## Rain Gardens

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## Rain Gardens

- Definition
- What a Rain Garden is NOT.
- Benefits
- Design
- New Berlin Project
- Why Native Plants?
- My "Why not? Lecture"



## **Rain Garden Definition**

• A rain garden is a planted depression that allows rainwater runoff from impervious urban areas like roofs, driveways, walkways, and compacted lawn areas the opportunity to be absorbed. This reduces rain runoff by allowing stormwater to soak into the ground (as opposed to flowing into storm drains and surface waters which causes erosion, water pollution, flooding, and diminished groundwater). Rain gardens can cut down on the amount of pollution reaching creeks and streams by up to 30%.

## Rain Garden Myths

- Rain gardens are not ponds or wetlands. It only holds water for 1-2 days after a rainfall event.
- A Rain Garden is not a breeding ground for Mosquitoes, which need 7-10 days in standing water to reproduce.

# Rain Garden Benefits (the fun part)

- Filter runoff pollution
- Recharge local groundwater
- Conserve water
- Improve water quality
- Protect rivers and streams
- Remove standing water in your yard
- Reduce mosquito breeding
- Survive drought seasons

## Rain Garden Benefits (the fun part II)

- Increase beneficial insects that eliminate pest insects
- Reduce potential of home flooding
- Create habitat for birds & butterflies
- Reduce garden maintenance
- Enhance sidewalk appeal
- Increase garden enjoyment

## Rain Garden Design

- Location
- Soils
- Plants



## **Rain Garden Location**

- At the end of downspouts, but not too near your house.
- Natural Swales
- Where water collects
- Edge of Parking Lots
- Beside Sidewalks
- Your Imagination

#### Rain Garden Location At the end of downspouts, but not too near your house.

- Divert Spoutings into Garden. Better yet divert your Rainbarrel overflow into garden.
- Keep 10 ft from house
- Make sure exit of garden is sloped away from house.
- Remember Septic, Utility Lines, etc



## Rain Garden Location Natural Swales

- Use natural swales or contours to carry water to Garden.
- Be careful to make sure you are not delivering too much water to your garden.



#### Rain Garden Location Where Water Collects

- Natural Wet Spots
- Where water lays after a storm event.
- Remember a Rain Garden is not a pond.



#### Rain Garden Location Impervious Surfaces



- Sidewalk Borders
- Parking Lot Borders
- Your Imagination



## Rain Garden Soils

- Perc Test?? Do we want that much work?
- Amended Soil
- Gravel Layer
- Drains



#### Rain Garden Soils Perc Test: Do we want that much work?

- Short Answer is NO...
- If we want it to work we can make it work.
- There are benefits in knowing the percolation rate, but we can work around slow rates.



## Rain Garden Soils Amended Soil

- Hundreds of Recipes, I like this one.
- VA Dept of Forestry.
  25% Compost / Leaf Litter
  25% Topsoil
  50% Sand



## Rain Garden Soils Gravel Layer

- Increases Infiltration Capacity
- Creates Voids to Trap Sediments
- The beginning of the "Why not? Lecture"



## Rain Garden Soils Drains

- Lets hope not.
- May be needed if you are capturing to much water.
- I would redesign before I would drain.



#### Rain Garden Plants Too many plants, not enough time

- Plants must be tolerant of water and drought. Remember these aren't ponds.
- Use Native Plants.
- Pick plants based on your design; butterflys, red-whiteblue, etc.





## New Berlin Rain Garden Project

- A project by the Lower Penns Creek Watershed Association (LPCWA)
- Install Three Rain Gardens near Ballfields in New Berlin Commons
- Targeting Three Erosion Problem Areas.





## Native Plants

- More Adapted to Soils and conditions in PA.
- Better Root structure to tolerate both dry and saturated conditions.
- Will not spread and become a nuisance.

## The "Why Not? Lecture

- Low Cost
- Low Tech
- Low Maintenance
- High Environmental Impact
- High Visual Appeal
- Highly Reproducible in Many Settings
- They're "Pretty"

### **Questions:**

#### My Disclaimer;

I am not an expert in horticulture, gardening, landscape design, well lets face it I am not an expert in anything.

I will try my best to answer any questions, but am not afraid to say "I have no idea"

## Questions

