



The Chicago region uses 2.4 billion gallons of water a day, which is more water than 4,500 Olympic swimming pools! All of the water that we use comes from Lake Michigan, a finite resource, which means that we need to conserve and protect our water. Rain barrels store rain water so that it can be used instead of tap water in people's gardens. Rain barrels also divert stormwater from the city's sewers, reducing the incidence of combined sewer overflows (CSO's) that can pollute the region's waterways and back up into residents' basements.

## Did you know?

Lawn and garden watering can make up 40% of your water use during the hot summer months. A rain barrel can significantly reduce the amount of water you consume!

The Chicago Department of Environment (DOE) sells discounted 55-gallon rain barrels to residents. **Coordinate with C3 and DOE's rain barrel program to organize a rain barrel distribution day for your neighborhood.** *Note: This event can also be combined with a compost bin distribution day.* Advertise in your community and ask people to reserve a rain barrel. During the distribution event, demonstrate how to properly install and maintain a rain barrel. Consider assigning team members to help with installation of the barrels for community members. After a week or two, contact the workshop attendees to see how their rain barrels are working, and track how much water the rain barrels are saving and how much stormwater they are keeping out of the sewer system.

## Timeline:

- **Project Proposal due to C3 Liaison:** 1 week after the Community Organizing class
- **Part I: Preparation:** 1-2 months
- **Part II: Distribution Day:** 3-5 hours
- **Part III: Follow up and Tracking Environmental Benefits:** 2-3 hours, 1-2 weeks after distribution
- **Part IV: Final Report due to C3 Liaison:** 2 weeks after your project is complete

## Materials:

- Rain barrels
- **Rain Barrel Installation and Maintenance** guides
- **Rain Barrel** PowerPoint presentation
- **Save the Source** brochures
- **Stormwater Management** brochures
- Downspout elbow extenders
- Truck rental to transport rain barrels to your distribution location
- **\$800 Savings Challenge** cards

## Things to Keep in Mind:

- Installing rain barrels in appropriate locations is crucial. Choose a downspout on your house or garage that is close to the plants and garden you water most, and where your rain barrel's overflow will soak into your own yard, and not your neighbors' property. Place your rain barrel on a pervious (e.g. landscaped) surface that allows overflow from your rain barrel to soak into the ground. If the barrel is placed on an impervious (e.g. paved) surface, water that overflows from the barrel during heavy rains could pool or seep into your house or garage foundation.

To make the City's Rain Barrel Program fair for all residents, we ask that you conform to the following policies:

- The City charges a highly discounted price of \$45 for each rain barrel. You are expected to charge the same amount.
- Limit one barrel per household; buyers must be Chicago residents.



- Checks should be made out to the 'Chicago Department of Environment.' Once compiled, checks should be mailed or hand delivered to the appropriate contact at DOE, 30 N. LaSalle St, Suite 2500.

There are some aspects of the City's Rain Barrel program that we think you could improve due to the small-scale, community-based nature of C3 projects:

- DOE does not currently give downspout elbow extenders to residents who buy rain barrels. However, you might decide to use part of your C3 budget to buy the extenders for the participants in your project. Whether you distribute the extenders or not, you will probably want several for your demonstration. There are several kinds of extenders, including aluminum, white PVC, and black PVC extenders. To decide what kind you want, take a walk around your neighborhood and see what type of downspout is most prevalent.

## **Part I: Preparation:**

### **~1-2 months**

1. **Become an Expert!** Read through the **Rain Barrel Installation and Maintenance** handout, and review our **Rain Barrels** PowerPoint (request an electronic copy from your C3 liaison). If possible, you may also want to install a rain barrel at your home so you can better advise participants in your project. Remember to install your barrel over a permeable surface so that it can absorb overflow. Finally, you may want to volunteer at one of DOE's Environmental Resource Events (rain barrel distribution days) to gain additional experience.
2. **Define your project vision and goals.** What do you hope to achieve by doing this project? How many community members do you hope will participate? What environmental benefits do you hope to achieve? How many rain barrels do you plan to distribute?
3. **Gather a project team.** Refer to the **Building Your Project Team** worksheet in your Project Development Workbook. Your project team can help you plan, prepare and implement your distribution day, or they can simply volunteer to help out on the distribution day itself by signing in participants, collecting checks, handing out brochures, and/or demonstrating how the barrels work.
4. **Find a location and set up a date and time for your distribution day. Before setting the date, work with your C3 liaison to set a date and time to pick up rain barrels at the Center for Green Technology or, in some instances, for DOE to deliver the rain barrels to your location.** Identify a venue in the community that would be appropriate to hold the distribution day. An appropriate location will have enough space to hold 20+ rain barrels, such as a parking lot. Make sure to contact the appropriate person at the venue to check availability and set up a date and a 2-3 hour block of time when people can pick up their barrels (e.g. 9 am – 12 pm on a Saturday). Work with your C3 liaison to set up when and where your rain barrels will be delivered. Possible locations include:
  - Local farmer's market
  - Neighborhood community center (e.g. gym, art center, library, school)
  - Alderman's office
  - Local community garden
5. **Advertise.** Use community newsletters, aldermen's newsletters, online list hosts, bulletin boards, signs at neighborhood events, etc. that serve your community/venue. Make sure to include the following information on all promotional materials:
  - Location, date and time of distribution day
  - Price of rain barrels (Barrels are only available to Chicago residents; limit one barrel per household.)
  - How to reserve a rain barrel (barrels must be reserved so DOE can provide you with the right quantity)
  - Your contact information
6. **Order materials through your liaison at least 3 weeks before the distribution day.** Provide your liaison with the following information:
  - How many rain barrels you need (based on how many people reserved a barrel)



- Quantity and type of elbow downspout extenders for demonstration
- Quantities of any handouts/brochures you will distribute (e.g., copies of **Rain Barrel Installation and Maintenance** handout (below), **C3 Brochures**, **Save the Source** brochures, **Stormwater Management** brochures)
- Logistical details to ensure prompt delivery of rain barrels to your distribution location

## 7. Work with your project team to prepare for your distribution and demonstration.

- **Plan and practice your rain barrel demonstration.** When participants arrive to pick up their barrels, you or members of your project team should demonstrate how the barrels work and be available to answer questions. Prepare and practice the demonstration ahead of time with your team, and make sure everyone involved is very familiar with barrel installation, placement and use so they can answer questions. We suggest the following resources to help you prepare the demonstration:
  - Refer to the **Rain Barrel Installation and Maintenance** handout
  - Review the **Rain Barrels** PowerPoint presentation as a group
  - Talk to friends/neighbors who already have a rain barrel
  - Volunteer at DOE's Environmental Resource Events
  - Consult your C3 liaison with questions
- **Plan for barrel transport pre- and post-event.** Coordinate with your project site on when barrels can be dropped off and if they can store any barrels that might be remaining.
- **Plan how the distribution day will work.** Figure out logistics, such as:
  - Roles for each member of your project team
  - Where participants will park their cars
  - Where participants will sign in
  - Where participants will pick up their barrels
  - Where participants will see a demonstration
- **Gather materials to hand out to participants and to use during your demonstration.** We recommend:
  - A rain barrel for demonstration
  - An elbow downspout connector for demonstration
  - **Rain Barrel Installation and Maintenance** handouts and other brochures
  - Nametags for project team members who are helping to distribute barrels and/or demonstrate barrel use/maintenance
  - **\$800 Savings Challenge** cards for participants to fill out before collection their rain barrels

## **Part II: Distribution Day**

**3-5 hours: 1 hour set up; 2-3 hour distribution; 30 minute clean up**

1. **Arrive around 1 hour early to set up.** People may arrive early to pick up their barrels, so it's a good idea to be ready with time to spare.
2. **Put all of your hard work and planning to work.** With the help of your team:
  - Sign in everyone who shows up to collect their (pre-reserved) barrels and record their contact information on **\$800 Savings Challenge** cards. Let them know you will contact them in a few weeks to answer questions and see if the barrels are being used.
  - Collect checks made payable to 'Chicago Department of Environment.'
  - Demonstrate how to install/use the barrels, explain proper rain barrel placement, and answer questions.
  - Hand out the **Rain Barrel Installation and Maintenance** guide and other brochures.
  - Deal with any leftover barrels by leaving them with the on-site coordinator for later pick-up or transporting them yourself.



## **Part III: Follow-Up and Tracking Environmental Benefits:**

**~2-3 hours; a week or two after the distribution day**

- 1. Follow-up with participants.** Once your participants have had time to install their rain barrels, contact them to ask how their barrels are working and track environmental benefits. We suggest that you either call or send each participant a short survey. Make sure to ask:
  - If people have installed their barrels.
  - If people have not installed their barrels, find out what obstacles are keeping them from using them and suggest solutions. For example, you might offer to help with installation.
  - How the rain barrel is functioning. If the barrel has any problems, like not draining, attracting mosquitoes, leaking, or draining somewhere other than desired, recommend solutions.
  - How often they use the water collected in the rain barrel. For example, do they empty the barrel once a week? Once a month? Twice a month?
  - How people use the water from their rain barrels.
  - Why they purchased a barrel.
- 2. Calculate environmental and community benefits.** Based on your workshop and participants' survey responses, estimate the benefits of your project. Be sure to include:
  - How many people participated in your workshop.
  - How many barrels you distributed.
  - How many gallons of water your project diverts from storm sewers each month. Considering that Chicago's average rainfall is 3 inches per month and a typical 1,000 square-foot roof accepts 620 gallons during a one-inch rain storm, a barrel installed at a typical 4-downpout home can divert 465 gallons of water a month. (Not all of this water is actually used – some of it overflows and is absorbed by the permeable surface under the barrel). Therefore, if you assume that it rains 3 inches per month and each barrel is installed at a typical home, you can estimate how much water the barrels divert from the sewer using the following equation:

$$\text{Gallons of water diverted per month} = \text{Number of barrels installed} \times 465$$

How many gallons of water your project saves per month. Assuming that a rain barrel is emptied 3 times per month and that the barrels is full each time it is emptied, a barrel can conserve 165 gallons of water per month. Therefore, you can estimate how much water the rain barrels conserve each month using the following equation:

$$\text{Gallons of water conserved per month} = \text{Number of barrels installed} \times 165$$

Better yet, you can tweak this equation based on the past month's rainfall and how often your participants use the rain barrel.

- Any publicity you received (e.g., 1 community paper write-up about your project)

## **Part IV: Fill out your Final Report online (As soon as follow-up is complete)**

As soon as you've calculated environmental benefits, please fill out your **Final Report** online. Corresponding materials such as digital photographs, outreach flyers or posters, press releases, or news clippings should be emailed to [conservation@cityofchicago.org](mailto:conservation@cityofchicago.org). Please also enter the information from your **\$800 Savings Challenge** cards on [www.chicagoclimatereaction.org](http://www.chicagoclimatereaction.org).

# Rain Barrel Installation and Maintenance

City of Chicago Departments of Environment and Water Management

## Placing Your Rain Barrel

- Choose a downspout on your house or garage that is close to the plants and garden you water most, and where your rain barrel's overflow will soak into your own yard, and not your neighbors' property.
- Place your rain barrel on a pervious (e.g., landscaped) surface that allows overflow from your rain barrel to soak into the ground. If placed on an impervious (e.g., paved) surface, rain barrel water overflow during heavy rains could pool or seep into your house or garage foundation.
- You may want to place the rain barrel on concrete blocks if you are going to use a hose to direct water to your garden (gravity will help move the water), or if you want to fill up a watering can from the spigot (so the can fits underneath the spigot).

## Connecting Your Downspout to Your Rain Barrel



**Tools:** Rain barrel. Hacksaw. Aluminum downspouts: 6 screws and a screwdriver. PVC downspouts: PVC cement.

- Place your barrel near the downspout you have selected, and plan out how you will direct the downspouts.
- Disconnect your downspout from the sewer system by sawing the downspout above where the top of the rain barrel will be, leaving room for the elbow to be attached.
- Attach a downspout elbow to the end of your downspout so that water from your downspout is directed into the rain barrel through the plastic screen vent on top.
- If you have an aluminum downspout, secure it to the elbow with screws.
- If you have a PVC downspout, secure it to the elbow with PVC cement.
- Place your rain barrel under the downspout elbow.
- Optional: Attach a hose to the spigot, and/or to the overflow hole on the top-side of the barrel. Make sure that the overflow is directed into your own yard.

## Using Rain Barrel Water

- Water your flowers, trees, shrubs, and lawn.
- Wash your car or pets. Rinse hands and feet, tools, or muddy boots.
- Keep your rain barrel lid on tight at all times to prevent children and animals from entering or falling in.
- DO NOT DRINK WATER from your rain barrel.

# Rain Barrel Installation and Maintenance (continued)

## City of Chicago Departments of Environment and Water Management

### Maintaining Your Rain Barrel

- Keep your rain barrel spigot closed when you are not using the water so that the rain barrel can collect water. Overflow water will spill from the black vent on the top and the overflow hole on the side near the top.
- Regularly check your gutters, downspouts, rain barrel water intake screen, rain barrel mosquito screen and rain barrel spigot for leaks, obstructions or debris.
- Keep your rain barrel lid sealed.
- Drain your rain barrel before temperatures drop below freezing.
- In the winter, keep your rain barrel spigot open so that water does not accumulate in the rain barrel and freeze.

### Preventing Mosquitoes

Your rain barrel should be equipped with a mosquito-proof screen over all openings to keep mosquitoes and other insects out.

- Place your barrel on a pervious (water-absorbing) surface, so that overflow water soaks into the ground instead of pooling on paved surfaces.
- Keep your rain barrel lid sealed.
- Keep your barrel free of organic material.
- During the rainy season, every 3-4 days use your hand to splash off any water that may collect on the top of the barrel. Mosquitoes need at least 4 days of standing water to develop as larva.
- If you believe mosquitoes are breeding in your rain barrel, empty your barrel completely. This will kill all mosquito larvae that may be in your barrel. If your mosquito netting is intact and there are no leaks, your rain barrel should be mosquito-free.

### Disclaimer

With proper installation, maintenance and use, your rain barrel should function properly. The City of Chicago, the Chicago Department of Environment and the Chicago Department of Water Management assume no liability for the installation, maintenance or use of your rain barrel. We are not responsible for any rain barrel malfunction, property damage, or injury associated with your rain barrel, its accessories or contents.

### Further Contact

If you have any questions or comments regarding rain barrel installation or maintenance, please contact the Chicago Dept. of Environment at **(312) 743-WATER** or [rainbarrel@cityofchicago.org](mailto:rainbarrel@cityofchicago.org)