Digging Into Rain Gardens Script
approx. 35 minutes

From the *Wisconsin Rain Garden Educator's Kit,* April 2004
Produced by UW-Extension & Wisconsin Dept. of Natural Resources

---

Digging into Rain Gardens is designed to be an overview program given to groups who want an introduction to the topic. Since this kit is being sent to individuals with a variety of knowledge about rain gardens, keeping it basic will allow everyone to feel comfortable in presenting the material. We encourage you to add local interest and information. Depending on your knowledge of the topic, you may want to expand the script.

The *Value of Rain Gardens* program provides a more in-depth discussion of what is included in the first half of this presentation while the *How to Build a Rain Garden* program expands on the last portion of this presentation. These two slide shows share many of the same images and ideas as *Digging Into Rain Gardens*, but in an expanded format.

Many of the slides are designed to have script or a bullet be animated – coming in on a mouse click.

Anytime you see an asterisk (*), hit your mouse button for the next bullet/picture to come up.

Information in parentheses/italics is extra information for the presenter.

Rain garden-blue flowers	1. Welcome, I'm ____ and I'm here to talk to you about an exciting new idea for your home or business: rain gardens
Watertown billboard	2. It's a way we all can help protect one of our most important resources, water.
Grey lake	3. You know, as the children's song goes… * "Rain, rain go away." But the question is, where does it go?
Yellow flower bed	4. Well here it does go away, * soaking into this beautiful garden to become part of our groundwater.
Curved stream	5. Groundwater is important because it replenishes our streams, rivers, lakes and wetlands, and most of us get our drinking water from wells that tap into groundwater.

Four pictures: Culver springs, Dane County Close-up of spring water leaving the spring, Spring flow with Token Creek Wet prairie and fen Southern Kettle Moraine	6. Here groundwater is bubbling up from a spring, * With such volume * That it is the headwaters of Token Creek which is the most significant source of clean water to Dane County's Lake Mendota. * Groundwater is also critical to rare communities such as wet prairies and fens.
Road with grass clippings	7. However in most of our urban environments rain falls on roofs, roads, and parking lots – areas where it can't soak in.
Conservation subdivision photo	8. Gradually this impervious surface causes problems – not so much when communities are small or designed with storm water in mind. However,
Large city photo	9. As our urban areas increase, so do the problems.
Parking lot	10. Water moves quickly off paved areas…
Stormdrain with water running into it	11. And with it, it carries a smorgasbord of leaves, grass, soil, oils, fertilizer - all of which end up in our lakes and streams.
Six Mile Creek – sediment plume Madison	12. Urban runoff --along with runoff from rural sources-- causes major problems for our water resources.
Cobble bottom	13. The health of our waterways depends on clean water and places for animals to hide and find food. This is a cobble bottom stream-- a healthy stream that has a bed with clean sand, gravel or small rocks or cobbles, important habitat for
Rusty crayfish Mayfly	14. Crayfish and * insects, the base of the river food chain, providing food for fish and other animals.
Dead game fish	15. When too much soil or fertilizer gets into our rivers and lakes, it firsts covers the bottom with a blanket of sediment smothering the insects and fish eggs, destroying the home or habitat of many animals. Next this rich source of nutrients causes tremendous growth of nuisance weeds. Finally as the weeds die, bacteria, feeding on the dead matter, use up the oxygen in the water, which can lead to fish kills.
Storm water pipe – lots of water (done like a	16. Besides the pollution, an even bigger problem for our rivers and lakes is the tremendous <u>volume</u> of water that rushes off of our

water color)	roofs, roads, driveways and parking lots.
Flood below viaduct	17. Streams that once caused no problems now flood more and more often. Not only is that a problem for folks in the city--in agricultural areas near cities, farm fields that in the past only flooded occasionally and only in early spring, are now flooding every year and with every heavy rain.
Tree toppling: Lincoln Creek, Milwaukee 2000, flood crest three feet above normal. Original stream width was where the line of large rocks is.	18. Streams impacted by runoff that change dramatically in depth and force are called 'flashy'. Amazing amounts of water rush down the channel with incredible destructive power. The erosion shown here occurred over three days as several major storms hit an urban area. The line of large rocks is where the original stream edge was.
Two pictures concrete – channalized streams	19. Our response in the past was to 'control' these streams. The result is ugly and dangerous, kids have drowned in the fast water – and its no picnic to be a river critter trying to live here with too much water one minute and not enough the next.
Boats on pristine lake Algae in front of UW Hoofers Sailing Club dock - Madison	20. The impact of poor water quality is felt not only by the animals that live in the streams and lakes, but also by our economy. Water-based tourism brings in $12-$15 billion every year to Wisconsin's economy. * But when our waterways become choked with algae, it impacts boating, fishing, swimming…all those things that our tourist economy depends on.
Man fishing below Jefferson Dam	21. And what about you and me? Poor water quality effects our quality of life, our sense of who we are and where we live, our community gathering places and our enjoyment of the local resource. *[You may want to ask the audience: How many people do you think travel up north for good water recreation because they don't enjoy what's in their own backyard?]*
Blue graphic	22. For those of you who like numbers…In the growing urban area in Madison around Lakes Mendota and Monona, one large storm in 2000 caused significant flooding and property damage. Runoff volume was calculated at 5.6 billion gallons! With the amount of urban growth that is expected for this area, it is estimated that a similar storm in the year 2020 would result in a 57% increase in the amount of water flowing into the lake or 8.8 billion gallons! That is, if we don't put in good storm water control. What would this mean to Madison? The whole Isthmus where the Capitol is would be flooded and the locks separating the two lakes would likely be destroyed. Not to mention the property damage done to lakeside homes.

Home – traditional drainage	23. Here's one reason why we have this problem: When people build houses they design them to get rid of water as quickly as possible. Builders and developers use the principal of collecting water, concentrating the flow, and conveying it quickly off the property. While this protects the home, it ends up sending the problem downstream.
Detention basin and armored stream	24. We've tried to address this by building detention ponds to collect the water and send it downstream more slowly. But these engineered practices are expensive, frequently look ugly and can become full of algae.
Downspout and rain garden	25. Here's one solution that you can do – it's elegant in its simplicity. A slightly depressed garden full of native plants where rainwater can soak into the ground, replenishing groundwater and protecting our surface water.
Brown-eyed Susans and white fence	26. We call them rain gardens. * And they do help protect and restore natural hydrology, * allowing rainwater to soak in instead of running off. * They also help trap pollutants that might be in the runoff. Rain gardens aren't only for city folks. This is a rain garden between two sheds on a farm – They can be used anywhere the amount of water running across the ground is a problem.
Butterfly on asters	27. There are also other benefits to rain gardens – the native plants attract birds and butterflies.
Rain garden with sunflowers and liatris Same rain garden with frost from different viewpoint	28. They are attractive additions to property, enhancing the beauty of the neighborhood, *not only in summer but in winter too. The winter seed heads can be an appreciated food source for our winter songbirds.
Students planting a rain garden with camera crew	29. They're a great project for kids – teaching important lessons. Here the installation of a rain garden is being filmed for 'Into the Outdoors', a television show for kids.
Teens with shovels	30. And in Madison, Centro Hispano teens are involved in a service project installing a rain garden at a local church. *(Centro Hispano is a Hispanic support center, the students are involved in an after school program.)*

Bannerman rain garden	31. So what exactly is a rain garden? * It's a sunken garden, * Typically 4-6 inches deep with a flat bottom. * While any size does some good, they normally are about 1/3 of the size of what is draining to it – usually a roof, yard or driveway. * It can be wild or formal looking depending on the plants selected and the desires of the home owner.
Graphic of native prairie plant and grass	32. Perhaps you're asking yourself why native plants? * The roots of native wildflowers and prairie grasses typically go twice as deep into the ground as they are tall, while turf grass roots are the same depth as the grass is kept. Therefore natives absorb much more water *[One reason to keep your grass at least 2 ½ - 3 inches tall.]* * Uses no fertilizer * Uses little or no pesticides * Maintenance similar to perennial gardens * After establishment does not need watering
Pale purple cone flower and brown-eyed Susan's Columbine	33. Native plants are also beautiful individually, and as a community.
Wessel front garden	34. Let's take a trip through a few rain gardens. This recently planted shade garden was added to an existing planting of shrubs and hostas.
Close-up one year old plants	35. Here's a close up of another garden at the same home showing the one-year-old plants. This is the typical size most people use when planting their rain garden.
Bertolacini's brick edged	36. Here you can see a more formal approach and what the garden looks like before adding plants and mulch *(Madison)*
Brown eyed Susans – between sheds	37. A rain garden at this farm catches the water from both of these sheds. This garden was started from seed just one year earlier. *(Palmyra)*
New home with just planted rain garden	38. In this Cross Plains subdivision all homes are required to have a rain garden. You can see how this one has been integrated into the landscaping.
Willy Street Co-op with water Willy Street Co-op	39. The Willy Street Grocery Co-op in Madison has integrated a rain garden into their landscaping as well. This attractive addition absorbs rainwater from the roof and part of the parking lot.

small plants in bloom	
Four pictures – Scenic Drive -	*40.* Most houses have multiple downspouts. This house is in the process of installing four different gardens--one for each downspout. You can have a different look for each one! *(Madison)*
Salvage yard rain garden before… And after	41. And even in an industrial site a rain garden can be established – Because of the small area available for this rain garden, extensive engineering was required. These more highly designed and engineered rain gardens are often called bio-infiltration cells. At this auto salvage yard in Milwaukee, several feet of gravel was brought in before soil was added. The nice thing about this garden is that the water coming off the roof and into the garden is clean. Since it soaks in instead of running off, it doesn't pick up the oil, grease, and other pollutants from the salvage yard and carry them to the river as it used to. Here is the final product, a very nice addition to the business and the neighborhood. *(This rain garden was one of seventeen installed at auto salvage yards in Milwaukee. The project is part of a special Milwaukee Metropolitan Sewerage District project to reduce combined sewer overflows – installed by Partnership for Rain Gardens)*
Three volunteers Half finished garden showing bark mulch, and newspaper weed barrier	42. This large, 700 sq foot rain garden, at the UW-Extension Jefferson County office, is being installed by volunteers. In the lower photo you can see how the plants were laid out. Once planted the spaces between were covered with four layers of newspaper as a weed barrier and covered by a bark mulch which you can see in the upper picture.
Roadside rain garden --two pictures Maplewood, MN	43. Rain gardens can be installed in many places. The value for storm water control varies depending on the soil, terrain, size of yard and the amount of impervious surface draining to rain gardens. Very effective rain gardens can be installed where they receive water from parking lots or roads. In Maplewood MN, the city is installing rain gardens along roads if people agree to maintain them.
Family planting rain garden	44. Thank you, I hope you've enjoyed this trip through some area rain gardens and I hope this makes you want to dig your own rain garden. More help, including a how-to build a rain garden manual, is available at your UWEX or DNR office or on the web.