



Rainwater Harvesting with Cisterns

for Landscape Irrigation

Workshop/Presentation Manual



florida

Rainwater Harvesting Initiative

First Edition
October 2009

Acknowledgements

The Rainwater Harvesting Initiative would like to thank everyone that cooperated in assisting with this effort:...*Dry run attendees...Dave, do you have sign in sheet(s)?*

A large, light grey arrow points downwards from the logos above towards the text below.

First Edition
October 2009
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Appendix A Workshop Presentation Notes Pages- (attach the presentation in hard copy)

Appendix B University of South Florida Technical Report

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Appendix D Workshop Handout

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1 Project Background and Definition

Defining the need

In early 2009, Tampa Bay Water, a regional water supply Authority, began work developing a Standardized Cistern Program Agenda, workshop structure and presentation materials. The overarching goal of this effort is to eliminate barriers to successful promotion of cistern systems for irrigation use in Florida and to link public and private efforts.

The Tampa Bay region has endured water supply shortage conditions over the three year 2006-2009 period. As a funding agency of the Florida Yards and Neighborhoods (FYN) program in their tri-county area since 1994, they have witnessed the public's interest in installation of rain barrels and FYN's rain barrel workshop program success. This is occurring through the 48 counties in Florida where the FYN programs are instituted.

Parties involved through initiative

Tampa Bay Water provided funding to University of Florida and the University South Florida to address these barriers and create a program that links the public to public agencies and private industry. We have also worked with Florida Irrigation Society staff on this project.

What elements were being developed by whom

As part of Tampa Bay Water's effort to conserve water, the agency worked with the University of Florida, University of South Florida, the Florida Irrigation Society and various cistern manufacturers and installers to develop a standard workshop for citizens to promote installation and use of cisterns in Tampa Bay so that the stored water can be used for irrigation, thus saving potable water.

The University of Florida was specifically tasked to determine what legal and code analysis is required to adequately preclude program presenters from being liable for all or portions of the workshop output. Local health departments were contacted throughout the region in order to gage their reaction to the installation outdoor cisterns for irrigation use. State and local ordinances were reviewed that may/may not deal with cisterns.

The University of South Florida was tasked with helping to analyze technical and engineering aspects of rainwater harvesting with cisterns. These included:

- Water quality considerations and issues associated with rainwater harvesting with cisterns
- Engineering designs on sizing, storage and treatment to enable the appropriate and reliable use of cistern water for intended applications
- Relevant operation and maintenance considerations for successful cistern use
- How rainwater harvesting with cisterns can be successfully integrated into an existing water supply infrastructure
- Economic considerations for cistern strategies

The Florida Irrigation Society helped in the development of water use requirements and sizing of cistern systems, while manufacturers and installers were a part of the process of including a full-scale workshop with presentations, sponsors, and links to actual product.

Drafting of materials

The University of South Florida coordinated with the University of Florida IFAS, FIS and Tampa Bay Water in the elaboration of workshop materials that were to be used. Specific issues and topics were identified as the most appropriate to present to the

public. Once a draft presentation was completed, dry-run workshops with members from local governments, FYN (local and statewide), water management districts and experienced cistern installers took place in order to collect further feedback on content of presentation and workshop length.

Review mechanisms

Once the final workshop presentation is issued, further review, update and edit may be necessary. Errata and modifications may to be submitted to the presentation steward (TBD) by email or in writing.

How the program can be used

The workshop will be delivered as a package to the Florida Yards and Neighborhoods (FYN) program throughout the region and state and would be part of FYN's workshop on rain barrels or a stand-alone workshop. In addition to educating citizens about cisterns, the program would seek to connect interested parties with contractors and businesses that can assist in designing and installing cistern systems.

2 How to Put on a Workshop

Florida Rainwater Harvest Initiative Linkage

The Florida Rainwater Harvest Initiative (FRHI) initial goal is to add private industry groups/associations that can use the workshop format to promote their industry and to help insure that expertise is funneled back and forth between educators and workshop attendees. It is not designed to circumvent training programs, continuing education unit development, or modify standards developed by others.

This will allow individual workshop developers to contact these entities for potential sponsors and potential business opportunities. It provides value to these private entities by linking the public with association membership at workshops.

Current representative organizations and contacts are;

American Rainwater Catchment Systems Association

<http://www.arcsa.org>

919 Congress Ave., Ste. 460

Austin, TX 78701

Florida Irrigation Society

www.fisstate.org

Jennifer Amarosa, Executive Administrator

administration@fisstate.org

Phone Number: (800) 441-5341/(813) 839-4601 Fax Number: (813) 839-4759

Address: P.O. Box 13502, Tampa, FL 33681

Sponsor levels and charges

Since it is anticipated workshops will be put on by Florida yards and Neighborhoods, along with the potential for other government entity use, creating a sponsorship process that is consistent between FRHI entities is important. Although public entities have

specific funding constraints through budgeting and oversight processes, monies are generally needed to continue and expand programs.

Having workshop sponsors is a legitimate means to promote workshops and also recoup costs for establishing them. In some instances, workshops may be located at facilities that require cost recovery.

Workshop implementers have two means of sponsorship; funding provided directly the entity in the way of a check or sponsoring a giveaway between all the sponsors at the event (no exchange of funds with the government entity). It is generally recommended that sponsorship levels be in the \$50 range for 25-50 participants and \$100 for over 50 participants. Sponsorship should be based on available space for sponsors to advertise along the side and/or back of the workshop location.

Workshop developers should decide which process works well for their entity before sending out request for sponsors.

What do the Sponsors receive in return for Sponsorship

Sponsors get recognized during the workshop and thanked for their efforts. During breaks and at the end of the workshop, the public will directly interact with sponsors to determine if there is additional interest in pursuing installation of rainwater harvesting systems. Materials provided during the workshop will give participants a general checklist of items that are required for successful rainwater harvesting system installation and linkage to irrigation systems.

Identifying a Minimum Number of participants

Based on discussion with Florida Yards and Neighborhoods coordinators in the Tampa Bay region, it is expected that at least 25 participants should be signed up for the workshop so sponsor levels can be secured as identified above. If less than 25 participants are expected, sponsors should be alerted prior to securing funding to insure good will between the sponsors and workshop promoters.

In some cases, rain barrel workshops have had in excess of 100 people in attendance. It's generally recommended that workshops be kept to less than 100 people, unless workshop presenters have experience dealing with large groups.

Workshop Agenda

A standardized agenda has been developed for the workshop. Modifications to the agenda can be made but note the presentation is locked in presentation mode to insure material and content integrity. Modifications to the agenda will generally not coincide with material presented.

To suggest modifications to the agenda or presentation materials see *Revising Presentation Materials* below.

Use of Workshop Presentation

The workshop presentation, located at [www. _____](http://www.fyn.gainesville.tx.us) is locked in the presentation mode. The cover slide is not locked so it can be modified to coincide with the presentation date and location. Additionally, a slide with the workshop sponsors should be provided. If entities have a logo, it is suggested you request an electronic version, and use it in your presentation.

Obtaining the Workshop Powerpoint Presentation

We need to send the presentation to FYN Gainesville and also make it available some other way electronically. It could be on our HydroX site or we have some other posting application.

Revising Presentation Materials

On a quarterly basis, materials will be reviewed for modifications based on feedback to dbracciano@tampabaywater.org. All comments specific to the presentation will be addressed by the next quarter.

3 The Florida Rainwater Harvesting Initiative

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4 Additional Future Coordination/Development Efforts

Standard Cistern Presentations for Other Water Use Opportunities

Identifying Technical Research Needs

Identifying Legal and Code-related Research and Development Needs

Other

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APPENDIX A

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APPENDIX B

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APPENDIX C

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APPENDIX D