Rainwater Harvesting Education in Texas

2007 American Rainwater Catchment Systems Association Conference
Hawai'i Volcanoes National Park on the Big Island of Hawai'i

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Texas Cooperative Extension


Rainwater
Harvesting


Texas Cooperative
EXTENSION
The Texas A&M University System


Texas Water
Resources Institute
make every drop count

- The mission of **Texas Cooperative Extension** as part of the A&M University and the Land Grant College System is *"to provide quality, relevant outreach and continuing education programs and services to the people of Texas."*

- The **Texas Water Resources Institute**, a unit of the Texas Agricultural Experiment Station and Texas Cooperative Extension, and member of the National Institutes for Water Resources, provides leadership to stimulate priority research and Extension educational programs in water resources within the Texas A&M University System and throughout Texas.

Master Gardener "Rainwater Specialist"

- June 2006 – July 2007
  - 5 Workshops – Menard, Edinburg, Ft. Worth, Menard, Grandbury – 165 volunteers
  - 15-20 hours of training
  - 15 hours of volunteer service required in Rainwater Education

$200 Registration Fee Limited to 30 People

- Notebook
- Power Point hard copy to take notes on
- Trash can rain barrel
- Build wildlife watering device
- CD of all Power Points
- Meals and refreshments
- Hands-On Installation of a Collection System for Landscape

- **Table 1. Overall program evaluation results (1=poor and 5= excellent).**

Overall Evaluation	Average Response 4.9
The objectives of this program were:	4.9
The organization & presentation of material was:	4.8
The PowerPoints presenting the material were:	4.7
My expectations were:	4.9
Overall, I consider this program:	5.0
My attendance at this program should prove:	4.8

- **Table 2. Evaluation results of knowledge before the program (1= least valuable and 5= most valuable).**

Topics Average Response 2.9 average	
Understanding of how rainwater addresses water quality and quantity issues:	3.2
Understanding of stormwater and its impact on the environment:	3.1
Understanding of rangeland watersheds:	2.7
Understanding of collection and storage of harvested rainwater:	3.1
Understanding of filtration and sanitation of harvested rainwater:	2.9
Understanding of how landscaping affects water usage:	3.5
Understanding of how a soil storage and infiltration system works:	2.8
Understanding of how rainwater cam be used to water wildlife:	2.8
Understanding of how raingardens can be used to harvest rainwater:	2.6
Understanding of how to implement a youth education session:	2.7

- **Table 3. Evaluation results of knowledge after the program(1= poor and 5= excellent).**
- **Topics Average Response** **Average 4.6**
- Understanding of how rainwater addresses water quality and quantity issues: 4.8
- Understanding of stormwater and its impact on the environment: 4.8
- Understanding of rangeland watersheds: 4.3
- Understanding of collection and storage of harvested rainwater: 4.8
- Understanding of filtration and sanitation of harvested rainwater: 4.6
- Understanding of how landscaping affects water usage: 4.8
- Understanding of how a soil storage and infiltration system works: 4.5
- Understanding of how rainwater cam be used to water wildlife: 4.6
- Understanding of how raingardens can be used to harvest rainwater: 4.6
- Understanding of how to implement a youth education session: 4.2

- **Table 4. Retrospective Pre-Post Test Percent Knowledge Gained**
  % Knowledge Gained **- 58%**

- **Table 5. Evaluation results of the ability to educate others on selected topics (1= poor and 5= excellent).**

Topics	Average Response
Introduction:	4.7
Stormwater:	4.6
Rangeland Watersheds:	4.3
Collection and Storage:	4.8
Filtration and Sanitation:	4.6
Landscaping:	4.7
Soil Storage and Infiltration:	4.4
Wildlife:	4.6
Raingardens:	4.7
Youth Education:	4.5

Education Team

- Billy Kniffen – TCE Extension Agent – Ag/NR
- Dr. Monty Dozier – TCE Water Quality Specialist
- Dr. Bruce Lesikar – TCE Storm Water Engineer
- Dr. Jim Cathey – TCE Wildlife Specialist
- Justin Mechell – TCE Engineer, TCE Assistant
- John Smith – TCE Soils/Crop Sciences Dept. TCE Assistant
- Molly Griffin – TCE Engineering Dept., TCE Assistant
- Bryan Davis – TCE Extension Agent – Ag/NR
- Mike Mecke – TWRI Water Management Specialist
- Local Extension Agents and Master Gardeners

Classroom Training

Demonstrations

Dip Irrigation Using A Trash Can

Construction and Installation

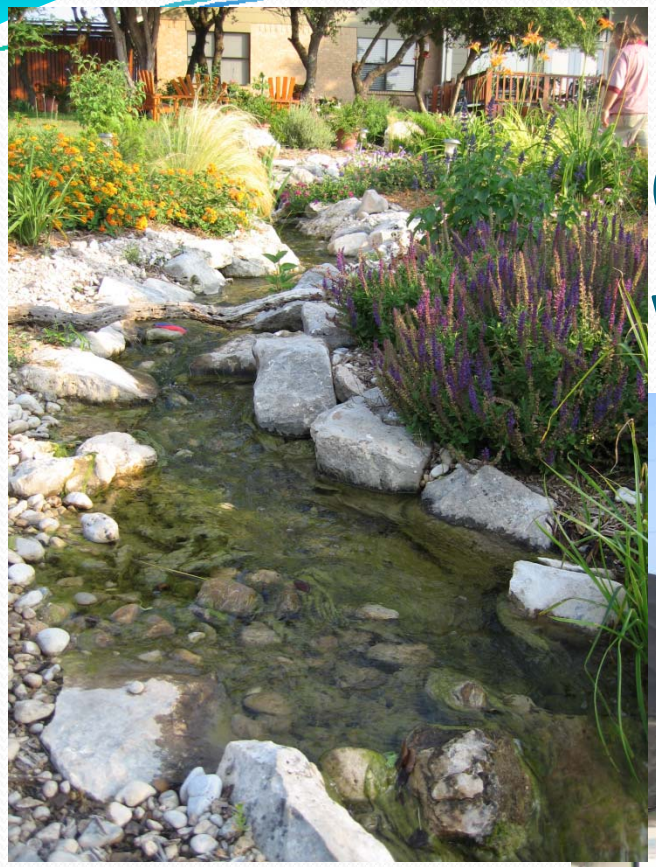
Hands-On

Why and How

Displays & Supplies

Tour Installations

Rainwater For Greenhouse and Water Garden



Homes & Schools

Kniffen's Home

Stormwater Management

Stormwater Management

Rain Garden Construction

Youth Education - Rainfall Off A Roof

Raindrop Impact

Recognition & Responsibility

Everyone Constructs A Wildlife Waterer For Their Trash Can

Everyone Gets A Trash Can Rain Barrel

Menard Class of 2007

Texas Master Naturalists

T E X A S

Master Naturalist℠

Master Naturalist 3 Day Advanced Training in "Rainwater Stewardship"

Classroom and Field Work

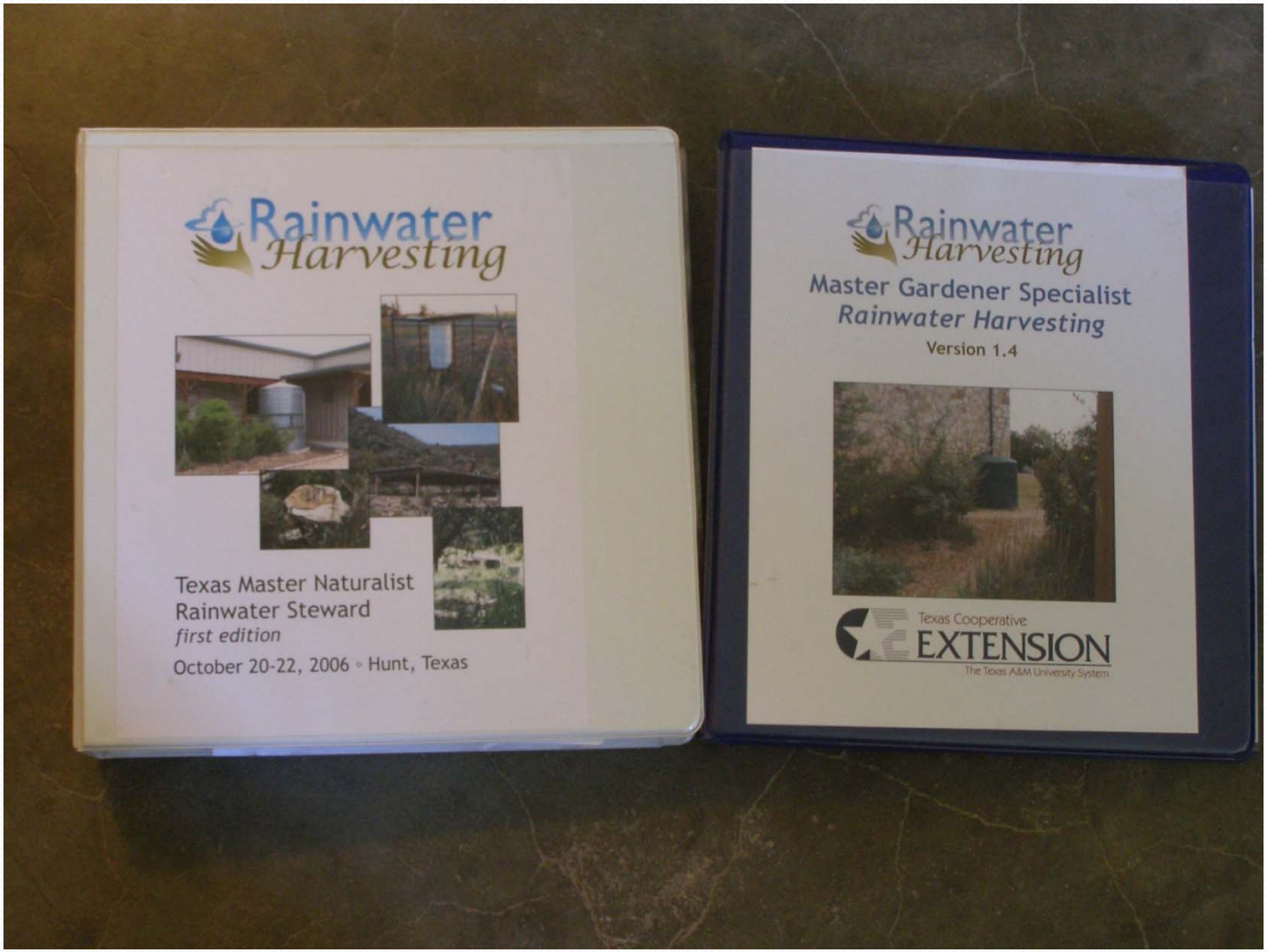
Paired Watershed Plots

Where Does The Rainfall Go

Youth Education and Wildlife Waterer

Master Naturalist Class of 2006

Manuals


Rainwater Harvesting
Texas Master Naturalist
Rainwater Steward
first edition
October 20-22, 2006 ◦ Hunt, Texas
Rainwater Harvesting
Master Gardener Specialist
Rainwater Harvesting
Version 1.4
Texas Cooperative
EXTENSION
The Texas A&M University System

Future Programming

- Master Gardener “Rainwater Specialist near Houston September 13-14, 2007
- In-home Potable Rainwater Workshop September 19, 2007 in Dallas
- In-home Potable Rainwater Workshop September 25, 2007 near San Antonio
- Master Naturalist “Rainwater Steward” program in San Antonio October 12-14, 2007
- 2008 – more of the same

Harvesting, Storing, and Treating Rainwater for Domestic Indoor Use

- Texas Commission on Environmental Quality
- January 2007
- **www.tceq.state.tx.us/publications**
- **http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/gi/gi-366.html**
- GI-366

http://rainwaterharvesting.tamu.edu/

Rainwater Harvesting

how to develop a rainwater harvesting system for your landscape

- Home
- Why Harvest
- How It Works
- Simple Systems
- Complex Systems
- Drinking Water Source
- System Maintenance
- Online Calculator
- Resources
- Video Clips
- Contact

Efficient water use is increasingly important to the Western United States. With the growing population and limited supply of both groundwater and surface water, homeowners must use water wisely. Rainwater harvesting is an innovative approach anyone can use.

Harvesting rainwater for use in the home landscape:

- Saves you money by reducing your water bills.
- Reduces demand on the municipal water supply.
- Makes efficient use of a valuable resource.
- Reduces flooding, erosion and contamination of surface water with sediments, fertilizers and pesticides in rainfall run-off.

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New Mexico State University

Arizona Department of Water Resources, Securing Arizona's Water Future

The University of Arizona, Tucson Arizona

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