



KEEP GROWING DETROIT'S RAINWATER CATCHMENT SAFETY & USE TIPS

WHY SHOULD YOU COLLECT RAINWATER?

Be a part of an ancient tradition! Whether you're growing food or just watering your lawn, collecting rainwater is a smart, economical, and environmentally beneficial practice. In Detroit, rainwater catchment systems provide residents and land based projects with the flexibility to grow plants on land without immediate access to city water. Collecting rainwater not only benefits plants, it also helps mitigate the impact of large rain events on the city's stormwater management systems; a win win for urban gardens and the broader community!

WHAT IS A RAINWATER CATCHMENT?

A rainwater catchment is any cistern or vessel connected to a downspout that is designed to catch and store rainwater that flows off of a catchment surface. Typical catchment surfaces include the roof of a house, shed, garage, or freestanding structure close to your garden or farm. Detroiters frequently use food-safe 55 gallon plastic barrels or 275 gallon IBC totes to store rainwater. Occasionally these vessels are elevated on bricks or a wood stand to help increase water flow. Depending on the size, growers may add a pump to push rainwater through a dripline or sprinkler irrigation system. Many growers choose to let gravity do the job!

ISN'T RAINWATER THE SAFEST OPTION?

Using untreated rainwater from a rainwater catchment when growing food crops carries some risk. Bacterial contamination from animal droppings and poor system monitoring is usually the culprit. With good practice and monitoring, collected rainwater from well maintained catchment systems is an excellent and affordable option. To keep consumers safe, the Food Safety Modernization Act (2011) set standards for growers using collected rainwater to irrigate crops meant for human consumption. For the same reasons growers must clean their harvest knives and keep their hands washed, collected rainwater must be used and monitored in ways that prevent the spread of food-borne illness. Keep Growing Detroit recognizes that rainwater collecting is a big part of our agricultural tradition, and can help growers navigate best practice for using rainwater on their gardens!

JUST HOW MUCH WATER...

1 inch of rainfall over 1,000 square foot
of roof = 623 gallons!

THAT'S A LOT OF WATER!

SELLING CROPS

In order to ensure that the produce sold to customers is both high quality and safe to eat, we strongly encourage all growers to adhere to these safe rainwater usage tips when growing and harvesting produce for sale. The checklist on the back of this sheet will help you get started!

THIS RESOURCE GUIDE IS PREPARED BY KEEP GROWING DETROIT FOR PARTICIPANTS OF THE GARDEN RESOURCE PROGRAM. FOR MORE INFO PLEASE CONTACT KEEPGROWINGDETROIT@GMAIL.COM, (313) 656-4769 OR VISIT OUR WEBSITE AT KEEPGROWINGDETROIT.ORG



KEEP GROWING DETROIT'S RAINWATER CATCHMENT SAFETY CHECKLIST

Residents can benefit greatly from harvesting rainwater. When it's done correctly, it gives growers flexibility during times of drought or water scarcity. At the same time, actions must be taken to prevent the spread of harmful bacteria through the direct application of collected rainwater on food crops. Use the checklist below as a guide when setting up a catchment system and using collected rainwater on your land based project.

SET-UP AND SIGNAGE

- Location: Rainwater catchment systems must adhere to City of Detroit property set-backs. Make sure you build at least 5 feet away from all neighboring property and away from trees.
- Capacity/Sizing: Examine your roof size and determine your water needs to right-size your water catchment so that you don't end up with too little or too much water. See KGD's "Rainwater Catchment Calculations" document for guidance about how to calculate.
- Signage: All rainwater catchment tanks must have a clear sign or label that states that the water is not for drinking or for washing food.
- Painting/Filtering: Use spray paint that adheres to plastic to paint water storage vessels dark to prevent bacteria/algae growth. Use window screen to prevent debris from entering the top of the vessel
- Permitting: For more information on securing a "catch basin permit" for your rainwater catchment system, go to the BSEED website: <https://detroitmi.gov/forms/plumbing-permit-application>.

USING WATER

- Separate City Water from Collected Rainwater: Irrigation systems can be fed with EITHER collected rainwater OR city water but NOT both to prevent backfeeding contaminated water into the city system.
- No Sprinklers: Use collected rainwater for drip or sub-surface irrigation ONLY, so that it contacts the soil directly and not the edible portion of the plant.
- Timing: Irrigating with collected rainwater should not happen directly before/on a harvest day where workers may come in direct contact with potential contaminants.
- Storing Water: Never store water for long periods of time. Try to use water within two weeks of collecting it. Use or dump water that's been standing for awhile the day before it rains to make room for fresh water.
- No Wash Water: Never use collected rainwater to wash produce. Use potable water only when washing produce, harvest tools, bins, and wash pack surfaces.

MAINTENANCE

- Treat As Needed: Add 1oz kitchen bleach per 55gal of rainwater/month to prevent algae and E. coli growth in your tanks. Let sit for 24 hours before using water. Treat more with frequent rainfall.
- Water Use Log: Keep good records! Document when you use collected rainwater, what you use water for, when you apply bleach treatments, change filter, test water, etc. Traceability is important!
- Testing: Plan to have your collected rainwater checked annually by a lab that can test for the presence of E. coli in your system.
- Watch for Contaminants! Check your catchment tanks weekly for algae, bird droppings, and other contaminants. Don't let a full tank sit for more than two weeks before flushing.
- Winterization: Remove and store all irrigation equipment for the winter ie November-April. Remember to empty the catchment tanks and leave valves open so that they don't freeze!