Pre-conference Workshop Agenda

Sunday, May 6, 2018 , Venue: TBA

Timetable: Registration: 8:30 am - 9:15 am
Morning Sessions: 9:15 am - 12:00 pm
Lunch: 12:00 pm - 1:00 pm
Afternoon Sessions: 1:00 pm - 3:00 pm

Informal session time lines, allowing for questions and feedback

Morning Session: 9:15 am - 12:00 pm

Opening Remarks: **Welcome, Panel introduction: 9:15 am - 9:30 am**
Co-Chairs: Mbali Matiwane, Ken Brothers
Panel: Tim Waldron, David Pearson

Session 1: Understanding Leakage, Losses & Barriers to Success:
Ken Brothers **9:30 am - 10:00 am**
a. Understanding leakage, breaks, losses, flow rates, backlog of leaks
b. Leakage run time: volume lost
c. Technical, operational and utility management barriers to success

Session 2: Standard Water Balance and 4 Loss Reduction Strategies:
David Pearson: **10:00 am - 10:30 am**
a. Standard Water Balance Overview: Components, real, apparent losses, terminology
b. The 4 Strategies for water loss reduction: How much is lost, where is it lost, why is it lost, select the best loss reduction strategy
c. KPIs: ILI, l/c/d

Session 3: Water Metering & Apparent losses:
Tim Waldron **10:30 am - 11:00 am**
a. Metering, Revenue Water
b. Apparent Losses: Billing errors: data transfer, reading, bypass/theft
c. Meters, features, Smart meters

Session 4: Speed & Quality of Repairs:
Ken Brothers: **11:00 am - 11:30 pm**
a. Responsiveness to leak repair
b. Effects of leakage run time with repairs & management processes
c. Quality of repairs: Materials and workmanship

Panel Q/A:
Mbali Matiwane Co- Chair & Panel **11:30 am - 12:00 pm**

Lunch Break: **12:00 pm - 1:00 pm**

Afternoon Session: 1:00 pm - 3:00 pm

Session 5: District Metered Areas
Tim Waldron: **1:00 pm - 1:30 pm**
a. Why DMAs?
b. Quantifying losses Minimum night flows
c. Design/size options
d. Step testing
e. Setting targets for active leak response

Session 6: Pressure Control:
David Pearson: **1:30 pm - 2:00 pm**
a. Pressure leakage relationship
b. Pressure fluctuations, stability, reduction
c. Benefits of pressure reduction
d. Pressure management areas
e. Predicting and achieving lower losses and break rates

Session 7: Leak Detection:
Ken Brothers: **2:00 pm - 2:30 pm**
a. Active vs. passive leak detection
b. Sound transmission and pipe materials
c. Equipment, tools and techniques
d. Training, teams and response

Audience & Panel Q/A:
Mbali Matiwane, Co- Chair **2:30 pm - 3:00 pm**

Wrap up

Supporting organisations

IWA the international water association
City of Cape Town ISIXEKO SASEKAPA STAD KAAPSTAD — Making progress possible. Together.
Cape Town & Western Cape Convention Bureau — a division of WESGRO
RAND WATER
gls consulting — an EOH company
EOH — Technology makes it possible... People make it happen
WATER RESEARCH COMMISSION
water & sanitation — Department: Water and Sanitation, REPUBLIC OF SOUTH AFRICA
Honeywell
WRP
aquatrip
TECHNOLOG
SINGER VALVE — Result-Based Solutions. Globally.
ISOIL INDUSTRIA — The solutions that count
sebaKMT — A member of Megger Group

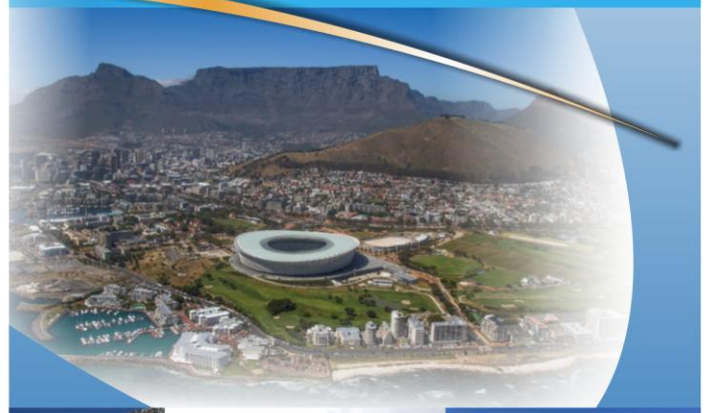
Water Loss 2018

Cape Town , South Africa
www.waterloss2018.com

PRE-CONFERENCE WORKSHOP

AN INTRODUCTION TO NON-REVENUE WATER TOPICS

6 May 2018
Century City Conference Centre and Hotel
Cape Town, South Africa



The main event of the:
IWA the international water association | Water Loss Specialist Group

City Partner:
City of Cape Town ISIXEKO SASEKAPA STAD KAAPSTAD — Making progress possible. Together.

The World's Premier Water Loss Conference

PRESENTERS:

Dr. RONNIE MCKENZIE, *PhD, BSc (Hons), Pr Eng, MICE, FSAICE.*
Managing Director, WRP Consulting Engineers

Ronnie Mckenzie has a wide experience in Water Demand Management, Hydrology, Water Resource Planning, Management and Operation. He has been involved in the analysis of many water resource systems throughout the Republic of South Africa and elsewhere in Southern Africa.

He was responsible for the development of the Royalty Hydrology for the Lesotho Highlands Water Project and introduced the Burst and Background Estimate methodology for leakage management to SA as well as the principles of advanced pressure control.

He has developed many packages to assist water utilities manage their leakage including SANFLOW, PRESMAC, BENCHLEAK, ECONOLEAK, and AQUALITE. He was responsible for the initiation and development of the Khayelitsha and Sebokeng Pressure Management Projects and has provided specialist support to various international organisations including GiZ, the United Nations, European Union and the World Bank. He is currently Chairman of the IWA Water Loss Specialist Group

TIM WALDRON, *PhD, BSc,*
Pr Eng, FICD, MAIM.
Retired, Former Chair IWA: Water Loss Specialist Group, Former CEO of Wide Bay Water Corporation

Tim is the recently retired Chief Executive Officer of Wide Bay Water Corporation in Australia. During his 15 years in the Queensland region, Tim helped to make the Corporation into Australia's leading water supply utility, receiving the Prime Ministers Environmental Award, the Australian Water Association Environment Award, and numerous Engineering Excellence Awards. Tim is recognised as one of Australia's experts on water loss control and water utility corporate management.

At the Vienna World Water Congress in September 2008 he was appointed as Chairman of the International Water Association Water Loss Task Force. Tim has since been reappointed to the position of Chairman at the Brazil Congress and is leading the 2012 World Water Congress in Korea and the WaterLoss 2012 International Conference in the Philippines on this issue. Due to the success of the work undertaken by the Task Force, it has been promoted to the status of becoming a permanent IWA Specialist Group.

Tim has 40 years experience in the water and wastewater industry and has been an advisor to 3 Prime Ministers. Born and educated in England, Tim worked for North West Water U.K. for over 20 years including 10 years as the Water Supply Manager of the City of Preston servicing a population of approximately 1.2 million people.

His specialist knowledge in water demand management gained at North West Water UK led to his secondments as a British Government Technical Cooperation Officer to various Governments, and to the United Nations as Technical Representative for the U.N.D.P. (South Pacific) and the World Health Organisation.

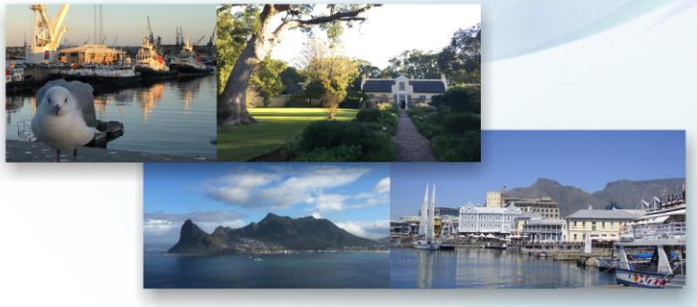
Over 30 countries have been able to reduce their water demand following Tim's influence on their government policies and utility actions.

KENNETH J. BROTHERS, *P. ENG.*
Managing Director, Hydrotech Consulting

Ken is managing director of Hydrotech Consulting. He has 45 years' experience spanning municipal utilities water leak detection, water loss reduction management at the senior operations and general management levels and as a utility management consultant.

Ken is a Professional Engineer, a graduate of St. Francis Xavier University, Nova Scotia Technical University and Queen's University Executive Program. His municipal public works and utility management experience was in Halifax, Nova Scotia, City of Ottawa and the Niagara Region, Ontario, Canada.

He has been active in several national and international associations, and has served as President of the Canadian Water and Wastewater Association, a Director and Vice-President of the American Water Works Association, and Chair of the International Water Association Water Losses Task Force and a member of the IWA Water Losses Scientific Group. He is recognized as a Fellow of IWA since 2011, recipient of George Warren Fuller Award from AWWA and as an international expert in water losses reduction and system management. He has presented water management and losses reduction workshops and presentations in 23 countries and undertake water loss reductions initiatives in over 60 water utilities.



MBALI MATIWANE.
Divisional Head: Water Quality and Revenue Management
Water and Sanitation Department,
Ekurhuleni Metropolitan Municipality

Mbali Matiwane is the Head of the Water Quality and Revenue Management Division in the City of Ekurhuleni Metropolitan Council. She has over 15 years' experience in the municipal water supply environment, having started her career as a Project Engineer and working her way up to Senior Management levels. She is currently completing her MSc studies in Water Engineering with the University of Witwatersrand. Her expertise include the provision of basic water and sanitation services, contract management, water demand management and revenue enhancement.

Mbali was responsible for the development and implementation of the Water Conservation and Demand Management Strategy for the City of Johannesburg, which comprised of over 11,800km of water network and 560 PRVs. Her active participation in the flagship programmes such as Pressure Management, Sectorisation and Active Leakage Control saw the City reduce its growth in demand to zero. She is currently driving Revenue Enhancement projects within the City of Ekurhuleni, which include large user meter consolidations, replacement of aged meters and tariff determination. She was also involved in the establishment of the NRW Reduction Program in Africa and the development of Guidelines for the Use of Model Performance Based Contract for Water Demand Management.

DAVID PEARSON.
BSc, Diploma in Water Engineering
Independent Consultant, Member of IWA: Water Loss Specialist Group

David is a chartered engineer with a BSc in Civil Engineering from Imperial College, London and a Diploma in Water Engineering. At the beginning of his carrier he worked mainly on water resource studies before moving into distribution operations as Regional Technical Manager for North West Water, one of the largest UK water companies.

In 1994 he became Programme Manager for leakage. His efforts were critical in maintaining supplies to a population of over 3 million customers (8 million people) through the major drought of 1995/96 and driving a leakage strategy that saw losses halved in 4 years – a reduction of over 450Ml/d. He was a member of the UK national leakage group and has been the client manager on a number of national research projects.

After a total of 33 years experience in the industry, David is now working as an independent consultant and has worked for a number of clients both in the UK and internationally. He became a key member within the IWA Water Loss Steering Group and was awarded membership of the IWA fellow's program for his achievements and contributions to the group.