



ARIZONA DEPARTMENT OF WATER RESOURCES

3550 North Central Avenue, Second Floor
PHOENIX, ARIZONA 85012-2105
(602) 771-8500

Municipal Conservation BMP Program

March 10, 2009 Workshop for Water Providers

**How to Evaluate and Improve your Distribution System:
Audits, Meters, and Leak Detection**

AGENDA	
12:30 – 1:00 pm	Arrival/ Registration
1:00 – 1:10	<i>Welcome/Introduction</i> <i>EPA Fix- A-Leak Week: March 16 – 20.</i> Ruth Greenhouse, Arizona Department of Water Resources
1:10 – 1:35	<i>Water System Audits: The Key to Supply-Side Water Loss Management</i> Andy Terrey*, City of Phoenix
1:35 – 2:00	<i>Importance of Water Measurement and Quantification: Metering</i> Lee Ester*, Salt River Project
2:00 – 2:25	<i>Water Meters are Your Cash Registers</i> Dan Yeo*, Arizona Water Company
2:25 – 2:50	<i>Automated Meter Reading (AMR) Initiative</i> Jason Bethke*, Global Water
2:50 - 3:10 BREAK	<i>Demonstration/Resource Table</i> Leak Detection Equipment, Emily Wunder and Jack McCormack, ADWR
3:10 – 3:35	<i>Arizona Water Company's Leak Detection Program</i> Tom Harrell*, Arizona Water Company
3:35 – 4:00	<i>Identifying Lost & Unaccounted for Water: Apache Junction Case Study</i> Frank Blanco*, Apache Junction Water Utilities Communities Facilities District (WUCFD)

Please fill this out for professional development hours or continuing education credit.

_____ attended this workshop on March 10, 2009.
Signature of workshop participant

Arizona Department of Water Resources

* See page 2 for presenter bios

PRESENTER BIOS

Andrew C. Terrey, Director of Internal Water Loss Management, City Water Service Department.

Andy Terrey is a project manager for the City of Phoenix Water Service Department, Distribution & Collection Engineering Division. Mr. Terrey received a B.S. in Agricultural Engineering from the University of Arizona in 1987 and has worked for the Phoenix Water Services Department since 1989. His areas of expertise include water conservation, water reuse, water quality, and groundwater recharge. Since 2003, Andy has been director of the Water Services Department's internal water loss management program, the first of its kind in Arizona.

Dan Yeo, Senior Meter Repairman, Arizona Water Company. Dan Yeo is serving in his fifteenth year with Arizona Water Company and in his fourth year as the Senior Meter Repairman at the Company's meter shop in Coolidge. The Company currently serves over 83,000 customers. The Company's meter shop had nearly 8,000 new and repaired meters pass through its facility in 2008.

Frank L. Blanco, CPM, Apache Junction Water Utilities Community Facilities District (WUCFD)

Director. Frank Blanco, an Arizona native originally from Yuma, received an AAS degree from Arizona Western College and a Bachelor of Interdisciplinary Studies degree with a concentration in Organizational Studies from ASU. He completed the Paradise Valley Community College Safety, Health, and Environmental Studies program and is a Certified Public Manager. Prior to entering the water industry, Mr. Blanco worked six years in Civil Engineering Design for the City of Tempe. He has worked as a water professional for over 23 years and holds certifications in Water Treatment, Wastewater Treatment, and Water Distribution from ADEQ. Mr. Blanco retired from the City of Phoenix in February, 2007 and is currently the Apache Junction WUCFD Director.

Jason Bethke, Director of Engineering and Construction, Global Water. Mr. Bethke is responsible for all aspects of engineering, construction and asset management for Global Water. Over the past five years Global Water has deployed over 300 million dollars of capital improvement throughout their 17 utilities. Mr. Bethke has been providing water, wastewater and recycled water engineering and construction management services in the Southwest for over 14 years. He has a master's degree in Civil Engineering and Business Administration from ASU. His career in the industry began as a consulting engineer designing water and wastewater projects. In his over two years with Global Water he has focused on deploying projects that meet the criteria of low operating costs, ease of maintenance and repair, operational simplicity and efficient use of capital dollars.

Lee W. Ester, Manager of Measurement Services, Salt River Project. Lee Ester received an AA Degree from Glendale Community College in 1982 and a BS Degree in Business Management from the University of Phoenix in 1996. Lee began his career at SRP in the Hydrology Division in June of 1987. His division of eleven analysts, specialists, and technicians design and operate a variety of forms of instrumentation, telemetry, and quantification of flow discharge at many of Arizona's native rivers on the Salt and Verde watersheds. Mr. Ester also provides water measurement/quantification on SRP's canals and laterals as well as in pressurized pipe configurations. His division operates a one-of-kind flow meter testing laboratory in the Phoenix area. He oversees accuracy verifications at all local City Water Treatment Plants as well as at other points of measurement detailed within local Contracts, Agreements and Indian Settlements.

Tom Harrell, Water Resources Coordinator, Arizona Water Company. Tom Harrell is a 1995 graduate of Arizona State University with a B.S. from the School of Agribusiness and Environmental Resources. He worked 4 years for the Arizona Corporation Commission, handling customer complaints and meter testing. Since 2001, he has worked for Arizona Water Company. His current title is Water Resources Coordinator. Some of his duties include overseeing the Company's conservation and leak detection programs, reporting water usage information to the Department of Water Resources and the Groundwater Replenishment District, and managing the Company's vehicles and equipment fleet.