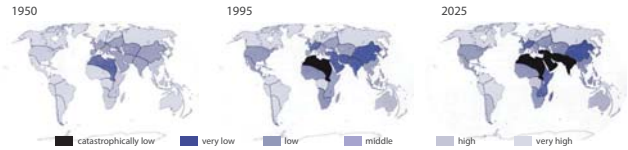
Background:

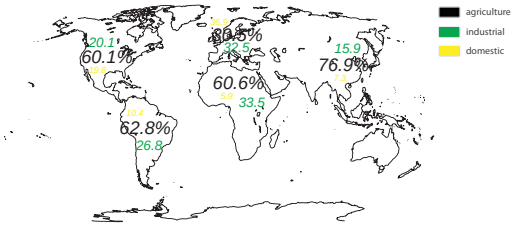
The global water availability is on the rise. Over 20% of the worlds population does not have access to safe drinking water.

More than 2.2 million people die each year from diseases Related to contaminated drinking water.



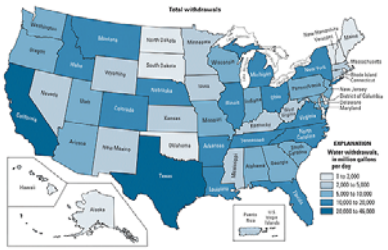
Global Water Availability

Over 450 million people today in 29 countries (mostly in Africa and the Middle East) are suffering from chronic water shortages. Which translates to roughly 1/5th of the world's population.



Illinois has one of the highest water withdrawal amounts in the country (9,000-13,500 million gallons of water per day).

1,000,000,000 gallons of Lake Michigan are consumed in Chicago everyday.



United States Water Consumption

Objective:

Our IPRO objective is to design and market a rain water collection system that is efficient, user friendly and aesthetically pleasing, to that of the current products on the market.

SINCE WHEN ?

There is evidence that people have been harvesting rainwater since 4000BC. The Roman Empire developed an intricate infrastructure to direct water to be used for irrigation and sanitary purposes. For the most part, modern society has abandoned the practice of harvesting rainwater because water sources have been plentiful and inexpensive.

WHY ?

There is a shortage in our water supply fast approaching, and it is up to us to conserve our water supply. There are countless opportunities to use Grey water(Rain water) instead of potable fresh water like flushing toilets, watering the lawn, washing the car, and many more.

HOW ?

Pleasing to harvest rain water. You can do it underground and have the top exposed, or you can have your cisterns above ground for all to see.

WHO ?

ANYBODY can do it! If you have a place to put/bury you cisterns then you can Harvest rain water.

Problem:

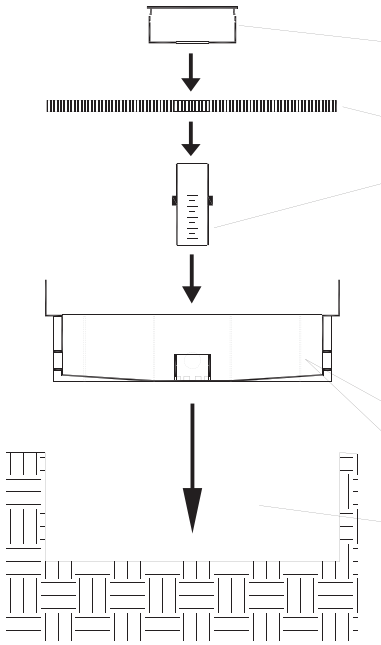
The intention of this IPRO team is to develop a product which could become the catalyst for the implementation of rainwater harvesting systems urban and rural residences, on a mass scale in the Unites States.

The team is comprised of various disciplines. Many of which have previous knowledge and research into aspects of rainwater collection or similar areas of study.

The team is highly motived to develop a product that will benefit Pentair Water and it's goals, while creating a product that helps improve the quality of life.

Ideas > Product > Marketability

Installation Instructions:



14.) Lay ground nearby flush with paver system

13.) Lay paver system on top of the cisterns

12.) Connect the adjustable access cap box to be flush with the pavers you have selected

11.) Place metal mesh to hold the pavers then a setting bed of gravel

10.) Place pump access tube in the lower holder of the cistern

09.) Put a cap on all other pipes not connected to another cistern

08.) Put down next cistern

07.) Twist and tighten the connector so that it connects both pipes connected to the cistern

06.) Lay the next cistern down

05.) Put connectors onto the pipe that is later going to be connected to the next cistern

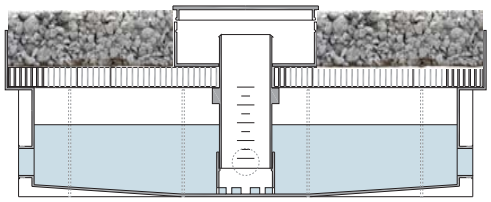
04.) Take plastic cistern out of box. Attach the pipes.

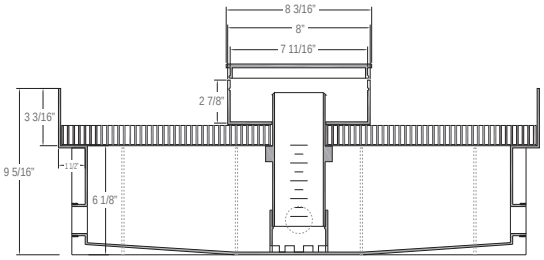
03.) Dig a ditch to put cistern(s) in to the ground

02.) Configure a layout for the boxes

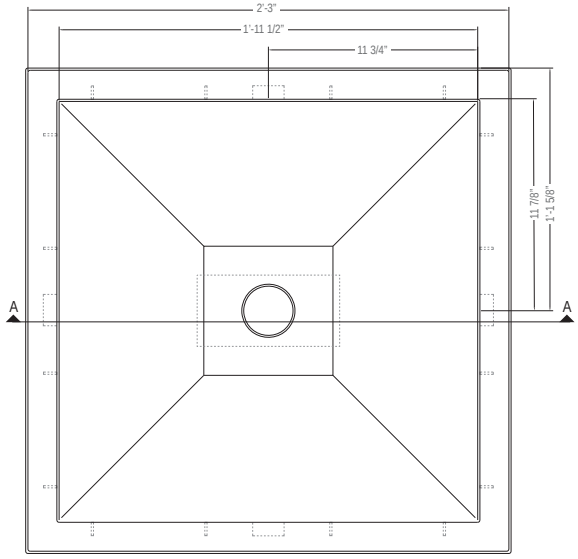
01.) Have a plan and a large area on your property that has access to the downspout from your roof.

IPRO It takes a team!
INTERPROFESSIONAL PROJECTS PROGRAM





Section A



Cistern Plan

Pentair provides water solutions and technical products to meet the demands of today's ever-changing global environment.

Distribution of clean, safe drinking water around the world to keeping high-tech electronics and electrical equipment protected from overheating and other environmental factors, Pentair delivers solutions that improve lives daily.

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ILLINOIS INSTITUTE OF TECHNOLOGY

Residential Rainwater Harvesting

W.O.W.

Pentair's "Walking on Water"
Integrated Residential Paving / Collection System