Allen Street Rain Gardens

Benefits in an Urban Environment

Rain gardens are small planted areas designed to absorb rainfall and runoff. The rain gardens on South Allen Street perform many functions beneficial in the urban environment of downtown State College:

- Allow stormwater to infiltrate the ground and recharge aquifers
- Filter pollutants and sediments
- Reduce water temperatures from seasonally hot surfaces such as asphalt and concrete
- Create an aesthetically pleasing natural environment and habitat for wildlife
- Educate the community on stormwater best management practices
- Mitigate negative impacts of urbanization and development on the Spring Creek Watershed

Rain Garden Plants

Rain garden plantings must be tolerant of wet and dry conditions that change rapidly in an urban environment. They allow water to infiltrate into the soil, provide a substrate for pollutants to be broken down, and evapotranspire fainfall back into the atmosphere. The plants were chosen for the rain gardens for their tolerance of periodic standing water, deep roots, potential to create habitat for wildlife, and aesthetically-pleasing characteristics.

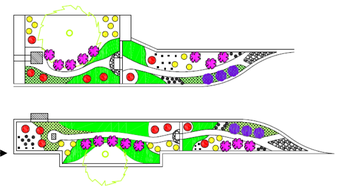
Catlins Giant Bugleweed (*Ajuga reptans)*
Heavy Metal Switchgrass (*Panicum virgatum*)
Elijah Blue Blue Fescue (*Festuca glauca*)
Variegated Lily Turf (*a muscari*)
Cardinal flower (*Lobelia cardinalis*)
Black-eyed Susan (*Rudbeckia hirta*)
Dragons Blood Sedum (*Sedum spurium*)
Artic Fire Dogwood (*Corus stolinfera*)

Public Works crews install the rain garden plants.

Design & Construction

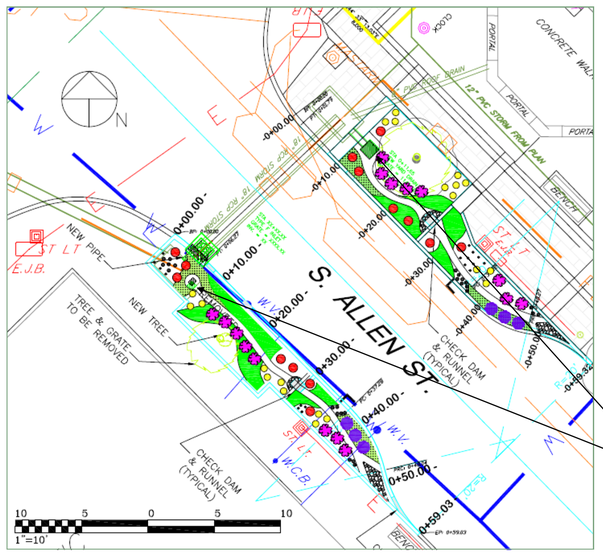
The Allen Street rain gardens were constructed in the summer of 2012 and are located on the west and east sides of South Allen Street, in front of Schlow Memorial Library and the Growing Tree.

The east side rain garden is 228 ft^2 and has a watershed area of 7,326 ft^2.
The west side rain garden is 143 ft^2 and has a watershed area of 34,729 ft^2 (.8 acres).



Theses rain garden drawings are based off work done by Penn State landscape architecture students in the spring of 2010. They designed a meandering path for water to run through the rain garden and gave a suggested list of plantings. Check dams are present in both to help slow runoff and allow for infiltration into the soil and yard inlet drains enable excess water to run into the storm sewer. A second storm drain was added to the entrance of the west side rain garden to prevent flooding from the high volume of runoff it receives (not shown).

The rain gardens were constructed with a layer rock, topsoil, and compost (totaling 2.5 ft deep) to enhance the infiltration potential.



Yard inlet drains

Educational Signs

Education panels were installed at each rain garden, focusing on the role rain gardens can play for stormwater management while helping to protect the Spring Creek Watershed. The panel on the west garden (above) has a children's section that fits nicely in front of the Growing Tree. We hope the rain gardens' central location will be a demonstration to the community of sustainable practices for handling stormwater. You can install rain gardens to control flooding, create a beautiful landscape, and allow for greater water absorption in your own yard.

Construction of the east rain garden.

The east rain garden right after completion.

The west rain garden during a rain event.