

A Rain Garden In Every Community: A Project of the Rock River Coalition

PROJECT SUMMARY

a) Organization: The Rock River Coalition (RRC) is a 501(3)(c) not-for-profit volunteer organization established in 1994. Its mission is to educate and bring together people of diverse interest to promote and improve the environmental, economic, recreational, cultural and historical resources in the Rock River Basins of Wisconsin. The Coalition's 300 members and volunteers are private citizens, civic, conservation and historic organizations, businesses, private industries, Chambers of Commerce, municipalities and local, state and federal agencies. Achievements include:

- 180 citizen volunteers monitoring basin streams and wetland restorations
- Twenty native shoreline restoration projects in city and county parks.
- Seven rain gardens established in partnership with community groups and schools.
- Published Environmental Action Resource Guide & Rural Development Policy Manual
- Hosted workshops on: conservation subdivisions, well abandonment, environmental grants, habitat restoration for rural non-ag homeowners, rural development, and groundwater concerns

b) Summary Statement: 'A Rain Garden in Every Community' will bring the concerns of storm water down to the individual or personal level.

The RRC demonstration rain gardens will be installed at schools or other community locations. We see these rain gardens as a key way to educate youth, adults and community leaders about the concerns of storm water runoff and groundwater recharge. Depending on the grant amount awarded, four to ten small to mid-sized communities will be selected for the project.

Education will involve curriculum units in the school, workshops for adults, and media coverage in papers, radio and cable.

The teachers will be trained on storm water concerns and teaching methods using materials such as the EPA Water Sourcebook, Illinois Rivers Guide, USGS Water Science for Schools, "Discover a Watershed" series and hands-on rain garden activities developed by local teachers.

A local consultant will work with the schools to establish a basic design and then work with the students to finalize the design and select plants. The students will help organize and run a workshop for community members on storm water and rain gardens.

PROJECT DESCRIPTION

a) Why

Storm water is one of the most critical environmental issues facing the Upper and Lower Rock River Basins in Wisconsin. More than twenty-five cities, towns and villages have or are in the process of obtaining a Storm Water Discharge Permit as required by EPA and Wisconsin statute NR 216. In 1998 a survey sent to 1600 people, followed by a Partnership Forum with a 180 participants, identified storm water and groundwater as two of the top ten issues facing the basin.

Over the past six years the Rock River Coalition (RRC) has worked with a storm water partnership team composed of consultants and staff from state Department of Natural Resource, city public works, city planning and county land conservation. Together they have identified critical needs regarding storm water. To that end they have hosted technical workshops for developers, consultants, agency staff and elected officials as well as workshops on conservation subdivision design and effective environmental grant writing.

One audience that the team feels is not being effectively reached are youth and the general public. One reason is the disconnect between a problem as large as storm water and the feeling that, I as an individual, can't do anything about it. Rain gardens pose an incredible opportunity to educate people about the issue of storm water while allowing people to take effective action to decrease their contribution to the problem. Each 300 square foot rain garden infiltrates 12,000 gallons a year enough to fill two and half tanker trucks.

In the Madison area, a number of organizations including the Rock River Coalition are working with individuals and community groups to establish rain gardens. The RRC has taken steps to bring this methodology out to the small villages and hamlets in the central part of the basin. Our Outreach Coordinator has worked to install rain gardens in a public park in Horicon, at a school in Hustisford, at a

Senior Citizen Center in Watertown, at the University of Wisconsin-Extension county office in Jefferson, at a church in Madison, at the Expo Center in Waukesha and at the airport in Middleton. Community volunteers and youth have been involved with the installation of these rain gardens. (Stars on map indicate location of these rain gardens). Many more communities haven't been, and need to be reached.

The results of a 2003 survey of residents in Madison, Wisconsin and its suburbs showed that people lacked knowledge about storm water, their contribution to storm water or what they could do to help. However, they also expressed a willingness to take actions including moving downspouts and establishing rain gardens if they knew how. The RRC can be a catalyst to help people take these actions.

The rain garden curriculum will also use the new Rain Garden Education Kit developed by Wisconsin DNR and UWEX, RRC workshop materials and *Rain Gardens: a how-to manual for homeowners* as well as the soon to be released technical standard for rain garden establishment.



Audience:

Based on eight rain gardens, Up to 16 middle and upper elementary teachers: 600 4-9th graders: 240 adults (general public): and 30 Master Gardeners will be directly involved with the project. In addition media releases will allow for broader education of the public.

Project methodology:

Teacher involvement: The Outreach Coordinator will contact 4-9th grade teachers in a diversity of locations within the basin to solicit interest. Then the appropriate number, based on the budget, will be selected are selected. Ms Rulseh will work with the schools, parks or public works departments to locate a site for the rain garden and to get administrative approvals. Depending on the size of the school and the age of the students, it is expected that this project will reach between 240 and 1600 students. After establishment, the rain garden will keep on teaching via permanent educational signs and additional curriculum. While the target is 6-9th grade, motivated teachers in other grades will also be considered.

Both RRC and UWEX have a long history of working with schools and will identify teachers from contact lists, as well as from the list of teachers who have completed the UW-Stevens Point Environmental Education Masters Degree Program. Media releases about the grant award will allow other teachers to learn of the project and how to contact us. If needed, contacts will be made with school principals in targeted communities regarding the program to locate teachers and encourage participation.

Community involvement: A key component of this project is the involvement of community groups. I funded for eight rain gardens, we expect to reach 160 community leaders who will help directly with the rain garden project and an additional 160 community members who will attend rain garden workshops. Based on past experience about one in five will either establish their own rain garden or will teach others about rain gardens, thus multiplying the impact of the “A rain garden in every community.”

Community group contacts will depend on which locations are chosen. The RRC has worked with many groups, such as lake associations, Rotary, Kiwanis, friends groups and Master Gardeners as well as various city and county departments throughout the basin. The Outreach Coordinator will talk with group leaders and make presentations about the project to enlist sponsorship and involvement.

Past partnerships similar to this project include: rain garden establishment; Jefferson County, LanDesign LLC, Partnership for Rain Gardens LLC, Dutch Designs LLC, Horicon Parks Department, Centro Hispano, St James Church, Hustisford Schools, Middleton Schools, Groundwater Guardians, Carroll College, Waukesha County, Department of Natural Resources, Watertown Senior Citizen Center: for natural shoreline restoration demonstrations; Wisconsin School for the Deaf, City of Delevan, City of Hartland, City

of Watertown, City of Middleton, Village of Fox Lake, Dodge County, Walworth County, Hartland Senior Citizen Center, Friends of Dodge County Parks.

c) How

Objectives 1: Teachers will have the skills and materials to teach about storm water and rain gardens.

Method: Storm water curriculum will be compiled from existing sources into integrated units appropriate for student grade levels. Teaching activities on rain gardens will be collected from local teachers and developed into a section on individual responsibility and methods of storm water controls. This unit will include importance, design, sizing, location, and plant selection. For future years it will include field laboratory research studies using the rain garden.

Objective 2: Schools or communities will install a rain garden to be used as a learning laboratory.

Method: The Outreach Coordinator will work with the school or community to locate an appropriate site for the rain garden. The school or community will agree to the project and provide resources for excavation, mulch, soil augmentation and plants. The plans developed by the rain garden designer will be agreed upon in principal, leaving the final design and plant selection up to the students.

Objective 3: Students in Grades 4-9 will be able to describe the concerns of storm water runoff in their community and the role that various control strategies play, including rain gardens, and will be able to design a rain garden, choose plants and help with installation.



Students at Hustisford Elementary help install a rain garden at their school.

Method: The teachers identified by the procedures described in b), will meet with project staff to be trained in the curriculum. Depending on timing, this will be done individually or with teachers from several schools. After the teacher has taught the initial portions of the unit, the RRC landscape architect will meet with the students and help them work through the design of their rain garden. She will have developed a general plan worked out with school officials and school maintenance staff. The students will be able to make some modifications and will select plants appropriate to the soil type and moisture. The students will do as much as practicable in the design and implementation of the rain garden. Our experience has been that once the school and teachers have experience with one rain garden, they are likely to look for opportunities at other community venues, which then become the basis for future lessons.

Objective 4: Community members will learn about rain gardens and the concerns of storm water and at least 20% of the participants will work to establish rain gardens at their home or other community locations.

The RRC, along with the school and community groups, will host workshops for the community. The students will participate in teaching workshop components, which may include: why rain gardens, selecting a site, sizing the garden and choosing plants. With more than 100 people participating in RRC rain garden workshops we have found offering both a late afternoon and an early evening workshop the most effective for reaching a broad audience.

Objective 5: Students will utilize the rain garden to do research on infiltration, learn about native plants and other lessons based on the teacher's objectives.

The rain garden will be a permanent part of the school landscape and an excellent school laboratory. The native plants will become an area to study for more than storm water as the native plants mature. Units will be included in the curriculum to use as the garden matures.

Who

Project Director: Suzanne Wade, University of Wisconsin-Extension Basin Educator for Natural Resources. Ms Wade has 30 years experience in curriculum development, teacher training, community development, evaluation and natural resources issue education. In addition to overseeing general management of the grant, she will oversee curriculum development and evaluation.

RRC Outreach Coordinator: Ellen Rulseh, will oversee all aspects of the project involving school and community contacts including but not limited to: making initial contact, working with school officials for approval, identifying teachers, enlisting the support of community groups, setting up and advertising community workshops, arranging for media coverage, establishing budgets for each site and implementing evaluation.

Project Consultants: The RRC currently works with Susan Priebe of Partnership for Rain Garden LLC and Margaret Burlingham of LanDesign LCC for rain garden design and establishment. Both have experience working with youth and community groups. Several teachers have expressed interest in working on the curriculum. If funded one will be selected to pull together and format the materials.

PROJECT EVALUATION

a) Measure project effectiveness: We will follow-up one year after a rain garden workshop to see whether participants are planning or have built the rain garden. We will also talk with local planning staff to see if they are receiving inquiries about rain gardens as part of an overall storm water plan for new subdivisions.

b) Project improvement: After the units have been taught teachers will be surveyed for their opinion on the quality of the educational units, whether resources were sufficient, what changes they would suggest, any adaptations that they made to the unit and what their plans and needs are for the future.

Other more subjective evaluations methods will also be used, including the number of calls area UW-Extension offices receive regarding rain gardens and storm water, the requests that we receive to give presentations on the project, and the number of other interested teachers that contact us.

BUDGET

The chart shows the cost for one rain garden and then if eight are funded. Since there are fixed costs, the price per rain garden goes down as the number installed goes up.

Activity	Funding request per rain garden	Funding request for eight rain gardens	Comments
Outreach Specialist 40 hours/rain garden @ \$19/hour	\$760	\$6,080	
Curriculum specialist 40 hours @ \$30	\$1,200	\$1,200	Cost is the same regardless of number of gardens
Landscape Consultant \$1,200/garden on average ((\$75/hr 24 hours including three with students and eight during implementation and workshops.)	\$1,800	\$14400	We can cut this portion and make it a requirement that the community funds half the cost for the consultant. This would cut \$900/rain garden from the budget
Mileage ~6 trips/ garden at 70 miles round trip average @ .405	\$170	\$1360	
Educational sign with frame	\$200	\$1600	
Office supplies, mailing, printing, phone,	\$400	\$400	These costs will be much the same regardless of the number of rain gardens installed
Services: insurance, bookkeeping, film development	\$63	\$500	
	\$4,593	\$25,540	

The cost of excavation and installation of the garden will be the responsibility of the schools or the community, with help from local community groups. Depending on funding we can require schools to fund half of the consultant costs – but that may make it much more difficult for some schools to participate. Both scenarios are listed below.

Other possible funding scenarios:

Four rain gardens = \$13,820	or \$10,220 if community picks up half the consultants cost
Eight rain gardens = \$25,540	or \$18,340 if community picks up half the consultants cost
Ten rain gardens = \$31,400	or \$22,400 if community picks up half the consultants cost

While this project is designed to be a Rock River Basin Project, if we are funded at a level above six, we would consider offering the program to other communities in the Southern District. Mileage may have to be adjusted for longer trips.