



The Droplet

Florida Water Environment Association
Integrated Water Resources Committee

February 2011

Volume 3 Issue 1



Chair:
Liz Bartell

Vice Chair:
Leslie Turner

Secretary:
Nestor Sotelo

Treasurer:
Gabriel Retana

IWRC Elections

As the end of the FWEA fiscal year quickly approaches, the FWEA Integrated Water Resources Committee (IWRC) will be holding officer elections to determine chairs for the next year. As we have in the past, the IWRC will use an order of succession to fill some of the chair positions; however, several chair positions are open for nomination. We have also added a Seminars Chair to the Committee this year. The Seminars Chair will serve as the contact person for luncheon and seminar speakers and will be in charge of getting seminars and luncheons approved for PDHs/CECs.

The following is the list of chairs for the new fiscal year:

Past Chair: Liz Bartell
Chair: Leslie Turner
Vice Chair: **Open for Nominations**
Secretary: Gabe Retana
Treasurer: Leslie Gowdish
Website Chair: Susan Gerena
Newsletter Chair: Saurabh Srivastava
Newsletter Chair: **Open for Nominations**
Seminar Chair: **Open for Nominations**

The deadline for nominations is March 25th. Please email me at Elizabeth.Bartell@RSandH.com if you would like to nominate yourself or someone else for an open position. **Elections will be held from March 28-April 1.**

The past year has been an eventful one for the IWRC. I would like to take this chance to thank all of the members and chairs who have helped make this past year such a success for the IWRC. The chairs have done an outstanding job this past year in helping to plan and organize everything from luncheons and seminars to awards and newsletters. I look forward to continuing to work with all of you next year as I move to the role of Past Chair.

Looking Ahead

The Committee has already begun planning for next year. The IWRC is currently working with the FWEA Seminars Committee to host several half-day seminars later this year. Dates for the seminars have not been confirmed, but they will likely be during Fall 2011 and cover several locations throughout Florida. Keep an eye out for details on the upcoming seminars in future issues of The Droplet.

The IWRC definitely has an exciting year ahead of it! If you are interested in becoming a member of IWRC or nominating yourself or someone else for a position, please contact me at Elizabeth.Bartell@RSandH.com.



Rainwater harvesting using Cisterns and Rain Barrels

Rainwater harvesting is the method of capturing rainwater during the wet season for use during the dry season. With growing water demands, increased environmental concerns due to overuse of traditional water sources, greater water restrictions and increasing cost of municipal water, small scale rainwater harvesting at residential scale for non-potable uses can provide significant benefits. Some of the benefits include water conservation, reducing stormwater runoff and pollution, and reducing the use of potable water. Moreover, these systems require low technology and are easy to operate and maintain.

Small scale rainwater harvesting can be achieved by using rain barrels or cisterns, which are both tanks of different capacities used to store rainfall captured from areas such as rooftops of residential or commercial buildings for future non-potable uses. Water collected from these systems is commonly used for irrigating lawns and gardens, but can also be used for other non-potable uses such as toilet flushing and washing.

Rain barrels are small—typically about 55 gallons or less in capacity. Cisterns, on the other hand, are comparatively larger in size and can be up to 10,000 gallons in capacity or larger. Due to their small size, rain barrels cannot provide sufficient supply to meet all the irrigation demands in a typical house; nevertheless, they can supplement the irrigation demand thereby reducing the use of valuable potable water for irrigation. One of the main advantages of rain barrels is their relatively low upfront costs and very low maintenance costs, which can be attractive to homeowners. Cisterns are comparatively more expensive; however, their larger capacity can help lower a homeowner's monthly water bill and therefore help offset the increased cost of installation.

Components of a rain barrel or cistern system include the following: catchment area, storage, filtration and distribution. Catchments of these small-scale systems are typically building rooftops and are an important determinant of how much rainfall can be captured by these systems. For example, a house with 2,000 square feet of rooftop area receiving 45 inches of rainfall annually can potentially capture nearly 45,000 gallons of rainfall during a year, assuming 80% efficiency of the rainwater collection system. Storage is the most critical component of these systems. The size of the storage tank depends on factors such as irrigable area, water demand and upfront cost. Rain barrels are cheaper than cisterns, starting at less than \$100 and going up to a few hundred dollars. Cisterns are more expensive and can run up to several thousand dollars depending on the size of the tank. Wycoff (2008) estimated the installed cost of cisterns to vary from \$11,000 to \$26,000 for storage tanks of 2,500 gallon to 10,000 gallon, respectively.

Rainwater collected from rooftops is generally considered safe for plants and filtration systems may not be required. A simple screen may be helpful to keep the leaf debris, bird droppings and mosquitoes out of the storage tank. Water distribution from a rain barrel can be as simple as using a spigot and a hose to deliver water to the plants. Rain barrels can be elevated from the ground to increase pressure in the system. For larger tanks the use of a small pump can be beneficial, especially when irrigating large areas.

Although rain barrels or cisterns do not provide adequate storage to meet all non-potable water demands of a typical house, they offset part of that water demand and can be an important part of the solution for future water supply issues.

Reference:

Wycoff, R. L., 2008. An Evaluation of the Cost Effectiveness of Rainwater Harvesting in East-Central Florida. SJRWMD Special Publication SJ2008-SP21. Report prepared for the St. Johns River Water Management District. July 2008

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Calendar of Events

<u>Date</u>	<u>Description</u>
April 4, 2011	IWRC Meeting Teleconference
May 2, 2011	IWRC Meeting Teleconference
June 6, 2011	IWRC Meeting Teleconference
July 5, 2011	IWRC Meeting Teleconference
August 2, 2011	IWRC Meeting Teleconference
Fall 2011	FWEA – IWRC Joint Seminar

Interesting Facts about Florida's Waters

- Florida has nearly 7,800 freshwater lakes, more than 1,700 rivers and streams and nearly 700 springs.
- Florida has more than 11,000 miles of rivers, streams & waterways.
- Florida has nearly 11 million acres of wetlands
- Lake Okeechobee is the second largest freshwater lake in the U.S (448,000 acre)
- The total drop of the St. John's River from its source to its mouth is less than 30 feet, or about one inch per mile, making it one of the "laziest" rivers in the world.

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