Welcome to Gardens 101 - This slide presentation will introduce you to the basics of rain gardens. Most of the information comes from the Rain Garden Handbook for Western Washington and there is a link to the handbook at the end of the slides.

In this presentation, you will learn:
* What is a rain garden?
* Why are rain gardens important?
* Where to locate a rain garden
* Design & installation
* Appropriate plants
* Examples of rain gardens
* Links to further information
First of all - what exactly is a rain garden?

A rain garden is a landscaped area that collects, absorbs, and filters stormwater runoff from roof tops, driveways, patios, and other hard surfaces that don’t allow water to soak in. It’s a shallow depression divided into three zones and it will have an inflow and an overflow.
In order to understand how rain gardens work, we need to understand a little about stormwater. In undeveloped or rural areas or areas that have a lot of undisturbed vegetation, when it rains, stormwater is able to infiltrate into the ground. There is less than 1% surface runoff.
In developed areas where trees have been removed and replaced with impervious surfaces, stormwater is not able to infiltrate right into the ground and up to 20-30% of the stormwater ends up as surface runoff.
And this is what happens to runoff. It ends up in culverts and ditches and eventually into streams and lakes and Puget Sound.
What are some alternatives to deal with stormwater? One alternative is a rain garden which acts like the natural environment to infiltrate and treat the stormwater. Other options include expensive stormwater treatment systems like the one on the right that costs taxpayers millions of dollars.
Let’s say you decide to install a rain garden on your property. Where do you begin?
One of the first steps is to decide where to locate it.
But - before you can decide where to locate your rain garden, you need to know where you shouldn’t locate it. You shouldn’t locate your rain garden over a drainfield, well, utilities, within 10’ from a building, steep slopes or in areas that don’t drain well.
Your next step is to assess your property to determine the areas that will drain to your rain garden. Rooftops, driveways, patios and landscaped areas with compacted soils produce runoff that rain gardens can absorb and filter. The stormwater should flow naturally toward the rain garden and not need to be pumped.
After you’ve selected the location for your rain garden, your next step is to test the soil for the texture and soil drainage rate. This will tell you the size of your rain garden.
You will need to dig a hole about 2 feet deep and 1 to 2 feet wide. Fill the hole with 6-12 inches of water and time how long it takes for the water to drain out of the hole. This is your soil drainage rate in inches per hour.
Using the rain garden sizing chart in the handbook, determine the size of your rain garden. For example, if you live in Region 1 and you wanted a ponding depth of 6” and your drainage rate was between 0.25” and 0.49” per hour, your rain garden should be 10% of the amount of impervious surface you are treating.
Now you’re ready to design your rain garden.
Rain gardens are divided into 3 zones. Zone 1 is the bottom of the rain garden, the wettest area. Zone 2 covers the side slopes which may occasionally become wet. Zone 3 covers the area around the perimeter of the rain garden or berm where plants will grow in drier soil. Your rain garden can be round or kidney shaped or just about any shape that fits into your existing landscape.
This is an example of a sample planting plan taken from the Rain Garden Handbook for Western Washington. This plan shows a rain garden in the shade. Note the inflow and overflow as depicted by the blue arrows.
This is an example of a much larger rain garden for a sunny location. Note that in this case, there are 2 inflows. One inflow could be roof runoff, and the other could be from a driveway.
Now that you’ve selected the location of your rain garden and determined its size and shape, it’s time to start digging.
Dig a hole

Dig the hole 2 to 4 feet deep. It should be a shallow depression in roughly this shape.
Determine where your inflow and overflow will be located.
After your hole is the right size and shape, it’s time to fill it with your rain garden soil mix and cover that with about 3 inches of mulch such as arborist’s wood chips shredded or chipped hardwood or softwood.
Now you’re ready to plant your rain garden. The handbook contains a lot of information about plants suitable for rain gardens.
These are examples of plants for zone 1, the wettest area of your rain garden. Some good choices are rushes and sedges, plants that don’t mind being wet for extended periods of time.
In zone 2 you can plant a greater variety of plants. Some options are small shrubs, ferns, bulbs or groundcovers.
Since Zone 3 is the driest area, you can plant your choice of small trees, shrubs, groundcovers, ferns, and all sorts of annuals or perennials and blend it into your existing landscape.
Examples of rain gardens

The following slides show some examples of rain gardens.
These two examples show rain gardens located in the front yard of the homes. The rain garden on the left was planted with mostly grasses and small evergreens while the rain garden on the right has a lot of colorful flowers.
These are good examples of how different rain gardens can be designed. The one on the left is tear drop shaped and has mostly grasses and small shrubs. The rain garden on the right is oval shaped and full of colorful flowers. In both cases, you can see the rock lined overflow in the foreground.
These four slides show rain gardens used in commercial situations. The two slides on the left show rain gardens used to treat stormwater runoff from streets and sidewalks. The slides on the right show rain gardens treating roof runoff from commercial buildings.
The slides you have seen are just an introduction to rain gardens and rain garden design. If you have any questions about locating, designing, and installing your own rain garden please give us a call at either of the above numbers.