” forces water to weave slowly through the wetland promoting pollutant removal.

3 **Areas of Shallow Water:** Varying depths of water promote plant growth allowing for biological uptake which helps remove pollutants.

4 **Pools:** Deep pools reduce the suspension of sediment, reduce thermal pollution, and increase habitat.

5 **Outlet:** A primary function of a stormwater wetland is to help slow down stormwater. Aligning with this goal, the outlet of the wetland is intentionally designed to release water slowly to improve downstream environmental conditions.
Ankeny is a leader in utilizing wetlands across their city to manage and treat stormwater runoff. Several wetlands were installed in the Prairie Trail Development as part of a stormwater treatment train. The wetlands slow down the runoff and remove pollutants before moving to the next stormwater structure. A wetland constructed adjacent to Fourmile Creek and north of 36th Street was built to address sediment and nutrients in the runoff from 55 acres which would have flowed untreated directly into the creek. These wetlands also provide habitat for a variety of wildlife species as well as educational opportunities for the public.