



# SUSTAINABLE GUIDE TO: *RAINWATER HARVESTING*



Rainwater harvesting systems capture and collect rainwater from impervious surfaces (such as roofs) for use on-site. Some systems filter and purify the water, while others provide a means to distribute it, as in irrigation. These specifications will examine rainwater harvesting for use in distribution and irrigation. Water will be kept outside of the structure and not used for potable intake.

 Material Cost

**\$1,000–  
5,000**

 Install Season



 Man Hours

**25-60hrs**

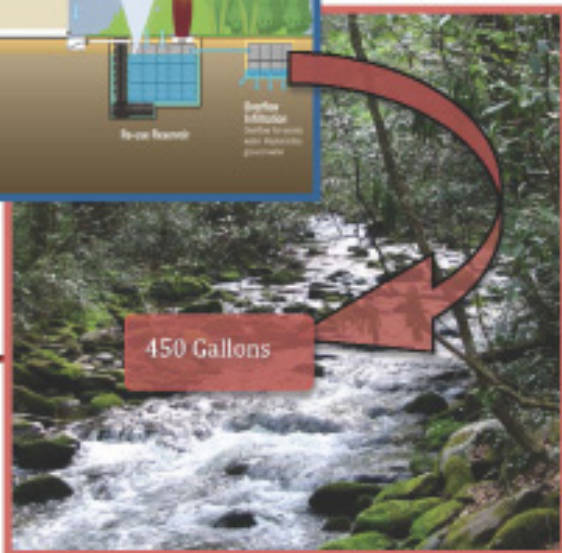
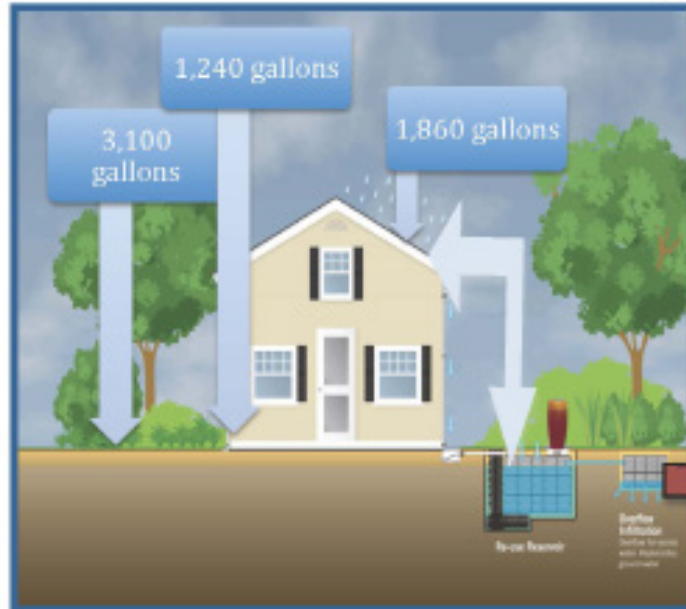


**FACTS**  
~10,000 sqft property  
~1"rain event = 6,200 gallons

- 3,000 sqft roof = 1,860 gal.
- 2,000 sqft paved surface = 1,240 gal.
- 5,000 sqft turf = 3,100 gal.

*\*\* Chicago Area Average Precipitation 40"/yr*

**Our Objective is to Re-engineer** developed land to compensate for the altered hydrology and **Re-balance** the water cycle.



450 Gallons

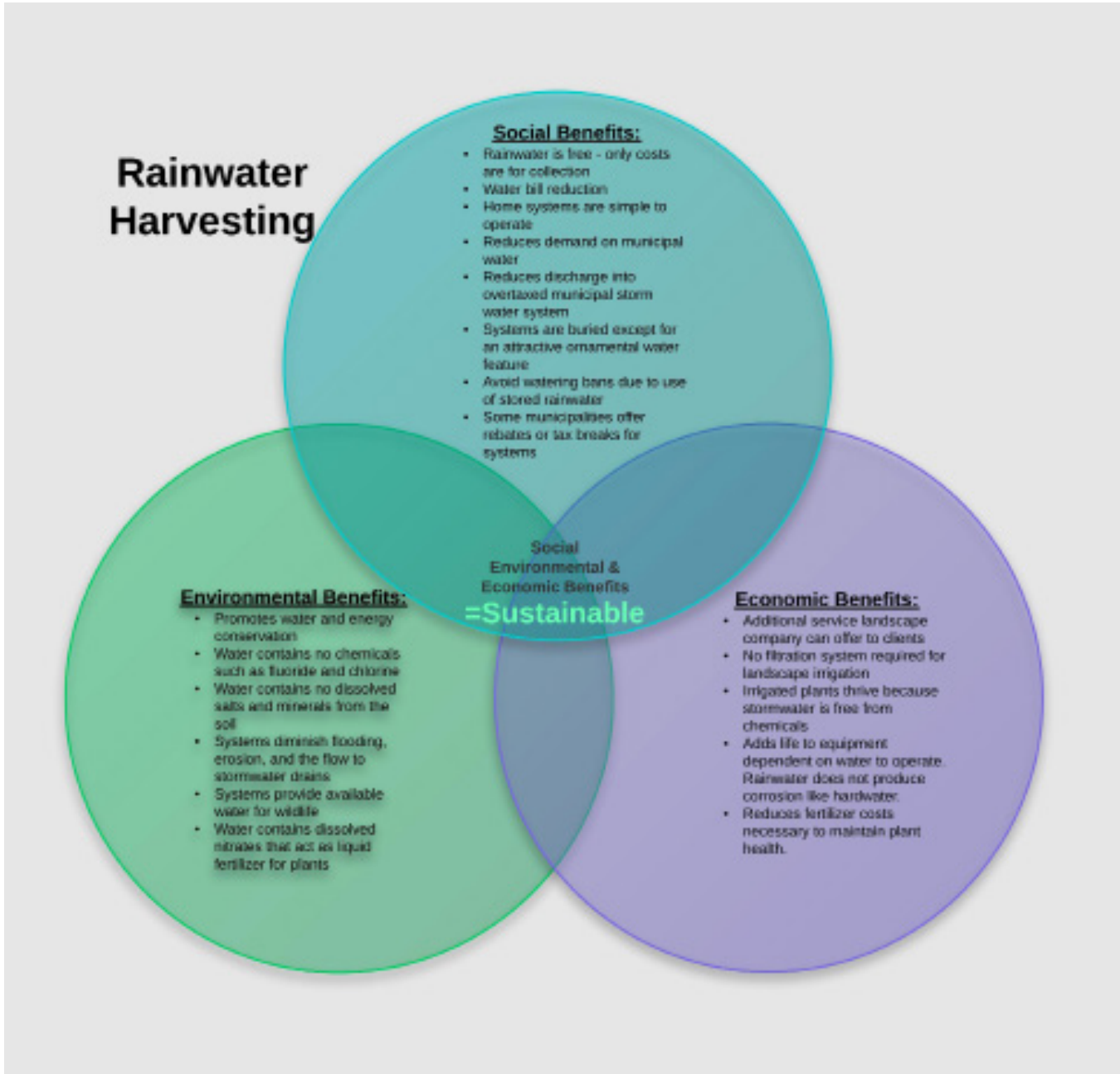
- Solutions**
1. Install 500 gallon underground modular catchment systems for each downspout.
  2. Remove impervious surfaces and replace with permeable pavers or re-direct water from impervious surfaces
  3. Amend size, grade and plant material in turf areas.
- \*Ground water solutions vary depending on site.

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### RAINWATER HARVESTING IS BROKEN INTO THREE PARTS:

1. **Rainwater harvesting collection and storage:** a system for the capture, diversion, and storage of rainwater and consists of a cistern(s), pipe, fittings, and appurtenances required for or used to harvest rainwater for non-potable purposes.
  
2. **Rainwater harvesting overflow:** Many times, a rainwater harvesting system will not be able to store all water during a storm event. There are different options for dealing with excess water (overflow).
  - a. The system can be reconnected to the municipal stormwater system.
  - b. The water can drain into a bioswale for onsite drainage and infiltration.
  - c. The water can be drained and infiltrated into a rain garden.
  - d. The rainwater can be stored underground in an infiltration system.
  
3. **Rainwater harvesting distribution systems:** a system for the distribution of rainwater collected by a rainwater harvesting collection and storage system. It is often required that a licensed plumber or registered irrigation contractor perform the connections on a rainwater harvesting distribution system for the purposes of irrigation.

# BENEFITS



The Illinois Landscape Contractors Association does not use a specific definition of sustainability. Instead, ILCA examines three necessary attributes that must be in place for the system to be sustainable; social, environmental, and economic benefits. In short, the public must want the technology, it must have environmental

benefits, and the contractor must be able to perform the work without subsidy. If any of these elements are missing, the system will likely not last. ILCA acknowledges that new technology may be introduced to address a deficient element over time.