



Rain Gardens

*... a beautiful choice
for stormwater*



City of Lawrence, Kansas
Public Works
Stormwater Division

*For more information on
Rain Gardens, Rain Barrels
and other stormwater topics,
contact*

**City of Lawrence
Stormwater Division**

785-832-3136

or visit our website at
www.lawrenceks.org/stormwater



Rain Gardens are landscaped areas strategically located to intercept stormwater runoff. They are slight depressions in the landscape, either natural or excavated, that can be planted to wild flowers and other native vegetation. Rain gardens collect runoff from rooftops, driveways, lawns and parking lots and allow it to soak into the ground. Pollutants such as sediment, fertilizers, pesticides and even oil, grease and heavy metals from roads are trapped by the soil and root systems, allowing clean water to infiltrate the subsoil and recharge the groundwater.

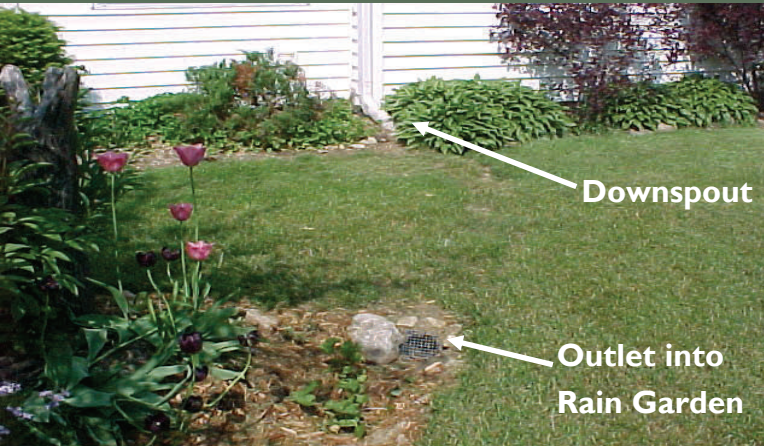


Compared to a conventional lawn, a rain garden can allow 30% more water to soak into the ground. Rain gardens are also wonderful habitat for wildlife and can be an attractive asset to any property.



Site Selection and Layout

- ◆ Locate an area where you can intercept runoff or a low area in your yard, but not where water stands for long periods.
- ◆ Consider directing downspouts to the garden area.



Source: Wisconsin Dept of Natural Resources

- ◆ Stay at least 10 to 15 feet from foundations to prevent water in basement.
- ◆ Likewise stay away from septic system lateral fields.
- ◆ Determine your property lines. Consider a side garden in cooperation with your neighbor.
- ◆ Avoid right of ways and underground utilities - call 811 for locates.

Construction

- ◆ Garden should be 2 to 8 inches deep with the average being 4 to 6 inches. If you have poor infiltration, make the area shallower to spread the water out over a larger area. Likewise, good infiltration allows for a deeper garden.
- ◆ The bottom of the garden should be flat with the sides sloping gradually towards it.
- ◆ Incorporate organic matter into the bottom to increase infiltration.
- ◆ Direct downspouts to the garden using swales or underground pipe.



- ◆ Where will overflow go during large storms? Do not change the general drainage pattern or affect neighboring properties.

- ◆ Avoid excavating under large trees. You do not want to disturb the roots and the trees may not tolerate the added water.

- ◆ Consider your existing landscape. How will you integrate your rain garden into the landscape?

- ◆ Full sun is best - most native species prefer at least ½ day of sun.

- ◆ Size according to roof area: garden area should be 15-20% of roof area in sandy soils, 20-30% of roof area in silty soils and 60% of roof area in clay soils.

- ◆ Infiltration is crucial. Water should only stand in a rain garden from a few hours to 2 or 3 days.

- ◆ Dig an 8" X 8" hole to test the infiltration. Fill the hole with a bucket of water. The water should go down at a rate of 1 inch per hour.

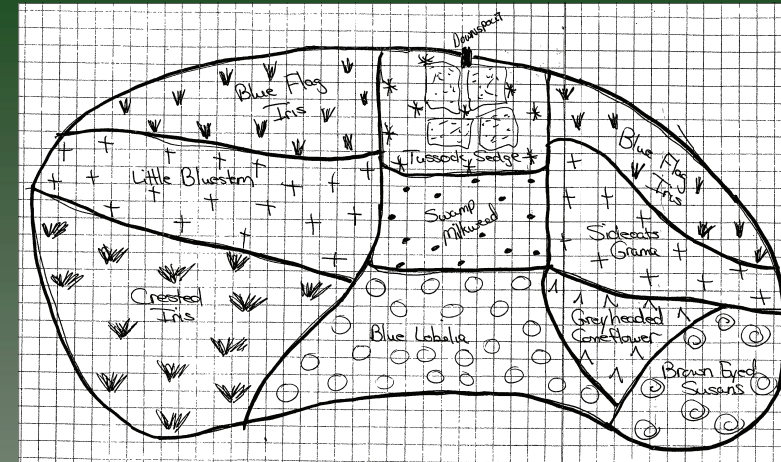


Yellow Coneflower



Blue Flag Iris

Design ~ Plant species ~ Number of plants



Planting

- ◆ Select plants that can withstand periods of water inundation followed by dry periods.
- ◆ Consider using native plants which are tough and will survive extremes in temperature and precipitation. They have deep root systems which allow for better infiltration. They also attract birds and other wildlife.



- ◆ Rain gardens contain 3 zones - very wet, wet to dry and dry. Plant accordingly and move if necessary.

- ◆ For a neater appearance, select low growing plants and keep edge neatly trimmed.

- ◆ It is okay to mulch just use coarsely shredded mulch that won't wash away.



Blue Lobelia



Maintenance

- ◆ Do not use fertilizer. Native plants do not require fertilizer and we are trying to remove possible pollutants, not add them!
- ◆ Weed and mulch as necessary.
- ◆ You may need a few strategically placed rocks to break the flow where water enters the garden.
- ◆ Do not park or drive on garden. Compaction will greatly decrease infiltration.
- ◆ Do not let soil, sand or debris flow into garden.
- ◆ Move plants as necessary to provide optimum growing conditions.



Marsh Milkweed

