



RIVER

talk

UPCOMING EVENTS

SUMMER 2008

Annual Watershed Bus Tour

Our popular watershed tour returns for its fifth year! This year's theme is "Flood Response: On the Road to Drier Ground" and each stop on our tour will highlight an aspect of what is being done to protect our communities from flooding.

Our first stop will be a visit to the Des Plaines River Wetlands Demonstration Project. The site near Wadsworth, Illinois is a living laboratory designed to provide scientists the research opportunities necessary to study the function of wetlands. These controlled, experimental wetlands have been constructed where abandoned farm fields and gravel pits once stood.

After lunch (included), we'll visit the Village of Gurnee, Illinois and learn about their experiences as a community that has experienced significant, repeated flooding. Village Administrator James Hayner will tell us about Gurnee's program to purchase flood-prone prop-

erties and convert them to more appropriate uses. We'll learn how this benefits others along the river as well.

Our final stop will be the Village of Lincolnshire, which has achieved one of the highest ratings in the Community Rating System (CRS). The CRS level that a community receives impacts the flood insurance

rates that its residents will pay. Jennifer Hughes, Director of Public Works and Village Engineer, will discuss the village's flood response plan and how participation in the CRS program has benefitted the community.

Cost of the tour is just \$15 in advance (\$25 at the door), but is limited to 50 participants.

Following the watershed tour, we invite you to stay for UDPREP's annual meeting (below) which will feature a keynote speech from Donald Hey of The Wetlands Initiative.

DATE:

Wednesday, Oct. 8, 2008

TIME:

8:45 AM – 2:30 PM

COST:

\$ 15 (includes lunch)

LOCATION:

Meet in the remote parking lot (follow signs) at Lincolnshire Village Hall, One Olde Half Day Road, Lincolnshire, IL

RSVP:

By September 30, 2008

Use the enclosed reservation form



UDPREP President Patty Werner was one of many volunteers helping to install native plants during our recent Hands-on Rain Garden Installation Workshop.

See our special section on watershed friendly landscaping inside.



UDPREP's Annual Meeting

Each year UDPREP members and guests gather to celebrate our conservation successes and elect UDPREP officers. This year's annual meeting has been scheduled to coincide with our popular watershed bus tour (above). If you are unable to join us for the tour, you are still encouraged to attend the annual meeting.

The meeting will be held at Lincolnshire Village Hall, One Olde Half Day Road, Lincolnshire, IL 60069, 3:00-4:00 PM.

Our keynote speaker will be Donald Hey, Ph.D., president and co-founder of The Wetlands Initiative, Inc. He also is director of Wetlands Research, Inc., which manages the Des Plaines River Wetlands Demonstration Project near Wadsworth, Illinois, one of the nation's first large-scale wetland restoration projects.

Are you a member?

Your membership in UDPREP helps fund our efforts to preserve, protect, and enhance the Upper Des Plaines River watershed.

As a member, you'll enjoy many benefits including our newsletters, invitations to special events, and voting privileges at annual meetings.

If you would like to join us, or if your membership has lapsed, you can find our membership form on our website. Click on "Membership".

Watershed Friendly Landscaping

In pre-settlement times, rain water falling on the Upper Des Plaines River Watershed would infiltrate the soil and slowly percolate to the river's mainstem through a network of wetlands, streams, and groundwater systems.

As the population of our watershed has grown, so too has the amount of land covered with impervious surfaces like roads, parking lots, and walkways. Impervious surfaces do not allow stormwater to infiltrate the soil. Instead, stormwater washes across these surfaces into storm drains or directly into our local streams, ponds, and lakes. This stormwater runoff carries with it pollutants such as oil and other fluids that leak from cars and numerous harmful substances that collect on paved areas.

As wetlands and floodplains are lost and as impervious surfaces expand, the ecological and hydrological integrity of our watershed is seriously compromised. Major watershed challenges now include unstable stream flows, flooding, accelerated streambank erosion, and poor water quality.

Whether you own a parcel of land in the watershed or you are responsible for managing public property in our region, *you can make a difference in the health of our river*. In this special section of our newsletter, we've highlighted a few ways that you can help. We have additional information about these and other watershed friendly landscaping practices—including places where you can view examples of these practices in action—on our website. Check it out at: http://www.upperdesplainesriver.org/landscaping_home.htm

Rain Gardens

A rain garden is a shallow, landscaped depression planted with native flowering perennials and other native vegetation that is naturally adapted to wet conditions. Rain gardens are designed to receive and absorb stormwater runoff from impervious surfaces like driveways, sidewalks, parking lots, and rooftops.

Rain gardens allow stormwater to slowly soak into the ground, reducing the amount of runoff flowing into storm drains and surface waters like streams, rivers, and lakes. A rain garden built below a downspout on a typical quarter acre residential lot will reduce the annual runoff from that lot by 25 percent! ¹

Benefits

While an individual rain garden may seem like a small thing, collectively they can produce substantial neighborhood and environmental benefits, including:

- Increasing the amount of water that filters into the ground, which recharges local and regional aquifers;
- Helping protect communities from flooding and drainage problems;
- Helping protect streams and lakes from pollutants carried by urban stormwater – e.g. lawn fertilizers and pesticides, oil and other fluids that leak from cars, and numerous harmful substances that wash off roofs and paved areas;
- Enhancing the beauty of yards and neighborhoods;
- Providing valuable food and shelter for birds, butterflies, and many beneficial insects. ²

What About Mosquitoes?

Mosquitoes typically need 7 to 12 days to lay and hatch eggs. A properly installed rain garden will have standing water for no more than a few hours after most storms and will therefore not be a breeding ground for mosquitoes. Also, rain gardens attract dragonflies which eat mosquitoes! ³

Rain Barrels

Rain barrels are food-grade barrels (typically 60 to 75 gallons) installed below a downspout in order to collect and store rain water for future use. Multiple barrels can be linked together to increase storage capacity. Rain barrels can be used on residential, commercial, and industrial sites to manage rooftop runoff. ⁴

Benefits

Residential irrigation can account for 40% of domestic water consumption in a given municipality. Rain barrels not only store water, they help decrease demand during the sweltering summer months. Only 1/4 inch of rainfall runoff from the average roof will completely fill the typical barrel.

Collection of water from rooftop runoff can provide an ample supply of this free "soft water" containing no chlorine, lime or calcium and fewer sediments and dissolved salts than municipal water. Chlorine-free rain water helps maintain a healthy biotic community and is ideal for many applications including biodynamic and organic vegetable gardens and indoor tropical plants like ferns and orchids.

Water from a rain barrel can also be used for automobile washing and cleaning household windows.

Using a rain barrel reduces a property owner's demand for treated tap water, thereby saving money on monthly water bills. Rain water diversion also helps decrease the burden on water treatment facilities and municipal drainage systems during storms. The storage of rain water is also recommended for general emergency preparedness, or for areas prone to disasters or drought.

A rain barrel installed at a school or municipal building can serve as a helpful educational tool to teach the public about water conservation and runoff. ⁵

Installing a rain garden or replacing your asphalt walkway with permeable pavers may seem like a small thing, but collectively these individual choices can produce substantial neighborhood and watershed benefits. Together, we can use these practices to help address some of the gravest threats to the health of our river.

Bioswales

Bioswales go by many names—including vegetated swales, grassy swales, bioretention areas, and filter strips—and serve many functions depending on how they are engineered.

In their simplest forms, bioswales are linear rain gardens planted with native vegetation that receive and absorb stormwater runoff from impervious surfaces.

Bioswales are sometimes planted on a gentle slope so that runoff flows along the length of the swale, the vegetation slowing and filtering the water as it infiltrates the soil. Sloping bioswales may have check dams to help slow and detain the flow.

More complex bioswales (usually installed with underdrains and infiltration trenches) are used to manage and treat stormwater runoff from larger developments and parking lots. These bioswales are designed to filter pollutants, regulate flows, and increase infiltration.

Permeable hardscaping

Permeable hardscaping utilizes paving materials with spaces that allow stormwater to move through the driving or walking surface. Permeable hardscaping can replace asphalt and concrete and can be used for driveways, parking lots, and walkways. The three broad categories of permeable hardscaping are paving blocks; porous asphalt; and other surfaces including gravel, cobbles, wood, mulch, brick, and natural stone.⁶

Paving blocks

Paving blocks are cement or plastic grid systems with gaps between them. Paving blocks make the surface more rigid and gravel or grass planted inside the holes allows for infiltration (see photo).



Photo by Alison Cook

Porous asphalt

Porous asphalt has larger particles in the aggregate than traditional asphalt, allowing stormwater to infiltrate.

Other permeable surfaces

Gravel, cobbles, wood, and mulch also allow varying degrees of infiltration. Brick and natural stone arranged in a loose configuration allow for some infiltration through the gaps. Gravel and cobbles can be used as driveway material and wood and mulch can be used for walking trails. Porous concrete is another product that is being used to reduce stormwater runoff.

Funding for UDPREP's watershed friendly landscaping project provided by the Lake County Stormwater Management Commission's Watershed Management Assistance Grant Program.



Native Plant Landscaping

Native plants provide a beautiful, hardy, drought resistant, low maintenance landscape while benefiting the environment. Native plants, once established, save time and money by eliminating or significantly reducing the need for fertilizers, pesticides, water, and lawn maintenance equipment.

Native plants do not require fertilizers. Vast amounts of fertilizers are applied to lawns. Excess phosphorus and nitrogen (the main components of fertilizers) run off into lakes and rivers causing excess algae growth. This depletes oxygen in our waters, harms aquatic life, and interferes with recreational uses.

Native plants require fewer pesticides than lawns. Nationally, over 70 million pounds of pesticides are applied to lawns each year. Pesticides run off lawns and can contaminate rivers and lakes. People and pets in contact with chemically treated lawns can be exposed to pesticides.

Native plants require less water than lawns. The modern lawn requires significant amounts of water to thrive. In urban areas, lawn irrigation uses as much as 30% of the water consumption on the East Coast and up to 60% on the West Coast. The deep root systems of many native Midwestern plants increase the soil's capacity to store water. Native plants can significantly reduce water runoff and, consequently, flooding.

Native plants help reduce air pollution. Natural landscapes do not require mowing. Lawns, however, must be mowed regularly. Gas powered garden tools emit 5% of the nation's air pollution. Forty million lawnmowers consume 200 million gallons of gasoline per year. One gas-powered lawnmower emits 11 times the air pollution of a new car for each hour of operation. Excessive carbon from the burning of fossil fuels contributes to global warming. Native plants sequester, or remove, carbon from the air.

Native plants provide shelter and food for wildlife. Native plants attract a variety of birds, butterflies, and other wildlife by providing diverse habitats and food sources. Closely mowed lawns are of little use to most wildlife.

Native plants promote biodiversity and stewardship of our natural heritage. In the U.S., approximately 20 million acres of lawn are cultivated, covering more land than any single crop. Native plants are a part of our natural heritage. Natural landscaping is an opportunity to reestablish diverse native plants, thereby inviting the birds and butterflies back home.⁷

Sources

1. *Rain Gardens: A how-to manual for homeowners*, Wisconsin Department of Natural Resources
2. *ibid.*
3. *ibid.*
4. Low Impact Development Center
5. Lake County Soil and Water Conservation District
6. Stormwater Manager's Resource Center and *Conservation Development in Practice*, The Nature Conservancy, Chicago Wilderness, and The Conservation Design Forum
7. U.S. Environmental Protection Agency

Summer Events Highlights

HANDS-ON RAIN GARDEN INSTALLATION WORKSHOP

Rain gardens play an important role in the Upper Des Plaines River Watershed. They help reduce water pollution, reduce flooding, and increase groundwater recharge.

The goal of this workshop was to encourage public and private landowners to install rain gardens on their own property by providing them with a hands-on opportunity to learn how to design, install, and maintain a rain garden.

The new rain garden was constructed on the grounds of the Forest Lake Community Center in Ela Township, Illinois. The location was selected for its high visibility and the community's enthusiasm and interest in rain gardens.

On Saturday June 7, 2008, eager volunteers helped UDPREP plant nearly 900 native plants and grasses in the new rain garden. The garden has since grown very well as a result of wet weather in June and early July. In addition to capturing and filtering runoff from the nearby roof and parking lot, the garden provides a kaleidoscope of color throughout the summer. The photo on the right shows just two month's growth!

See more online:

www.upperdesplainesriver.org/events/2008_rain_garden_workshop.htm



UDPREP HAS A NEW COORDINATOR

Earlier this year, Alison Cook stepped down as UDPREP's coordinator after four years with us. Alison's knowledge, energy, and enthusiasm will be greatly missed. We wish her the best in her new pursuits!

In May, Jill Hughes accepted the position and is working to fill Alison's shoes. As coordinator, Jill handles the daily operations of our organization.

Jill can be reached at (847) 561-2294 or via email at coordinator@upperdesplainesriver.org

THANK YOU!

UDPREP would like to thank the following individuals and organizations who helped to make our recent Hands-on Rain Garden Installation Workshop a success:

Doug DeWitt, Tallgrass Restoration, LLC.
Forest Lake Community Association
Bill Kruckenberg, Ela Township Highway Department
Lydia Scott, Village of Lincolnshire
Chris Fisher, Village of Lincolnshire
Patty Werner, Lake Co. Stormwater Management Commission

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Oberweiler Foundation

\$500-\$999
Des Plaines River Association

\$200-\$499
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Chicago Community Trust
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Lake County Forest Preserve District

\$100-\$199
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Cook Family
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Jerry Kolar
Werner & Judith Neuman
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\$75-\$99
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Des Plaines River Watershed Alliance
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Village of Lincolnshire
Village of Maywood
Village of Paddock Lake
Village of Third Lake
Village of Vernon Hills

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Don Wilson
Jane Wittig

Upper Des Plaines River
Ecosystem Partnership
www.upperdesplainesriver.org



UDPREP works to preserve, protect, and enhance the Upper Des Plaines River Watershed through stakeholder education, collaboration, and technical assistance.

The Upper Des Plaines River Ecosystem Partnership is a 501(c)(3) nonprofit organization. Donations are tax deductible.