

Chicago Conservation Corps Speakers Bureau
Sustainable Backyards: Rain Barrels and Rain Gardens



Goals:

1. Understand the impact of stormwater on Chicago's water infrastructure.
2. Develop hands-on experience with rain barrels.
3. Provide referrals for rebates and resources.

Materials: rain barrel, downspout extender/elbow, native plant and bucket, *Managing Stormwater at Home*, *Plant a Rain Garden in your Yard*, *Rain Barrel Installation and Maintenance*,

KEY TERMS:

Stormwater Management

Combined Sewer Overflow

Downspout extender/elbow

Downspout Disconnection

Rain Barrel

Rain Garden

Native Plants

Step 1: Introductions

Time: 10 mins.

TIP: Remember to always introduce yourself, smile and make eye contact

1. **Introduce yourself and the goals of the presentation.**
2. **Develop a leading question.** This will help you get a sense for your audience and peak their interest.
Review the *Myth Busters* and *Fact's* for assistance.
 - Who has experienced a basement flood?
 - Who has seen big puddles on their street days after a storm?
 - Why are there so many jokes made about the color of the Chicago River?
3. **Group introductions:** Use these questions as an opportunity for group introductions.

Step 2: Overview

Time: 10 mins.

TIP: Use activities to increase understanding the issue- see Drop in the Bucket and Question and Answer Cards

THEME: Rain barrels conserve and protect water quality.

Big Picture Overview

- Of all the water on earth, only 2.75% is fresh water.
- Most fresh water is locked in glaciers: another portion is found in groundwater and aquifers.
- An even smaller percentage (.5%) is potable, which means it is fit for human consumption.
- Of the .5%, the Great Lakes contain 21% of the world's fresh water supply.
- Harvesting rainwater in urban environments is recognized as a valuable tool for conserving potable water and managing stormwater. (Source: US EPA)

Chicago Specific Overview (Point out the diagram in *Managing Stormwater at Home*)

- The Great Lakes are the largest fresh water reservoir in the world. Conservation is still important!
- Chicago, like many older cities, has an antiquated system called the **Combined Sewer System**, which combines stormwater with wastewater (everything that goes down any drain in homes and industries across the city) in one pipe.
- Under normal conditions, this mix of stormwater and wastewater is sent to the treatment plant before it is released into local waterways.
- During heavy rains, sewers can overflow, and this mix of stormwater and wastewater can be released into local waterways-primarily the Chicago River, without being treated.
- This sewer overload can also cause basement flooding, which can be a health risk (raw sewage/mold).
- Stormwater overload doesn't affect our drinking supply from Lake Michigan.
- Rain barrels, rain gardens, trees and permeable pavement are great tools for stormwater management.
- **Chicago Climate Action Plan** recognizes stormwater management as an important mitigation and adaptation strategy for reducing energy required to treat stormwater and reduce future flooding.

(Source: Chicago Department of Water Management and the Chicago Climate Action Plan)

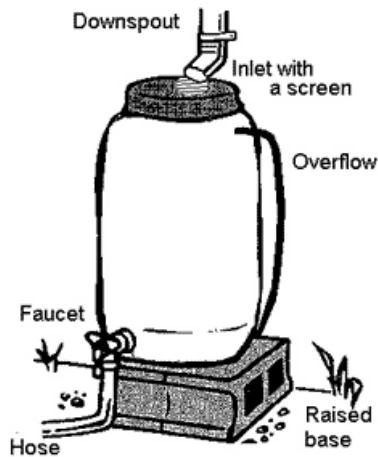
Questions?

Time: 5 mins.

Step 3: Rain Barrel Demonstration

Time: 15 mins.

TIP: Make sure to fill up the rain barrel before the presentation begins to ensure there is sufficient water to demonstrate how to access it through the tap. When finished, empty the barrel into the grass, not down the drain.



Barrel Essential Points

1. Choose a downspout site where water can be accessed easily and the ground slopes away from the house.
2. Make sure the base is surrounded by permeable ground or around native plants.
3. Set up a raised base (usually cinder blocks) and place the barrel upon it.
4. Measure the height of the extender/elbow.
5. Measure the height of the raised base.
6. Make an 8" gap between the barrel lid and the elbow.
7. Attach the elbow to the downspout with screws.
8. Position the elbow over the barrel and secure with a bracket.
9. Attach a hose to the over-flow spout and position into the grass (optional). Your barrel will overflow, but it can be managed.
10. Make sure the ON/OFF switch is in the OFF position until ready for use.

TIP: Invite the audience to participate. Have participants hold the downspout, pour the water and turn on the tap.

Tips for avoiding insects

1. Ensure the screen is without holes.
2. Add a small amount of mineral oil to the water.
3. Use the water.

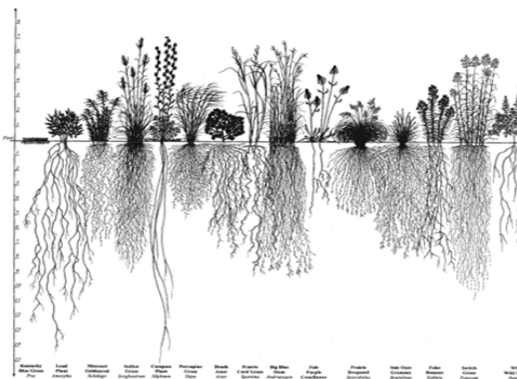
Tips for managing overflow:

1. Downspout diverters
2. Rain gardens
3. Connect multiple barrels at each overflow outlet found at the top

Step 4: Rain Gardens and Native Plants

Time: 5 mins.

TIP: Dig a depression to create the site for your rain garden. The water will pool around the plants. (See the Rain Garden Pamphlet)



Native Plants

1. Can withstand a range of wet to dry conditions.
2. Have long roots that absorb more water.
3. Have evolved to thrive in Midwestern conditions.
4. Create a healthy environment attractive to beneficial wildlife and insects.

Native plants are more common than you think. You may already have a few planted in your garden:

- | | |
|-------------------|----------------|
| Black-eyed susan | Asters |
| Purple coneflower | Butterfly weed |
| Plains coreopsis | Big bluestem |
| Bee Balm | Mountain mint |

Questions?

Time: 5 mins.

Step 5: The Rebate Process

Time: 5 mins

1. Identify the rebate form in the packet of information with the audience.
2. Provide contact information for rainbarrel@cityofchicago.org, yourself and offer troubleshooting assistance.
3. Audience members will have to purchase their own materials (rain barrels, native plants and trees) at local garden shops or hardware stores. Remind them to **SAVE THE RECEIPT**.
4. Fill out the rebate form, attach the receipt and return to the Department of Environment by 12/31/2011.
Department of Environment
Rain Barrel Rebate Program
30 N. LaSalle, Suite 200
Chicago, IL 60602
5. Take action: disconnect the downspout, install the rain barrel and/or build a rain garden.
6. The rebate will be processed and disbursed within 120 days of receiving the rebate and receipt.

Step 6: Questions and Wrap Up

Time: 5 mins.

TIP: *Sum up the presentation theme-* Rain barrels conserve and protect water quality.

Additional Resources

Print Materials

- Managing Stormwater at Home* pamphlet
- Save the Source* pamphlet (limited quantity)
- Plant a Rain Garden in your Yard!* pamphlet (limited quantity)
- Rain Barrel Installation and Maintenance* one-pager
- Water Resources in Chicago* one-pager
- List of participating garden shops and hardware stores* one-pager

Local Resources

- DOE Sustainable Backyards Workshops: rainbarrel@cityofchicago.org, 312-743-9283
- Green Tech U at the Center for Green Technology: greentech@cityofchicago.org, 312-746-9642
- Rain Garden Network: info@raingardennetwork.com, 773-774-5333
- Chicago's Rain Harvesting Blog: <http://chicagorainharvesting.wordpress.com/>
- Department of Water Management: 312-744-4H₂O (4426)
- Center for Neighborhood Technology, Green Values Calculator: info@cnt.org, 773-278-4800

National Resources

- US EPA www.epa.gov
- The Texas Manual on Rain Water Harvesting: <http://www.twdb.state.tx.us/iwt/rainwater.asp>
- Stormwater Managers Resource Center: <http://www.stormwatercenter.net/>