

# Rainwater Harvesting

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# Rainwater Harvesting in Utah

- Permit required from the Utah Division of Water Rights if collecting precipitation from more than two covered 100 gallon cisterns
- Maximum collection capacity is 2,500 gallons
- No charge for registration
- Link to registration:  
<http://waterrights.utah.gov/forms/rainwater.asp>

# Implementation of Rainwater Harvesting Programs for Stormwater Management

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## Introduction

Rainwater harvesting (RWH) involves collecting stormwater runoff, storing it and applying it for beneficial reuse or release at a controlled rate. The recent development of RWH as a local government and individual property owner solution to stormwater management and water supply has led to a wide array of individual program implementations across the country. RWH is an especially useful practice in areas where water is scarce and must be heavily conserved.

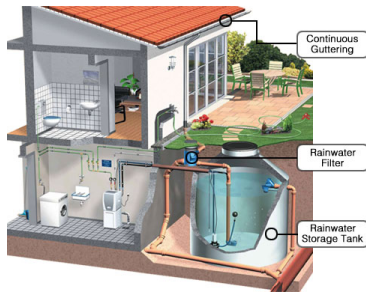


Figure 1. Example of an underground rainwater cistern system connected to potable and non-potable plumbing.

## Objective

The goal of this project is to compile and analyze the national trends for rainwater harvesting policy and education and outreach activities.



Figure 2. Map of U.S. with blue points marking areas surveyed

## Research Methodology

A survey was created and administered to RWH managers across the country to collect information on the RWH policies in the U.S. Survey items included:

- challenges to implementation
- incentives and rebate programs tested
- administrative approaches used
- fee structures used
- general feedback on expected or observed performance and cost data

A phone interview was conducted to RWH education and outreach managers to collect data on the characteristics of programs across the country.

Survey Link: <https://www.surveymonkey.com/s/RWH-iUtah>

## Future Goals

The data gathered from the online and telephone surveys will be compiled to create case study summaries that will be published in a journal article and committee report. Startup rainwater harvesting programs will be able to use these reports as guidelines for implementation.

Q2 What motivated the implementation of the program?

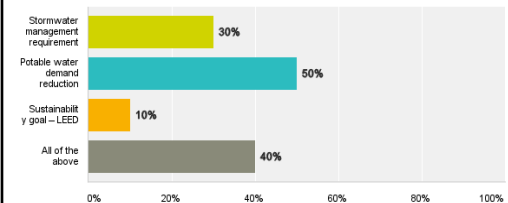


Figure 3. Chart created from survey data displaying reasoning behind rainwater harvesting implementation



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# Survey

- How long have you had your rainwater harvesting program?
- Is this program a requirement for new construction? If yes, what are the parameters of the requirement (e.g., required installation of 50 gallons of storage for every 1000 sq. feet of catchment)?
- Are incentives (e.g., tax, grants) or rebates provided? If yes, what is provided?
- How do you help building and homeowners to install and maintain rainwater harvesting systems?
- Do you have requirements for maintenance?
- What can the harvested rainwater be used for – indoor, outdoor, etc?
- Do you follow up on installations to ensure owners are complying?
- Do you follow up on installations to ensure owners are complying?
- Have you been able to measure the benefits for stormwater management? If yes, how so?
- What motivated the implementation of the program?
  - a) Stormwater management requirement
  - b) Potable water demand reduction
  - c) Sustainability goal – LEED
  - d) Other...

Sample tank set-up. Water level sensors (shown on top of the tank) are not included.



# Further Research

- Finish revision of report and submit for publishing
- Potentially present research at various conferences