

Delaware River Basin Commission



WMAC UPDATE **Water Accountability**

Committee Chair: Bob Molzahn

Subcommittee Chair: Mary Ellen Noble

COMMISSION MEETING PRESENTATION
July 18, 2007

Water Management Advisory Committee Update: Water Accountability

Background:

- WMAC and subcommittee has been reviewing water accountability and water loss methods
- March '05: Presented approach to Commissioners
- September '06: Summarized findings for Commissioners in a position statement
- July '07: Draft resolution for consideration (not voting at this time)



Water Management Advisory Committee Update: Water Accountability

Overview:

- An estimated 150 million gallons per day is physically lost from public water supply distribution systems in the Basin
- Basin Plan Objective 1.3.C promotes efficient use of water
- Current approach (Res. 87-6) of measuring and monitoring “unaccounted for water (UFW)” inadequate
- WMAC considered new AWWA / IWA method with expert assistance from George Kunkel (PWD)

WATER ACCOUNTABILITY: Problems with Current Approach

- Water Companies have different methods for determining UFW
- Current definitions are not specific
- Data are not comparable hindering decision-making
- 15% target is not a technically defensible target





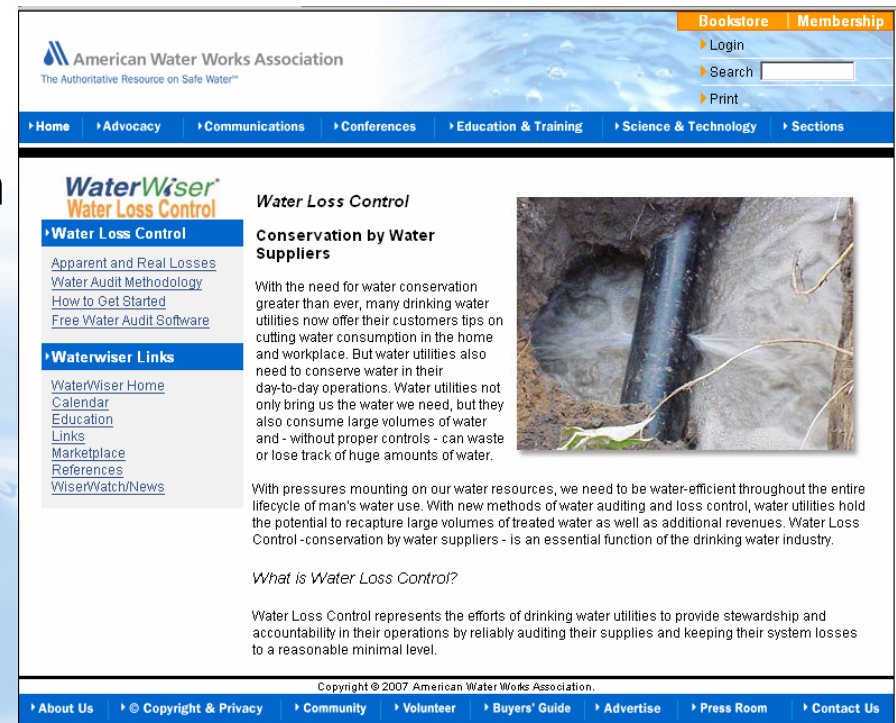
WATER ACCOUNTABILITY: Key Changes

- **Terminology** - Remove references to “unaccounted for water”
- **Standardization** - Water purveyors would follow a well-defined water audit structure (AWWA software available and accompanying guidance document)
- **Performance indicators** - Provides meaningful performance indicators to identify systems with the greatest real losses
- **Phased implementation** - Initial voluntary period, followed by required reporting format

WATER ACCOUNTABILITY: Key Changes

Terminology & Standardization:

- Use AWWA Water Audit Approach
- AWWA hosts free Water Audit Software – available for download to perform audits
- AWWA Guidance manual (in press) to assist auditors



The screenshot shows the AWWA website interface. At the top, there is a navigation bar with links for Home, Advocacy, Communications, Conferences, Education & Training, Science & Technology, and Sections. A search bar and links for Login and Print are also visible. The main content area features a sidebar with 'WaterWiser Water Loss Control' and 'Waterwiser Links'. The main text discusses 'Water Loss Control' and 'Conservation by Water Suppliers', highlighting the importance of water conservation and the role of water utilities. A photograph of a pipe being inspected is included. The footer contains copyright information and additional navigation links.

American Water Works Association
The Authoritative Resource on Safe Water™

Bookstore | Membership
Login
Search
Print

Home | Advocacy | Communications | Conferences | Education & Training | Science & Technology | Sections


WaterWiser
Water Loss Control

Water Loss Control
Apparent and Real Losses
Water Audit Methodology
How to Get Started
Free Water Audit Software

Waterwiser Links
WaterWiser Home
Calendar
Education
Links
Marketplace
References
WiserWatch/News

Water Loss Control
Conservation by Water Suppliers

With the need for water conservation greater than ever, many drinking water utilities now offer their customers tips on cutting water consumption in the home and workplace. But water utilities also need to conserve water in their day-to-day operations. Water utilities not only bring us the water we need, but they also consume large volumes of water and - without proper controls - can waste or lose track of huge amounts of water.



With pressures mounting on our water resources, we need to be water-efficient throughout the entire lifecycle of man's water use. With new methods of water auditing and loss control, water utilities hold the potential to recapture large volumes of treated water as well as additional revenues. Water Loss Control - conservation by water suppliers - is an essential function of the drinking water industry.

What is Water Loss Control?

Water Loss Control represents the efforts of drinking water utilities to provide stewardship and accountability in their operations by reliably auditing their supplies and keeping their system losses to a reasonable minimal level.

Copyright © 2007 American Water Works Association.

About Us | Copyright & Privacy | Community | Volunteer | Buyers' Guide | Advertise | Press Room | Contact Us

www.awwa.org/WaterWiser/waterloss/index.cfm

WATER ACCOUNTABILITY: Audit Structure

AWWA Water Audit Structure:

System Input Volume (corrected for known errors)	Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (including water exported)	Revenue Water	
			Billed Unmetered Consumption		
		Water Losses	Unbilled Authorized Consumption	Unbilled Metered Consumption	Non-Revenue Water (NRW)
				Unbilled Unmetered Consumption	
	Apparent Losses		Unauthorized Consumption		
			Customer Metering Inaccuracies		
			Data Handling Errors		
	Real Losses		Leakage on Transmission and Distribution Mains		
		Leakage and Overflows at Utility's Storage Tanks			
		Leakage on Service Connections up to point of Customer metering			



WATER ACCOUNTABILITY: Key Changes

Performance Indicators:

- Use of 15% UFW no longer best practice
- Software outputs meaningful indicators:
 - gpd / mile mains
 - gpd / connection
 - ILI (infrastructure leakage index)
- Metrics for DRBC standards need to be defined

Please see software example screen



WATER ACCOUNTABILITY: Key Changes

Phased Implementation:

- AWWA methodology is new in regulatory context, therefore:
 - Effective Date – 2011: New method is voluntary
 - 2012 calendar yr onwards: New method is required format
 - State agencies to require reporting consistent with AWWA methodology
 - Actual metrics to be added beyond 2012 after data are collected and evaluated

WATER ACCOUNTABILITY: Summary



- Water Accountability approach provides a more rational audit structure compared to existing approaches
- Some systems already utilize this approach – piloted successfully in AWWA study (incl. DRB water purveyors)
- Initial audits likely to identify data gaps and reporting challenges – hence phased approach
- New audit approach provides more meaningful indicators for both regulatory agencies and water purveyors:
 - targeting real losses
 - identifying financial costs of losses