



Introduction

Following on from the successful series of Water Demand Management Workshops and Water Demand Management Master classes held bi-annually by WRP Pty Ltd since 1997; the 2013 Summit event was again a great success and for the third time had full IWA support and approval. The South African event was held over 2 days in both Johannesburg and Cape Town attracting more than 220 delegates between the two venues from 11 countries. This year's events were by far the most successful events held to date and they highlight the growing importance of water loss control in the African environment as they attracted delegates from many parts of Southern Africa including Botswana, Namibia, Mozambique, Zambia, Kenya, Lesotho, Madagascar and South Africa. In addition there were speakers and delegates from the UK, Australia and Germany. The breakdown of delegates between the various sectors is provided below in **Figure 1**.

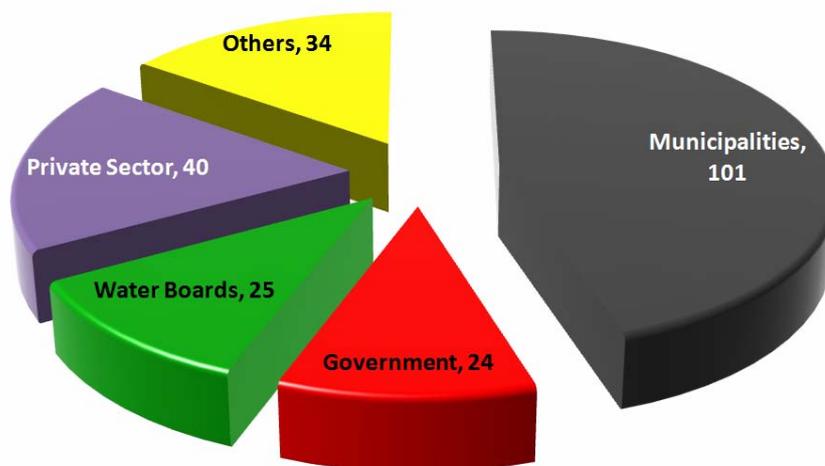


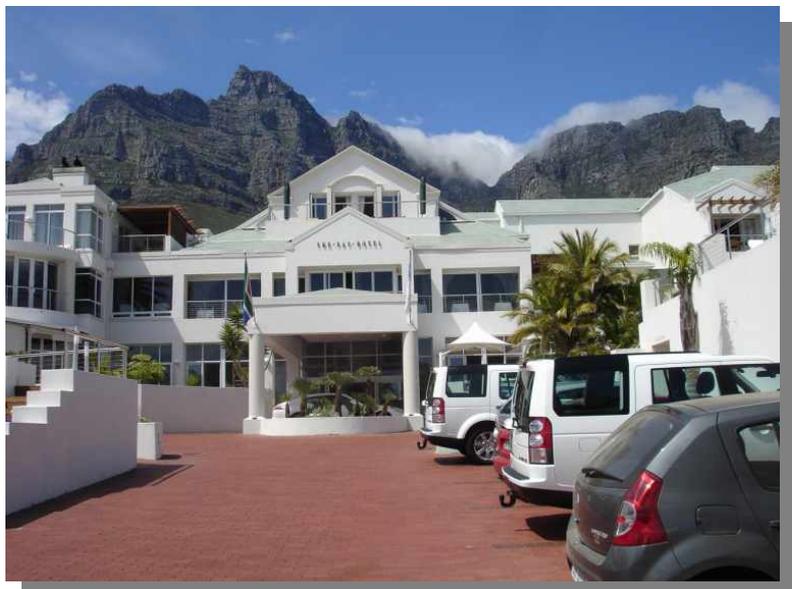
Figure 1: Distribution of delegates between sectors

This was only the third year that the events were organised in a Summit format as opposed to the many previous events which were geared towards the normal “Master class” or workshop format. This year's event was again a joint effort involving the private and public sectors with WRP Pty Ltd as the main organiser supported by many organisations including the South African Department of Water Affairs, the South African Water Research Commission, The Development Bank of Southern Africa, The City of Tshwane (now the largest city by area in Africa), Sasol, the German Government (GiZ), British Government (DFID) and the Australian Government (AusAid). This year's event was further supported by Rand Water in Midrand and the City of Cape Town in Cape Town, both of whom provided great support in organising the events and encouraging delegates to attend.

The record number of attendees was achieved despite numerous other similar water loss events which were organised around the same time by various commercial conference organisers. The record attendance was a reflection of the quality of the speakers, the quality of the organisation and the fact that this event is not operated to generate income but rather to create awareness of the need to conserve water throughout Southern Africa.

The event took place over 2 days with the Johannesburg event being held in the Vulindela Auditorium of the Development Bank of Southern Africa while the Cape Town event was held at the famous 5-star Bay Hotel in Camps Bay (see **Figure 2**). The Chairman of the IWA Water Losses Specialist Group, Mr Tim Waldron travelled from Australia to open the Midrand event where he provided a key-note address on the latest developments worldwide on water loss reduction.

In Cape Town, the City of Cape Town provided great help and support through the efforts of Johan Prins and his colleagues from the Water and Sanitation Department. The high level of support for water loss reduction in Cape Town was demonstrated by the opening address which was given by Councillor Ernest Sonnenberg who is the Executive Mayoral Committee Member responsible for Water, Sanitation, Solid Waste and Electricity for the whole of Cape Town. Councillor Sonnenberg highlighted the high level of political support within Cape Town for saving water and indicated that Cape Town is one of the only Metros in South Africa that is likely to achieve the water use targets set by Water Affairs for 2014 as part of the country's drive to reduce water losses. He indicated that the latest estimate of Non-revenue Water for the City of Cape Town is now 21% compared to the country average of 37% and the 2014 target for Cape Town of 20.2%. He also stressed the importance of such water loss events and expressed his thanks to WRP for taking the initiative to organise the event with the City and especially during the winter period when tourism tends to be less popular. The City of Cape Town is embarking on a drive to encourage such events during the low-season when accommodation is plentiful and rates tend to be low throughout the City.



**Figure 2: View of famous Bay Hotel
– Venue of 3rd IWA Regional
Summit on Water Losses**

The South African events are quite unique in the respect that they are organised jointly by both the public and private sectors and are not operated as a profit making events by official conference organisers. It is intended to retain the events as non-profit making events to ensure that the attendance fees remain low enough to encourage all Municipalities throughout Southern Africa to attend. The two events were again chaired by Dr. Ronnie Mckenzie from WRP who is well used to such a role after helping out as acting Chairman of the Bi-annual IWA world water loss event which was held in Cape Town in 2009. He managed to keep the proceedings on track and the speakers in check which is never an easy job when there is so much to say and so little time in which to say it.

In general the event ran very smoothly and kept to schedule in most cases. Feedback from the attendees was very favourable and this year's events were rated by the participants as the best yet.

Councillor Sonnenberg

As mentioned above, Councillor Sonnenberg, from the Executive Mayoral Committee of the City of Cape Town kindly opened the Cape Town event and his opening address is provided at the end of this conference report.

Tim Waldron and Guenter Hauber-Davidson

Mr. Tim Waldron is well known throughout the world as one of the top WDM specialists and Chairman of the IWA Water Losses Specialist Group. He is well known for his lively and interesting presentations and his opening address highlighted the importance of reducing water losses from potable water supply systems worldwide and the key role that is being played by the IWA in its efforts to drive down wastage. He presented an overview discussion on the latest developments around the world with regard to the reduction of water losses in urban areas. Mr. Waldron, highlighted that the issue of water losses is now considered by the IWA to be one of the most important issues facing the world today. He stressed the importance of selecting suitable Performance Indicators (PI's) and while acknowledging that it is difficult to move away from % losses, they should not be used for comparison purposes. He suggested various alternative PI's that can be used in place of percentages including the ILI which he suggested as the most appropriate.

He indicated that from his own assessments in South Africa, he believes that Pressure Management is one of the most important water loss interventions that should be considered as part of any water loss strategy due to the unusually high pressures which exist in many parts of the country. He added that he was surprised to hear that so much money is being used in some municipalities on pipe replacement relative to pressure management and that it may be possible to achieve greater overall savings if some of the pipe replacement budget is used to reduce system pressures. He concluded that he was very impressed with the level of expertise in South Africa. He added that the country is still rated as one of the leaders in pressure management worldwide with the famous Khayelitsha and Sebokeng installations being used as examples of best practice at almost every water loss conference in the world.



Figure 3: Tim Waldron inspecting one of world's largest Pressure Management installations near Johannesburg

Mr. Hauber-Davidson from Water Group in Australia provided a general overview of the need for water conservation globally as well as specifically in Australia where he is based. His presentation touched on the issues of water auditing and WDM of industrial consumers and he indicated that such measures were likely to become commonplace in South Africa as water becomes more expensive.

Allestair Wensley, Paul Herbst, Kobie Mare and Jay Bhagwan

Following the opening address, there were three related discussions from various representatives from Water Affairs (Allestair Wensley, and Paul Herbst) as well as Kobie Mare from Rand Water and Jay Bhagwan from the Water Research Commission. This initial round of presentations is repeated annually in the opening session to provide a general overview of the water situation throughout South Africa and to set the scene for the remaining presentations. These initial presentations are updated each year to include the latest reservoir storages as well as the most recent municipal water demand figures to enable the balance between supply and demand to be presented. In this manner, it is possible to highlight the key problem areas in South Africa and to indicate whether or not the country

The first presentation from Mr Bhagwan set the scene by explaining the role of the Water Research Commission in South Africa and presented an overview of the work being undertaken by the Water Research Commission to support water loss control within Municipalities. He provided details of many software applications which are freely available from the Water Research Commission to assist Municipalities in understanding and subsequently reducing water losses. He stressed the fact that the programs are free to all Municipalities both in South Africa and elsewhere in the world and that they are regularly downloaded by overseas organisations. He also provided details of the recent assessments of water losses undertaken throughout South Africa by the Water Research Commission and indicated that the most recent assessment is one of the most comprehensive of its type undertaken in the world.

Following Mr. Bhagwan's presentation, Mr. Herbst from the Directorate of Water Use Efficiency explained the actions being taken by his Directorate to assist the water suppliers in reducing their non-revenue water. He indicated that his Department would work with the Auditor General to ensure that water audits are submitted annually by Municipalities and that new water licenses would not be approved unless municipalities prioritise and budget properly for meaningful WDM interventions. He explained that many parts of South Africa would experience water supply problems in future if demands for water were not curtailed and that water loss reduction was an essential part of any long-term water supply strategy. He indicated that Water Affairs was responsible for ensuring that water would be available to every South African in future and that his Department has now set specific water use targets for all major Municipalities which will help to ensure a sustainable water supply into the future and encourage all municipalities to introduce water loss reduction measures. He added, that Gauteng was currently using more water than the Vaal River System could safely yield and that this situation would remain a problem for at least the next 7 years until the 2nd Phase of the Lesotho Highlands Water Project was operational. He concluded by indicating that the water abstraction permit for the main Bulk Water provider in Gauteng (Rand Water) had been capped at current levels for the next 7 years.

Following on from Mr. Herbst's presentation and his statement that Rand Water's abstraction license had been capped for the next 7 years, Mr. Kobie Mare from Rand Water provided a very

interesting overview of the water supply situation in Gauteng to explain why water loss reduction in the area was no longer an option but a necessity. He presented a graph of the total storage in the Vaal River System (see **Figure 4**) which is the source for virtually all water supplied in Gauteng. He explained that from 2005 to 2011 the area received above average rainfall resulting in most of the storage reservoirs being at or near their full supply storage. During this period, the system was able to support water demands which were above the theoretical limit of the system without any apparent problems. Since 2011, however, the storage has been dropping and is currently sitting at approximately 9 000 million m³ compared to the maximum full supply storage of 11 100 million m³. Should the trend of the past 2 years continue and the storage drops to 6 000 million m³, restrictions will be imposed as this storage is the “restriction trigger level”. He indicated that it is not necessary to panic at this stage and that both Water Affairs and Rand Water are monitoring the situation very closely. He concluded by stressing that predicting the next drought is always a problem as you never really know until you find yourself in the middle of it and can only look back a few years to realise when it first started. In effect, we may already be in a drought which may have started in 2011 but we will only know for sure in the next year or two. No-matter what happens, there will be a real need to reduce water losses throughout Gauteng.

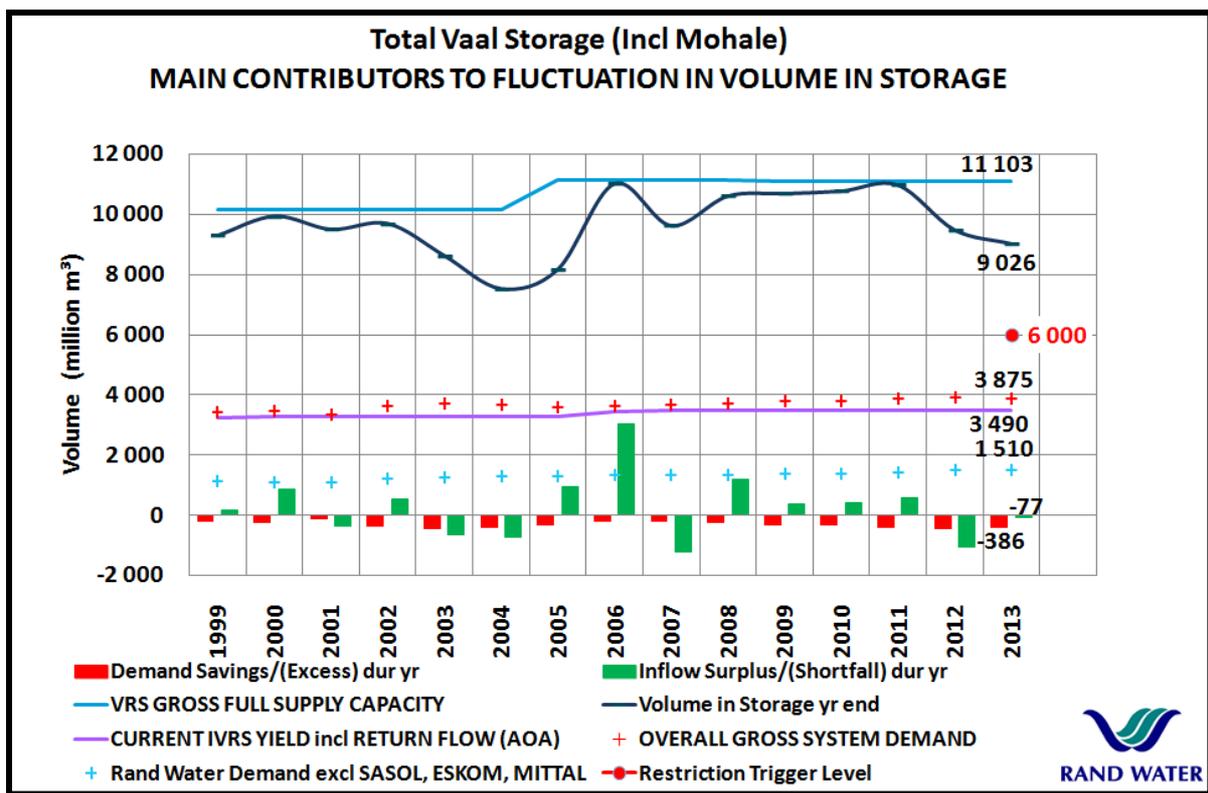


Figure 4: Storage situation in the Vaal River System (courtesy Kobie Mare: Rand Water)

Mr. Wensley closed the overview session by summarising the work and preliminary results which he has been preparing for the department of Water Affairs on the Municipal water use throughout South Africa. Mr. Wensley stressed that his Department had been working closely together with Mr Herbst and his colleagues together with Mr. Bhagwan from the Water research Commission. Between the various departments and organisations, they had realised the importance of measuring the water use and levels of water losses in all Municipalities throughout the country. By pulling resources and combining the various sources of information, great progress has been made in

assessing the overall level of water losses throughout South Africa. He stressed that they have used the recommended International Water Association Water Balance for all of the municipal water audits and that the results make interesting reading. A summary of the results for the 8 metros is provided in Figure 5. It should be noted that the Non-Revenue Water for the 8 metros is currently estimated to be 33.8% which can be compared to the average for all municipalities which currently stands at 37%. The 8 metros represent almost 80% of the total Municipal demand and the target Non-Revenue Water for 2014 was set at 27.4% back in 2007. Mr. Wensley indicated that only one of the Metros, namely Cape Town will achieve its water loss reconciliation strategy target by 2014 and the remaining metros.

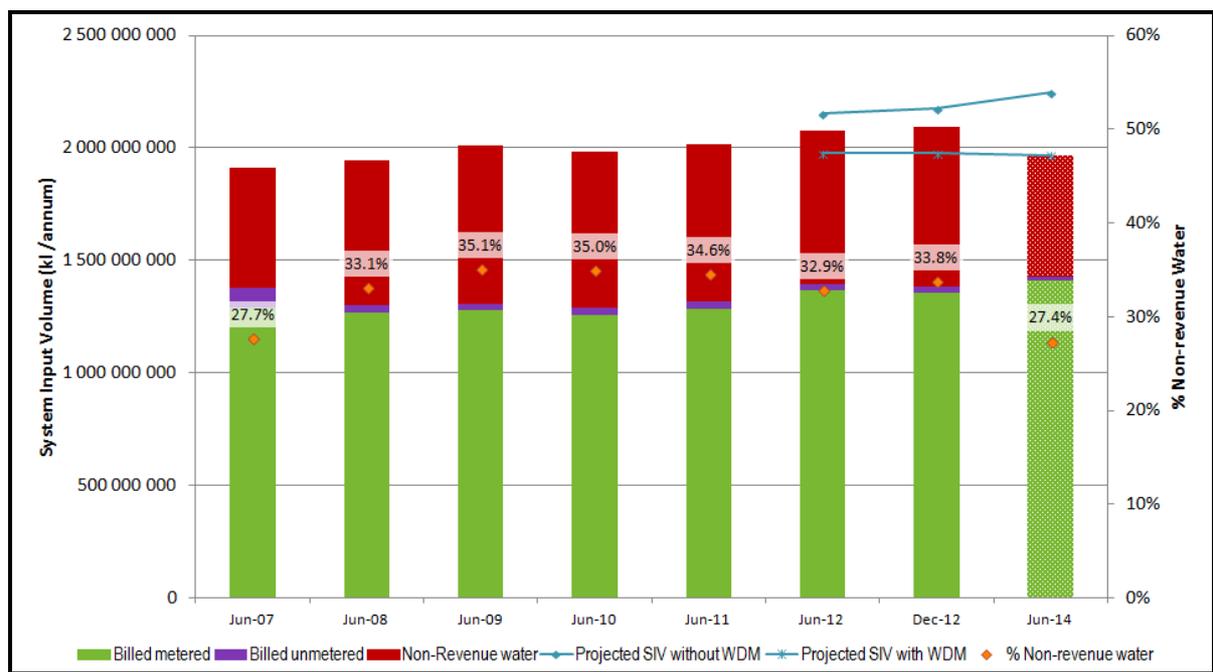


Figure 5: Water use and NRW assessment for the 8 Metros (courtesy A Wensley, DWA)

The presentation also included details of the current levels of physical leakage in each metro using the internationally accepted Infrastructure Leakage Index (ILI) as shown in **Figure 6**. This index provides an indication of the level of physical leakage in a system compared to the theoretical minimum level of leakage that can be achieved for the system. A value of 1.0 suggests that the system is operating at best practice levels while an index of 10 suggests that the physical leakage is 10 times the theoretical minimum level that can be achieved. In developing countries such as South Africa, the average ILI is approximately 6 and anything below 4 would be considered acceptable.

Mr Wensley also presented the latest preliminary findings for the 19 secondary cities, the results of which are shown in **Figure 7**. The level of physical losses in the 19 secondary cities is shown in Figure 8 which again highlights the Infrastructure Leakage Indicator. The figures from the secondary cities are broadly in line with those from the metros but the overall NRW tends to be slightly higher with an average value of over 39% and a very ambitious target of 16.2% which will clearly not be achieved in the near future.

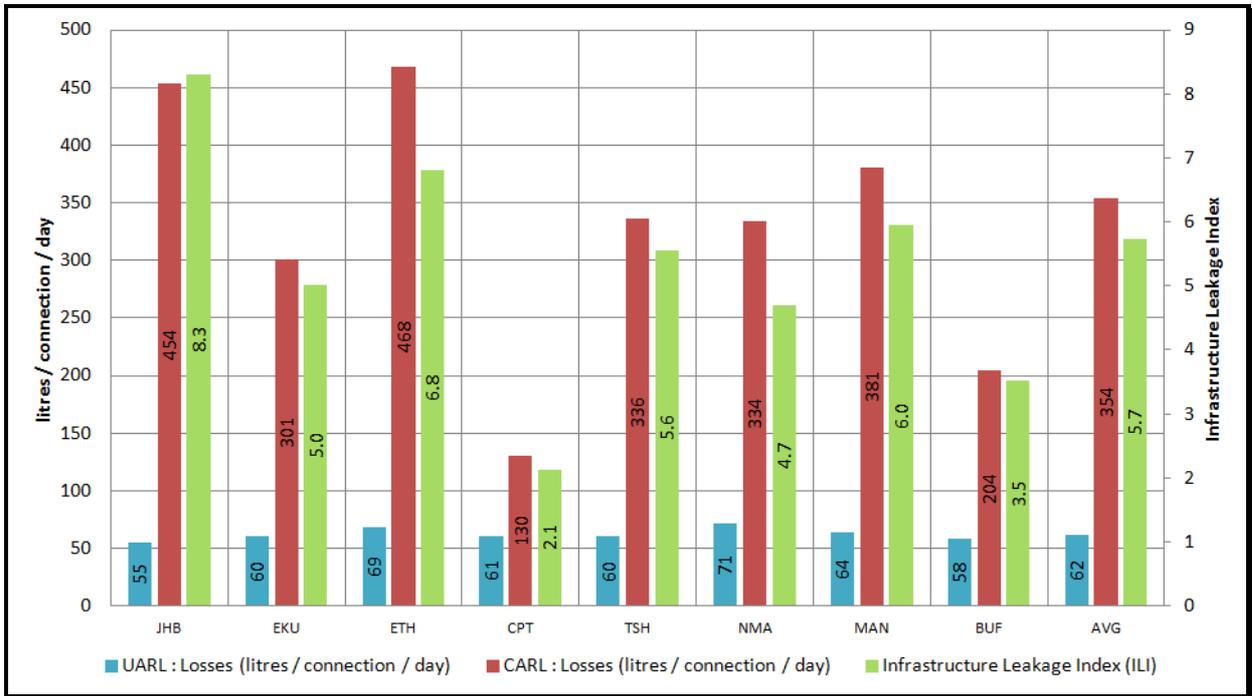


Figure 6: ILI indicator of physical leakage in metros (courtesy A Wensley, DWA)

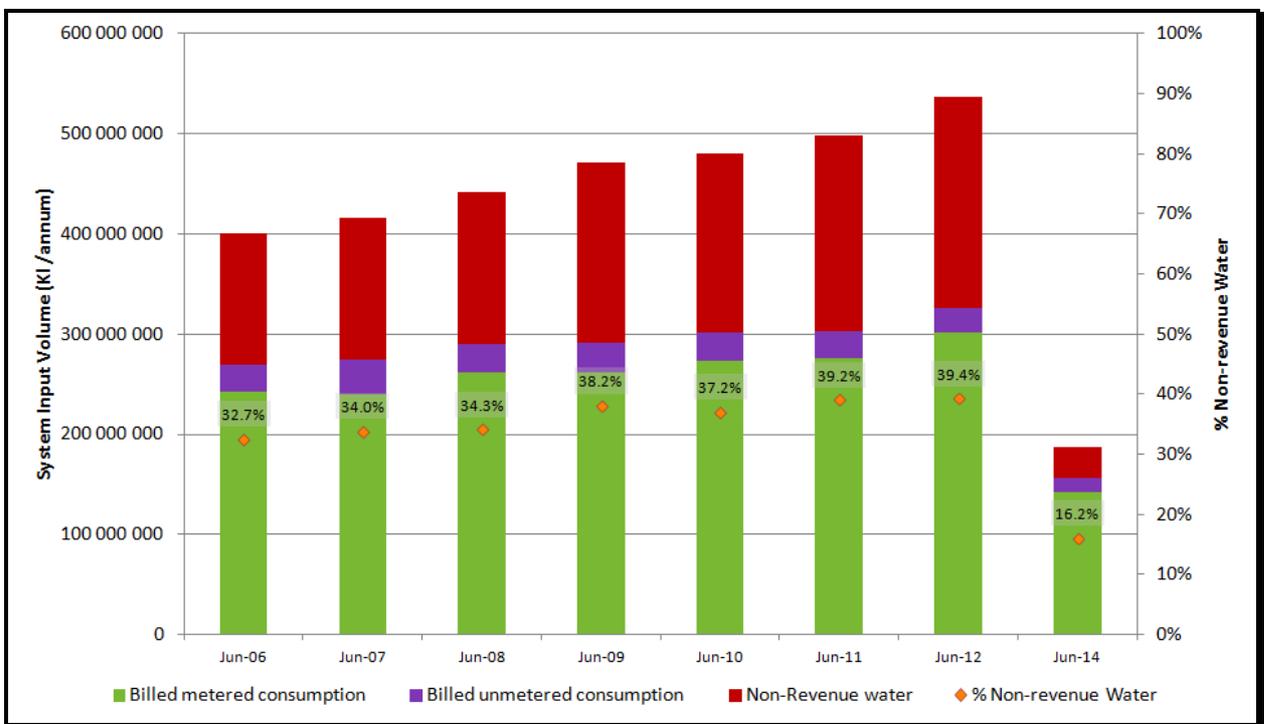


Figure 7: Summary of water use and NRW for the 19 Secondary cities (courtesy A Wensley, DWA)

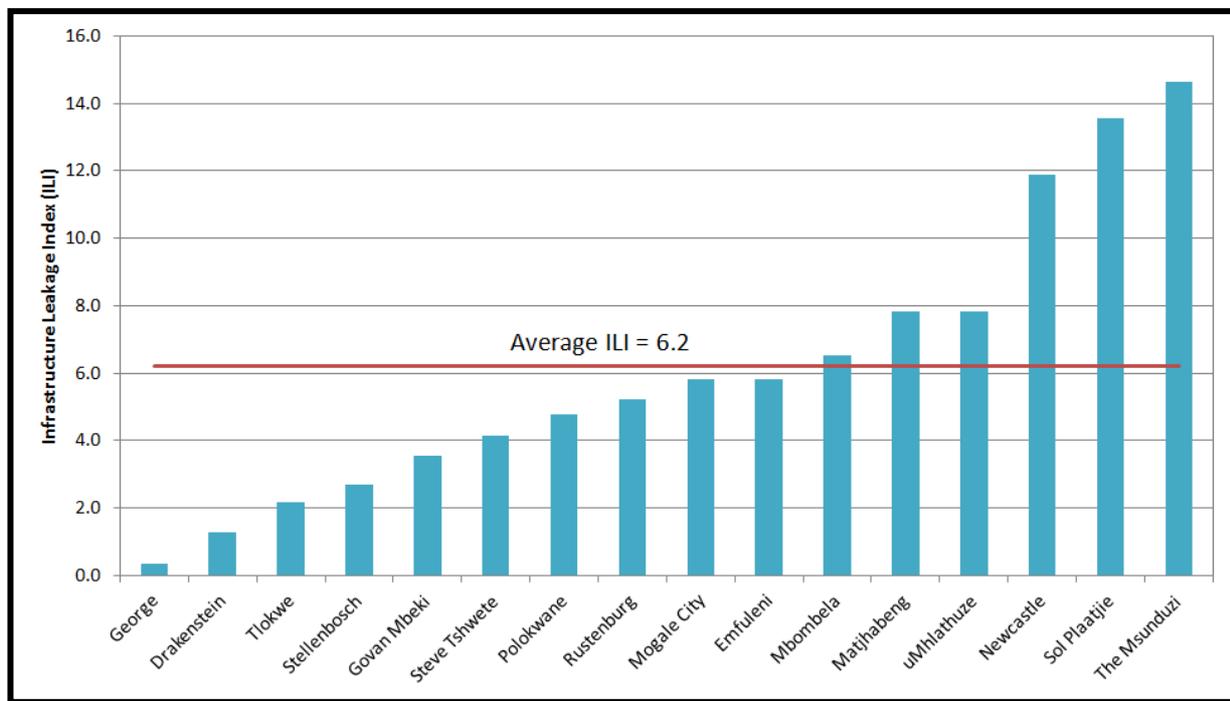


Figure 1: ILI indicator of real losses for 19 Secondary cities (courtesy A Wensley)

In summarising the water loss situation throughout South Africa, Mr. Wensley concluded that:

- The overall level of non-revenue for all municipalities in South Africa is approximately 37% and the figures suggest that this has been gradually rising over the past 10 years;
- The total Municipal water use is approximately 4 400 million m³ per annum and Non-Revenue component is estimated to be in the order of 1 500 million m³/annum.
- The non-revenue water represents approximately R7 billion per annum based on an average production cost of R5/m³.
- Although the South African level of Non-revenue water at 37% is close to the world average value of 38%, it is considered to be too high for a water scarce country such as South Africa.
- The average per-capita consumption of water in South Africa is around 235 litres/person/day which is well above the world average and can be compared to less than 170 litres/head per day in Australia for example. This figure suggests that there is considerable room for improvement and water losses represent a “resource” that can be accessed through proper water loss management practices.
- It appears that all metros and large municipalities are at last starting to implement water loss reduction interventions. Although such measures will not provide results in time to meet the 2014 targets, they should start to show results within the next few years.

Mr. Wensley concluded that it is clear that water loss reduction is taking longer to implement than originally hoped and that the results often materialise a year or several years after the interventions have been implemented. His department plan to continue auditing and monitoring water losses throughout the country and hopefully the increasing trends in past years can be reversed.

Dr. Kevin Wall

Dr. Wall from the CSIR provided an interesting and thought provoking presentation in which he discussed the dire need for maintenance of the water reticulation networks in many municipalities throughout South Africa. He highlighted the very poor “score” achieved by most municipalities on their service provision scorecard which is reviewed annually by the South African Association of Civil Engineering. After highlighting the many problems being experienced by municipalities throughout the country, he presented details of the possible job opportunities that such problems offer. He added that although the job opportunities tend to be for low paid and unskilled jobs, this is exactly the type of jobs that are needed in virtually every municipality in the country. Helping to address many years of poor maintenance is an issue that needs to be addressed and it will create jobs. He stressed that this is a golden opportunity to improve both service delivery countrywide and at the same time get local residents into some form of useful employment.

Young Water Professionals

Following discussions with the various supporting organisations, it was agreed that this annual event should try to encourage presentations from young water professionals and in this manner help them to develop their careers. It was therefore decided to include a number of case studies which were presented by some of the younger and less experienced water professionals at both the Cape Town and Midrand events. These presentations were very well received and this will become a standard feature of all future events. The presentations by young water professionals included:

- Zama Siqalaba from WRP on behalf of Emfuleni Municipality on the need for community education when implementing any technical water loss reduction intervention
- Mthoko Mlotshwa and Tshilidzi Godzwana from WRP on behalf of Ekurhuleni Metro on the Wadeville bulk meter consolidation and replacement project
- Xola Myekwa and Linda Siyengo from the City of Cape Town on the results of water loss reduction activities undertaken in 3 specific areas in Cape Town
- Nina Viljoen from the City of Cape Town on the monitoring and assessment of water loss reduction activities including community awareness undertaken throughout Cape Town.

Ms. Siqalaba, a Director of WRP Pty (Ltd), gave a presentation on the role and importance of community awareness and education with regard to water use in the community. She indicated that this issue is often ignored in favour of the direct technical interventions since they can show direct savings which can be easily quantified and evaluated. She presented a solid case to show that even the most potent technical intervention can fail completely if the community it serves are not supportive. She provided details from her recent work in Emfuleni where she manages up to 80 local community members who work within the community to promote awareness of the need to save water and also repair basic leaks within the properties. She provided details of the project which has covered involved basic plumbing repairs in over 65 000 properties at an average cost of R130 per property. Zama’s presentation reinforced the message given by Dr. Wall at the Midrand event in which he stressed the importance of water loss reduction within Municipalities as a means of creating real jobs to the local communities in addition to the water loss reduction.

Mthoko Mlotshwa and Tshilidzi Godzwana from WRP presented some interesting results on behalf of Ekurhuleni Metro on the Wadeville bulk meter consolidation and replacement project. Wadeville

is one of the largest industrial areas in Southern Africa and is located in Gauteng in South Africa. The area falls under the jurisdiction of the Ekurhuleni Metropolitan Municipality which is the 2nd largest Metro in the country. The industrial area consists of approximately 50 very large water users, 300 medium water users and 200 small water users. On commencement of the project, consumer metering and billing was unreliable, leakage levels were very high and network pressures were also high albeit not as high as modelled static pressures, due to the high levels of leakage.

A comprehensive program was launched to consolidate and upgrade all consumer metering in the area to improve the accuracy of metering to large consumers and enhance revenue collection. Secondary benefits include; Reducing multiple connections to consumers to a single connection (fewer consumer meters), improved knowledge of network conditions (typically industrial areas), improved consumer relationships, resolution of consumer metering and billing disputes. Fewer meters to large consumers also improves the cost benefit ratio for implementing Automatic meter reading. The results from the project have been so successful that Ekurhuleni Metro is now considering extending the project to include a further 25 000 industrial and/or large commercial consumers.

Xola Myekwa and Linda Siyengo from the City of Cape Town presented the results from various water loss reduction activities undertaken in three specific areas in Cape Town. The results in each case showed a marked reduction in overall water consumption ranging from almost 50% to around 20%. They stressed the importance of community involvement and the presentations were well received by the delegates.

The last of the young water professional presentations was made by Ms Nina Viljoen from the City of Cape Town on the monitoring and assessment of water loss reduction activities including community awareness undertaken throughout Cape Town. She delivered a very interesting presentation on the methodical approach that has been adopted by the City of Cape Town to monitor and analyse the success or failure of various water demand management interventions. The rigorous approach which she described was very interesting and nothing similar has been presented at any previous water loss conference or summit. The approach adopted and presented by Ms Viljoen is an excellent example of how the success of many of the less technical WDM interventions can in fact be measured. It is important to try and evaluate the success of every WDM intervention in some manner so that the effort and expense involved with the intervention can be gauged against the savings achieved.

Lenke Thamae, Bob Kleynjan

Lenke Thamae and Bob Kleynjan presented a very interesting case study on an alternative funding model which may help fund new water loss reduction projects throughout South Africa and elsewhere in the world. Mr. Thamae is the Executive Secretary of the Orange Senqu Commission while Bob Kleynjan is a water utilisation specialist from SASOL New Energy. They presented details of a project involving a unique funding model in which the Public Sector and Private Sector co-operate to save water in the Municipality. SASOL is one of the largest single users of water in South Africa and receives its water from the same water resources system as Emfuleni Local Municipality. By helping the Municipality to save water in its area of supply, SASOL both protects its own water supply and at the same time helps to address a serious water loss problem which Emfuleni Local Municipality is struggling to address due to a lack of resources. The novel approach offered jointly by SASOL and Emfuleni Local Municipality has attracted great interest around the world and is being supported by several international organisations including GiZ, DFID and Aus Aid. The proposed project is already proving successful and the savings achieved in the first year of operation are now being used to continue the interventions into the second year. This project has the potential to become one of the key WDM interventions in South Africa and will hopefully offer and demonstrate a new funding model which can be rolled out throughout Southern Africa.

Andre Kowalewski, Hanre Blignaut and Patrick Robinson

Andre Kowalewski presented the results from Drakenstein Municipality while , Hanre Blignaut and Patrick Robinson presented similar results from their work in Overstrand Municipality – both situated in the Western Cape. These two presentations have been lumped together since they were both quite similar in the manner in which the Municipalities have tried to address water losses and they offer excellent examples of what can be achieved by dedicated personnel trying to get the basics right. In both cases, the water losses in the Municipalities were very high and increasing before action was taken to reduce them.

In the case of Drakenstein, the overall water losses were reduced from 35% in 1999 to 12% in 2012 as shown in **Figure 9** and the savings were achieved through a range of interventions of which Mr. Kowalewski considers pressure management to be the most important. The results speak for themselves and Mr. Kowalewski received a warm reception and applause from the Midrand delegates, most of whom are struggling to get below 25% let alone 12%.

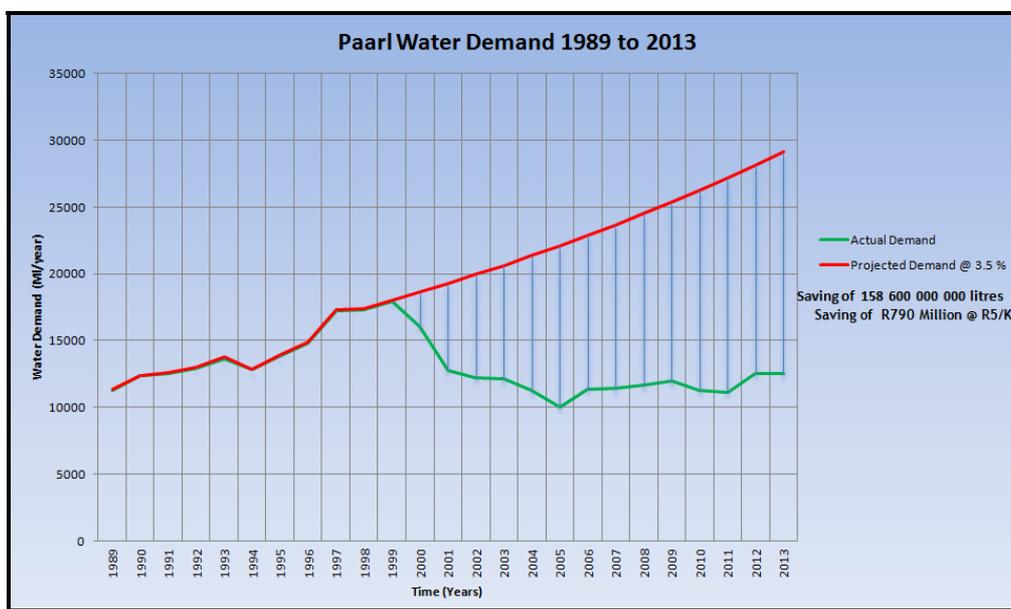


Figure 9: Impact of water loss reduction activities in Drakenstein (courtesy A Kowalewski)

In the case of Overstrand Municipality, Hanre Blignaut and Patrick Robinson who happen to be former colleagues of Mr. Kowalewski have undertaken very similar interventions and also recognise the importance of pressure management in their overall strategy. The results of their efforts which started in 2010 are shown in **Figure 10** which highlights the impact of WDM on the original water losses which were initially over 28%. Clearly they have a long way to go to emulate the success of their former colleague in Drakenstein, however, it also highlights that implementing WDM is a long term strategy and must usually be given at least 10 years in order to achieve significant savings.

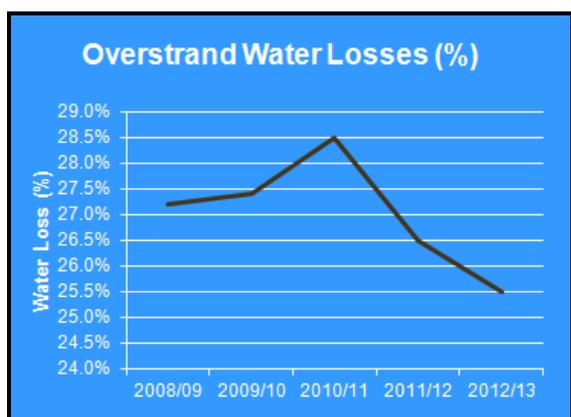


Figure 10: Impact of WDM intervention in Overstrand Municipality (courtesy Hanre Blignaut and Patrick Robinson)

Michael Singh

Michael Singh is the Water Affairs champion for WDM in KwaZulu/Natal and has a long history of promoting WDM within the Department. He presented an interesting overview of the levels of Non-Revenue Water in various parts of KwaZulu-Natal as shown in **Figure 11**. Although some of the figures appear very high when expressed in percentage terms, it should be noted that in rural areas, the percentage losses will always be very high and this highlights the problem of using percentages to compare leakage in different areas. Mr Singh highlighted the budgets required to address water losses in his area which were substantial and came to approximately R1 billion excluding the budget for Ethekeweni which in itself exceeds all of the other areas combined.

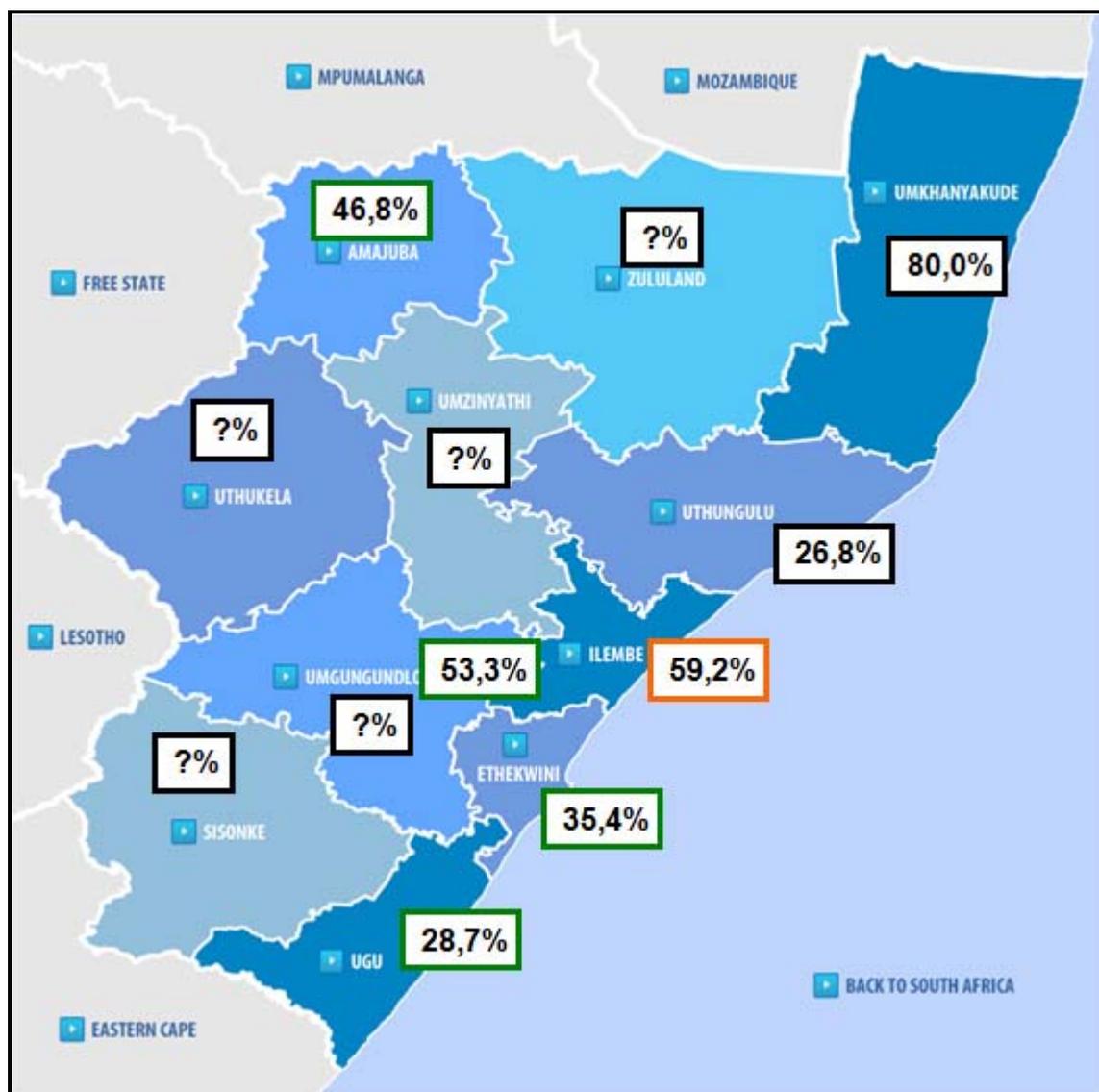


Figure 11: Current levels of NRW in Kwa Zulu/Natal (courtesy Michael Singh, DWA)

Suppliers

Although the Summit event does not involve marketing from suppliers, it was recognised that the suppliers who were kind enough to support the event helped to ensure that it was sustainable and without such support, it would not be possible to organise and continue to present this annual event. As a result, each supporting organisation was given a short slot in the programme to mention any new developments involving their product range.

Mr. Keith Bailey from Elster/Kent metering discussed the latest developments with their new Hybrid 5000 range of meters which despite being single element meters have a very high range which in most cases eliminates the need to use a combination meter. Mr. Bailey highlighted the fact that the demand for the meter has been so high in South Africa that they have had to pull in almost 40% of world production of the meter to support local South African demand.

Hymie Marnewick from Xlink Communications provided details of their new service which they are offering to industrial consumers and Municipalities to provide real time internet based flow and pressure information. He highlighted that they are currently processing more than 30 million transactions per month via over 80 000 GSM/GPRS machine to machine devices and that the new service will help to address water loss problems experienced by many consumers.

Mr. Marnewick's presentation was followed by Steve Howard, the MD of Technolog from the UK which is the world's largest manufacturer of flow and pressure loggers. He indicated that they initially developed the logging and pressure controllers for the UK gas industry in the 1990's and that it has since been applied successfully to the water industry. He added that Technolog was proud to be associated with the Khayelitsha and Sebokeng projects which are two of the largest in the world and are regarded internationally as world's best practice due to the savings they have generated over the past 12 years and the sustainability of the installations and associated control equipment. He stressed that Technolog does not promote the use of pressure controllers in all cases and will only recommend such expense in cases where it is clearly worthwhile and can be maintained properly by the Client.

Mr. Cobus Campion, a director from GLS in Cape Town presented details of the GLS software which is currently used by the majority of metros and large cities throughout South Africa. Mr Campion highlighted the benefits of using the GLS software to identify homes and industries which may be using water that is not being billed which is always a main element of the commercial losses. He also highlighted the methodology and software recently developed to identify areas where pipe replacement is viable and cautioned against a blanket approach for pipe replacement following some cases where huge budgets were used to replace pipes which had little impact on the water losses. He recommended that any Municipality considering major pipe replacement should rather try to replace areas selectively based on a robust and pragmatic approach which he outlined to the delegates. He indicated that many of the large metros and municipalities had employed this approach and achieved huge savings when compared to the expense of certain metros where blanket pipe replacement had been introduced.

MIDRAND EVENT



CAPE TOWN EVENT



SUMMARY AND CONCLUSIONS

Following on from the successful series of Water Demand Management Workshops and Water Demand Management Master classes held bi-annually by WRP Pty Ltd since 1997; the 2013 Summit event was again a great success and for the third time had full IWA support and approval. The South African event was held over 2 days in both Johannesburg and Cape Town attracting more than 220 delegates between the two venues from 11 countries. This year's events were by far the most successful events held to date and they highlight the growing importance of water loss control in the African environment as they attracted delegates from many parts of Southern Africa including Botswana, Namibia, Mozambique, Zambia, Kenya, Lesotho, Madagascar and South Africa. In addition there were speakers and delegates from the UK, Australia and Germany. The breakdown of delegates between the various sectors is provided below.

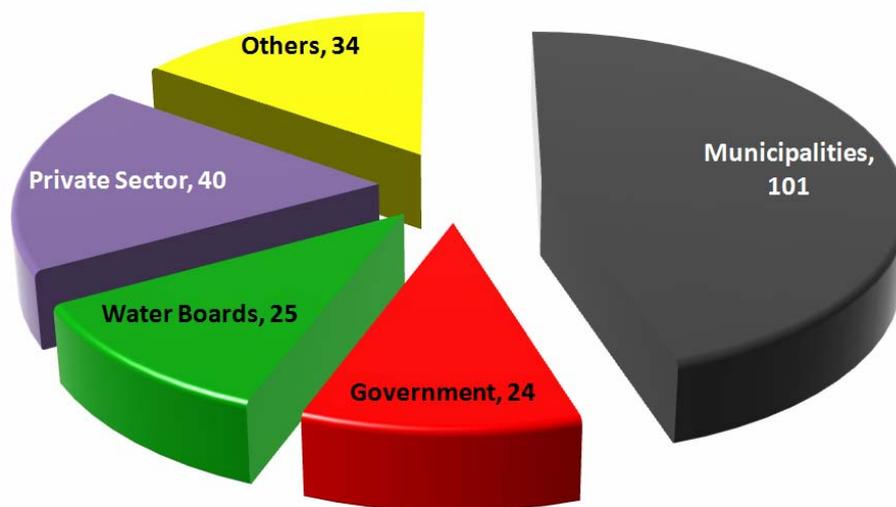


Figure 1: Distribution of delegates between sectors

This was only the third year that the events were organised in a Summit format as opposed to the many previous events which were geared towards the normal "Master class" or workshop format. This year's event was again a joint effort involving the private and public sectors with WRP Pty Ltd as the main organiser supported by many organisations including the South African Department of Water Affairs, the South African Water Research Commission, The Development Bank of Southern Africa, The City of Tshwane (now the largest city by area in Africa), Sasol, the German Government (GiZ), British Government (DFID) and the Australian Government (AusAid). This year's event was further supported by Rand Water in Midrand and the City of Cape Town in Cape Town, both of whom provided great support in organising the events and encouraging delegates to attend. The record number of attendees was achieved despite numerous other similar water loss events which were organised around the same time by various commercial conference organisers. The record attendance was a reflection of the quality of the speakers, the quality of the organisation and the fact that this event is not operated to generate income but rather to create awareness of the need to conserve water throughout Southern Africa.

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In Cape Town, the City of Cape Town provided great help and support through the efforts of Johan Prins and his colleagues from the Water and Sanitation Department. The high level of support for water loss reduction in Cape Town was demonstrated by the opening address which was given by Councillor Ernest Sonnenberg who is the Executive Mayoral Committee Member responsible for Water, Sanitation, Solid Waste and Electricity for the whole of Cape Town.

The Chair for the event, Ronnie Mckenzie from WRP indicated that this year's event was undoubtedly the most successful event of its type held to date in South Africa based on the very positive feedback provided to the organisers by the delegates. The event is run on a non-profit basis and in this manner, the attendance costs are significantly below any of the normal commercial events. More than 20 speakers presented at the event including many well-known local and international specialists. In addition, the event encouraged 5 new young water professionals to present case studies which were very relevant and well received by the attendees.

Mr. Waldron, the Chairman of the IWA Water Losses Specialist Group, commended the organisers and all the speakers on a very high quality event with excellent papers and presentations. He indicated that it is the best regional water loss conference he has attended and he will certainly give full IWA backing to future events in South Africa.

Opening Address by Councillor Sonnenberg: Mayoral Committee Member for Utility Services:

22 August 2013

Good morning, goeie more, Molweni

Welcome to Cape Town, home to a growing population of 3.7 million people, is a place with diverse cultures and communities where there is an abundance of creativity and livelihood and local talent and recently also a preferred tourist destination with Table Mountain recently declared as one of the 7 Natural Wonders of the world.

Both residents and visitors to our wonderful City, which will also play host in 2014 as design Capital of the World, are very aware and conscious of the dependence on water for growth and development but at the same time the need to conserve our most precious resource as Cape Town lies in a water scarce region and with climate change and changing weather patterns increase the demand on available water resources to provide for daily needs.

In realising the need to conserve water, the City's dedicated Water Demand Management section adopted a long term Water Demand Management Strategy in 2007 aimed at reducing water consumption, account for water losses and wasteful water use and develop and implement programs, both technical and educational, to influence behaviour change and bring about water saving.

Deeply embedded in the Strategy is the constant need to provide quality Water and Sanitation services to our communities whilst continuously looking at best practice and improving. This is very evident in the Vision statement of the department to "be a Beacon in Africa for the provision of Water and Sanitation Services", whilst the Mission statement and Values clearly depicts the commitment to service excellence.

Cape Town's potable water is amongst the best in the country, and residents and visitors can drink it with confidence. This is due to the fact that most of it is abstracted largely from unpolluted mountain catchments before being treated and distributed to residents.

The Water & Sanitation Department has received a number of awards in recognition of this, such as the Platinum Award for having excelled in the Blue Drop Awards Programme for four years in succession; Certificates of Excellence from the Water Institute of South Africa WISA (for seven of its eleven Wastewater Treatment Works) and a score of 98,14% for the quality of its drinking water.

The City received four other Blue Drop Awards as the Bulk Provider to areas in the Stellenbosch and Drakenstein Local Municipalities.

In 2010 the City supported the 1st Water leakage Summit in this very venue. The 2013 Water Loss Summits are now in their 3rd year and the Cape Town event has become one of the most popular venues. With the support from the City of Cape Town, the event will certainly grow in strength from year to year.

In September the City will mark the Centenary of the Amalgamation of 7 small municipalities to form the Greater Cape Town in 1913.

This event, which will draw attention to and celebrate the historical event with enormous political and economic implications for the region caused by the need to rationalise the water supply in Cape Town, will also emphasize the ongoing need for water demand management whilst also aiming at attracting entrants to the civil engineering profession. A full programme of activities is being planned.

Recent studies undertaken for the WRC suggest that the level of Non-Revenue Water in South African Municipalities averages at around 38% of the total water supplied which represents almost R7 billion per annum.

The City of Cape Town has been reducing its Non Revenue Water steadily since 2010 and recent studies have showed that the City of Cape Town has the lowest level of Non Revenue Water of any Metro at about 24% and Drakenstein (also in Western Cape and also presenting a case study at the Summit) has one of the lowest levels of Non Revenue Water (one which is properly audited) for any Municipality in the country at about 12% which is world class. Cape Town is within 1% of meeting its Water Reconciliation Strategy of reducing its NRW to 20.2% by 2014, which is commendable and great achievement.

The Water Loss Summit is officially recognised and sanctioned by the International Water Association and is operated on a non-profit making basis. The event is organised to promote water use efficiency and to highlight the water situation in the area and the need to work towards greater water use efficiency in future. By providing case studies from around the country, the successes and problems experienced by different Municipalities will help to highlight what can be achieved through proper management practices and an enthusiastic team.

This year's event is also the first event in which special emphasis has been placed on encouraging young water professionals in the various Municipalities and Metros to present case studies and to gain experience from some of the older and more seasoned water professionals. This form of mentorship will hopefully encourage a new generation of water professionals to become involved with future events and to gain experience by presenting at such events. Officials from the Water and Sanitation Department of the City will be presenting case studies at both the Midrand and Cape Town events which emphasizes the commitment and dedication of staff to ensure we keep on delivering excellent water and sanitation services to the community.

The events in Johannesburg and Cape Town have attracted attendees from over 10 countries including Mr Tim Waldron who is recognised internationally as one of the most experienced Water loss Specialists in the world and is currently the Chairman of the International Water Association's Water Losses Specialist Group. We are also joined this year by another Water Loss Specialist from Australia, Dr Genter Habber Davidson who has come over to South Africa for the first time specifically to see a Lion and to present at the Johannesburg and Cape Town Summits. We are looking forward to both their presentations.

The event, which is organised and supported by a number of organisations including DWA, the WRC, SASOL, CoCT, Johannesburg Water, Ekurhuleni, Tshwane, Drakenstein, GiZ and Orasecom and co-ordinated by WRP Consulting Engineers, will pull together various speakers etc., as well as gain the IWA seal of approval – this event is currently one of only two Regional Water Loss Events in the world which is sanctioned by the International Water Association and it plans to roll out the concept worldwide. The fact that Mr Tim Waldron, the Chair of the International Water Association, has

travelled from Australia to support this event is clear testament to the high regard in which this international organisation holds the South African event.

The Cape Town event would not have been possible without the great support from the Water Department and in particular Johannes Prins and his Water Conservation team.

On behalf of the City of Cape Town, it is my great pleasure to welcome you all to the third African Water Leakage Summit. This event promises to be of great benefit to all water suppliers in the Western Cape and it is a reflection on our commitment to saving water that the organisers of this Water Loss Summit have again selected Cape Town as one of the two venues in South Africa.

We trust that this event will prove very valuable to all those who are able to attend and that it will help to encourage water use efficiency throughout the region. The use of this scarce resource is one of the most important issues facing this region and for that matter the whole of South Africa.

This Summit has become an annual event and through the support from the City of Cape Town it is hoped that Cape Town will continue to be selected as the Host city in years to come. It is further hoped that the partnerships and lessons learnt in this forum will be of benefit to all delegates in a common mission to reduce water losses across Africa and will continue long after the two days we will be spending together. Ladies and Gentlemen, I Thank you.

Participating organisations :

