

Metropolitan Municipality Water Balance Assessment



A WATER BALANCE ASSESSMENT OF SOUTH AFRICA'S METROPOLITAN MUNICIPALITIES



water & sanitation

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Metropolitan Municipality Water Balance Assessment

EXECUTIVE SUMMARY

Key Findings

- Data quality is improving;
- In 2013/14 the metros supplied 2159 mill kl of water, exceeding their SIV target by 10%;
- Daily per capita consumption of 270 I is very high, especially for a water scarce country;
- The 2013/14 average NRW of 34.3% and WL of 28.8% are too high;
- Reducing the high ILI of 5.4 to an achieveable 3, will save metros R1.6 bn/annum;
- The SIV is increasing in line with the population, (but slower than the household growth rate), indicating that WC/WDM is not being successfully implemented;
- Despite initial reductions, % NRW and % WL appear to be increasing and the ILI plateauing;
- Johannesburg, NM Bay and eThekwini Metros all exceeded their SIV targets by over 20%;
- NM Bay, Johannesburg, Buffalo and eThekwini Metros all have NRW values above 39%; Johannesburg's has risen by 6.4% in 2013/14;
- Mangaung Metro, despite performance improvements, has the fastest growing SIV in terms of their population growth and a disproportionately high per capita consumption;
- Johannesburg Metro has the highest ILI of 7.5 and is thus the least efficient metro; and
- Cape Town Metro is the top performer, whilst Tshwane, thanks to considerable improvement in recent years, is also performing well.

Key Strategic Recommendations

- On-going monitoring and reporting of metros' water balances is crucial;
- Reconciliation strategy targets need to be reviewed and updated as necessary;
- WC/WDM must be implemented to secure water resources;
- Current water use per person must be reduced;
- Metros should increase their efforts to reduce NRW and the negative impact it has on their ability to generate own income and run a viable water business;
- Metros must increase efforts to achieve reconciliation targets; particularly so the Gauteng metros, (specifically Johannesburg Metro), where no additional water is available until 2022;
- Political support for payment and the prosecution of illegal water connections and theft is vital;
- Johannesburg Metro's sudden increase in NRW must be investigated;
- Ekurhuleni Metro must justify their excessive commercial losses;
- The failure of eThekwini Metro's WC/WDM initiative to improve performance to be investigated; and
- Mangaung Metro must take steps to reduce domestic consumption; they should consider revising their tariff structure.

Introduction

40% of South Africa's population lives within eight metropolitan municipalities and utilises approximately 48% of the total urban water supplied, or 11% of the total water consumed.

The Department of Water and Sanitation (DWS) regards water conservation and water demand management (WC/WDM), from a water resource perspective, as a key intervention in municipalities.Since WC/WDM is critical, and, in order to monitor municipal performance on an on-going basis, the DWS Water Services Directorate: Macro Planning,in consultation with the DWS Water Resource Planning Directorate: Water Use Efficiency, continually accesses municipal water balance information, a process that started in 2004/5 and more recently culminated in the No Drop process.

This metro specific report contains the most detailed water balance data from 2004/5 to 2013/14. All calculations are based on the International Water Association (IWA) standard water balance model as modified slightly for South African conditions.

Results

Metro water balance reporting standards are improving. In 2013/14 they supplied 2159 million kl of potable water, of which water losses amounted to 622 million kl and non-revenue water 741 million kl.

System input volume 2159		Billed authorised 1418	Billed metered 1378	Revenue water 1418
	Authorised consumption		Billed unmetered 40	
	1537	Unbilled author 120	Unbilled metered 15	Non-revenue water 741
			Unbill. unmetered 105	
	Water losses 622	Commercial losses	175	
		Physical losses	447	

Figure i: Combined Metro IWA Water Balance for 2013/14(million kl/a) NTS

From **figure ii** it is clear that the metros' reconciliation strategy 2013/14 target has not been met and it appears unlikely to be achieved soon as there has been significant growth in the SIV. After decreasing in 2011/12, NRW has increased to pre 2011/12 values. Water losses (WL) decreased from 33.4% in 2010/11 to 26.4% in 2012/13, only to rise to 28.8% in 2013/14.

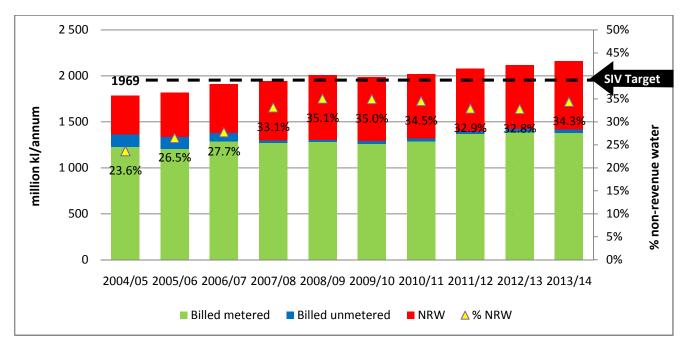


Figure ii: Combined Metro NRW and SIV Trends and SIV 2013/14 Target

Johannesburg Metro, (closely followed by NMB and eThekwini), has the highest Infrastructure Leakage Index (ILI) and current annual real losses. Cape Town Metro is the most efficient metro with an ILI of 2.3. The weighted average ILI of 5.4 is high for a relatively developed, water scarce, country.

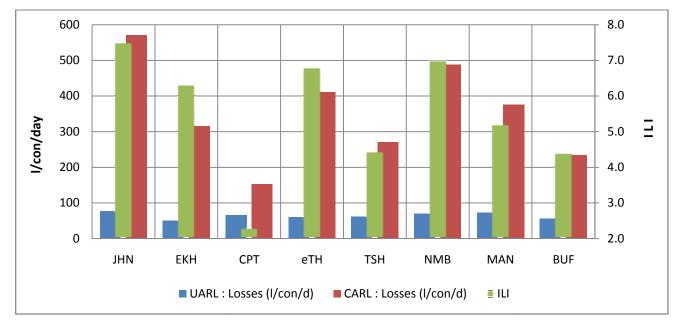


Figure iii: Metro 2013/14 ILI Comparison

Reducing the ILI to 3, a not unrealistic target, will save about R1.6 bn per annum as shown in **figure iv** below. Johannesburg and eThekwini have the highest savings potential.

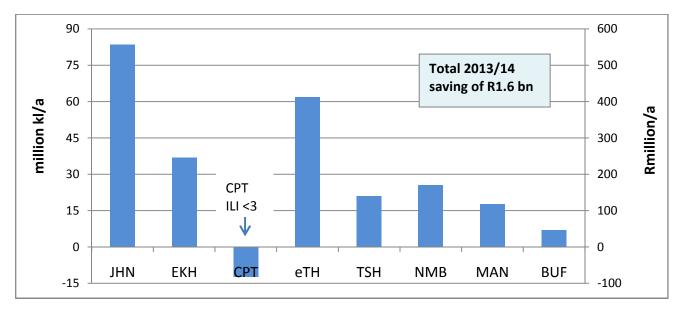


Figure iv: Metro 2013/14 Potential Saving Comparison at R7.60/kl

Figure v shows that unit consumption is particularly high in Johannesburg and Mangaung Metros. The latter is particularly bad as it does not have the high, non-domestic consumption that Johannesburg for example has. Overall, for a water scarce country, average per capita consumption (dotted lines), is much too high. It has however stabilised since 20010/11 at about 270 l/c/d, (relative to the SIV). In the same period unit authorised consumption has increased from 182 to 190 l/c/d. Unit domestic consumption has only recently started being recorded and the reliability of the 2013/14 value of 144 l/c/d is unsure.

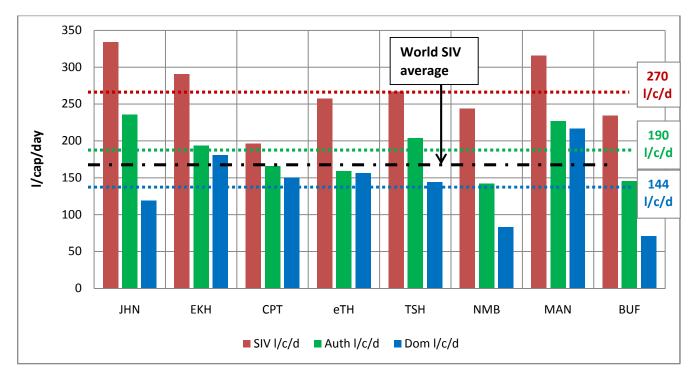


Figure v: Metro 2013/14 Per Capita Consumption Comparison

Over the longer term, total metro SIV has increased at the same rate as the population, which would seem to indicate that water conservation and demand management is either not being implemented

or is ineffective. However the SIV has increased at a slower rate than the number of households. Increased water scarcity (and climate change) will profoundly affect water supply systems and water resource security, and needs urgent attention. Only Cape Town and Tshwane met their 2013/14 reconciliation targets, with Johannesburg, Nelson Mandela Bay and eThekwini substantially exceeding their targets.

Unbilled authorised consumption has increased significantly from 23 million kl in 2010/11 to 120 million kl in 2013/14. The average number of households per connection has increased substantially since 2009, indicative of urban densification, albeit with a slight drop in 2013/14.

In terms of individual metros:

- 1) Given the lack of additional water sources in the Vaal catchment, these metros, and Johannesburg Metro in particular, as the largest Gauteng consumer, must take steps to reduce consumption and meet their targets.
- 2) Johannesburg Metro's big jump in % NRW in 2013/14 needs investigation.
- 3) Ekurhuleni Metro shows little sign of improvement and needs to start implementing WC/WDM.
- 4) eThekwini's failure to meet its SIV target and its recent increases in %WLand % NRW are disturbing.
- 5) The negative impact of adding problematic municipalities to a metro can be clearly seen in the Tshwane scenario.
- 6) Nelson Mandela Bay Metro's performance is deteriorating rapidly and is cause for concern.
- 7) Despite good efforts by Mangaung Metro, particularly as regards %NRW, their consumers are failing to play their part in conserving water and this needs to be addressed.

Business Intelligence Support

Metropolitan Municipality Water Balance Assessment

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List of acronyms

Acronym	Definition	
CARL	Current annual real (or physical) losses	
DWS	Department of Water and Sanitation	
ILI	Infrastructure Leakage Index	
IWA	International Water Association	
kl	Kilo litres (1 kl = 1000 litres = 1 m^3)	
KPI	Key Performance Indicator	
NRW	Non-revenue water	
NTS	Not to scale	
SIV	System input volume	
UARL	Unavoidable annual real (or physical) losses	
UFW/UAW	Unaccounted for water	
WC/WDM	Water conservation and water demand management	
WL	Water loss	
WRC	Water Research Commission	
WSA	Water Services Authority	
WSDP	Water Services Development Plan	
WSP	Water Services Provider	

1 INTRODUCTION

South Africa's eight metropolitan municipalities,(metros),support 40% of its population,(21.3 million people), and utilise approximately 48% of the urban water use. Theirwater resources have been investigated in detail in the past few years by the Department of Water and Sanitation (DWS) and water conservation and water demand management (WC/WDM) have been identified as key interventions required to balance the available supply against projected future requirements.

The aim of this assessment is to:

- Review the water balance data of each metro and in particular the status of their non-revenue water (NRW), water losses, (WL), water consumption and water use efficiency;
- Evaluate water balance trends;
- Assess progress made toward achieving the DWS Reconciliation Strategy targets; and
- Make strategic recommendations.

This report adds business intelligence to the data received and presents a strategic perspective that can be used for planning purposes. It does <u>not</u> provide reasons for the results, unless known. This would require a comprehensive interaction with each metro and is beyond the scope of this report.

Calculations are based on the International Water Association water balance model, as modified slightly for South African conditions in order to accommodate "free basic water". Previous studies undertaken by the Water Research Commission (WRC) and DWS have provided significant detail on the methodology and terminology, which are not repeated here. This review includes information from all metros and is considered the most comprehensive dataset to date. It should be noted that the work undertaken in this assessment is effectively an update on the previous work undertaken by the WRC and DWS, together with more recent data captured during the No Drop Programme and to a lesser extent the SALGA Municipal Benchmarking Initiative.

2 METHODOLOGY

2.1 Data sources

The following data sources were utilised in the preparation of this report:

- WRC NRW assessments in 2005 and 2007;
- The State of NRW in S. Africa (2012), (WRC);
- DWS 2011/12 NRW assessment;
- 2012/13 and 2013/14 No Drop Programme data, (DWS 2015);
- 2013/14 SALGA Municipal Benchmarking Initiative data, (2013/14);
- Metropolitan Municipality NRW Assessment, (DWS 2013);
- Population and households figures Stats SA;
- Water Services Tariffs 2012/13, DWA (PULA) 2013;
- DWS Reconciliation Strategy Studies for the major economic areas, namely
 - > The Western Cape Water Supply System, (DWS June 2007);
 - > Vaal River System Large Bulk Water Supply, (DWS, 2007);
 - > Water Reconciliation Strategy Study for the KZN Coastal Metropolitan Areas, (DWS, 2009);
 - Algoa Water Supply System, (DWS, Nov 2010);
 - Reconciliation Strategy for Amatole Bulk Water Supply System, (DWS, March 2008); and
 - > Large Bulk Water Supply Systems: Greater Bloemfontein Area, (DWS, June 2012).

2.2 Data validation and confidence levels

The metros have high confidence levels in their water supply figures, which are mostly metered by bulk water service providers such as Rand Water, Umgeni Water and Amatola Water. This confidence is certainly improving.

Consumer metering and billing is generally acceptable, with high levels of confidence. The figures are often verified, where the water supplied to specific areas is compared to the water billed to the consumers. Various software packages are used for this analysis.

Concerted efforts have been made to standardise the manner in which data is interpreted, so as toprevent discrepancies and allow meaningful comparisons to be made between metros.

2.3 Reconciliation strategy targets

Water resource management requires long-term planning, and strategies to source and supply water. The DWS has undertaken strategic water resource assessments at Water Management Area level, followed by supply and demand reconciliation studies for major river systems, metros, growth centres, and smaller towns across the country. The water balance reconciliation strategies seek to reconcile future water requirements with available resources over the next 20-30 years.

WC/WDM has been identified as a key intervention to reduce municipal water demand and reduce the need for additional new sources to be developed. Very often municipalities try to solve the problem of water "shortage" by developing additional resources, often at a very high cost and when their shortage is almost entirely induced by water losses.

The 2013/14 water demand targets set in the various reconciliation strategies are aimed at reducing the system input volume of the IWA water balance and do not specify water loss or NRW targets. The input volume can only be reduced by increasing efficiency, (reducing authorised consumption), and reducing water losses, (commercial (or apparent) and physical (or real) losses). NRW will only be reduced by increasing billed consumption and reducing unbilled consumption and water losses.

3 RESULTS

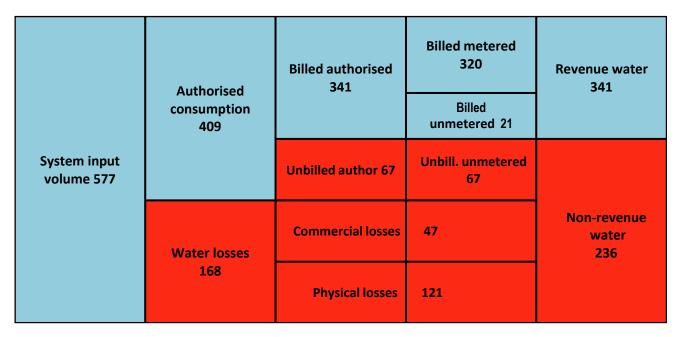
Previous investigations have found that the most important factors influencing water use efficiency in the various metros revolve around financial constraints and supply chain problems, so that the funding and resources required for WC/WDM interventions are simply not available. Water is not considered a priority in many metros and is not properly funded. Funding is only prioritised in metros where water security has become an issue and restrictions have been imposed. This problem is further compounded by the fact that such interventions require significant technical expertise.

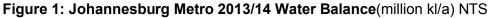
An important consideration when assessing annual trends in the various metros, concerns the changing boundaries. In some cases, such as Tshwane Metro, highly problematic areas with very high levels of water losses have been consolidated into the nearest metro, often because of a general breakdown in management and operation of the water service authority in question. This negatively affects metro performance and often masks positive developments.

In the results below, dates shown are for a municipal financial year, 1 July to 30 June.Unless otherwise stated, average metro values are weighted averages.

3.1 Metro specific results and trends

3.1.1 Johannesburg Metro (2013/14 KPIs: NRW = 40.9%; WL = 29.2%; ILI = 7.5)





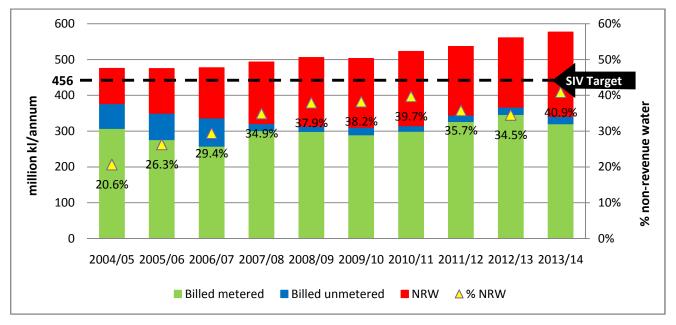


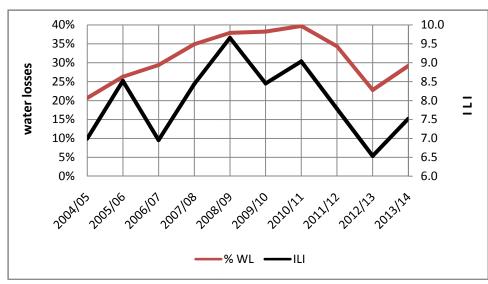
Figure 2: Johannesburg Metro NRW and SIV Trends and 2013/14 SIV Target

Clearly the metro has vastly exceeded its 2013/14 reconciliation strategy SIV target and is unlikely to do so in the near future. ¹The rate of increase in SIV is however slightly less than that of theirpopulation.

NRW in the metro fluctuated in recent years, but in 2013/14 increased enormously to almost 41%. **Figure 3** shows that its water losses reduced substantially from 2010/11 to 2012/13, only to increase in 2013/14 to 29.2%. This %WL is very close to the metro average of 29%.

¹ Appendix A figure 46

Since 2010/11 total WL, ²physical losses and the ILI have all decreased, most likely due to WC/WDM initiatives such as pressure management and a pre-paid meteringinitiative. In 2013/14 however these



values increased slightly. The current ILI of 7.5 is the highest of any metro. The high ILI, but relatively low %WL appear contradictory, however the WL are reduced by increase in the bia unbilled authorised consumption. Figure 3:

Johannesburg Metro ILI and WL Trends

³Authorised consumption

has increased in recent years. ⁴Unbilled authorised consumption has only recently been included as part of non-revenue water and has shown a huge increase; with this increase there is a concomitant decrease in both commercial and physical losses.

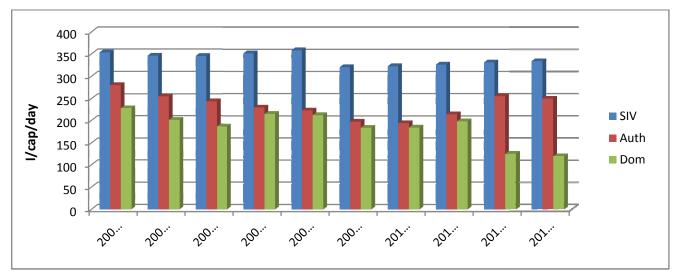


Figure 4: Johannesburg Metro Per Capita Consumption Trends

Figure 4 indicates a sudden drop in SIV unit consumption in 2009/10, an increase in unit authorised consumption in 2012/13 and a sharp decrease in unit domestic consumption in 2012/13. The confidence level of the latter is however low.

The recent increase in %NRW is concerning, as is the increase in unbilled authorised consumption. TheSIV target was hugely exceeded and is unlikely to be met any time soon under current trends. This is particularly concerning given the unavailability of any additional water before 2022.

² Appendix A figures 47, 48

³ Appendix A figure 47

⁴ Appendix A figure 48

	Authorised consumption 239	Billed authorised 222	Billed metered 222	Revenue water 222
System input volume 357		Unbilled author 17	Unbill. unmetered 17	
	Water losses	Commercial losses	57	Non-revenue water 135
	118	Physical losses	61	

3.1.2 Ekurhuleni Metro (2013/14 KPIs: NRW = 37.8%; WL = 33.2%; ILI = 6.3)

Figure 5: Ekurhuleni Metro 2013/14 Water Balance(million kl/a) NTS

Some Ekurhuleni data prior to 2007/8 is suspect, (e.g. NRW). It should be interpreted with caution.

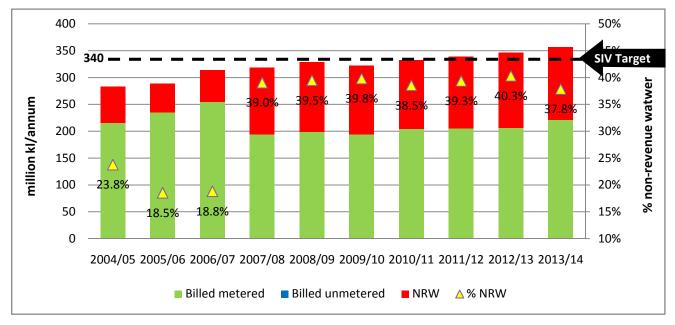


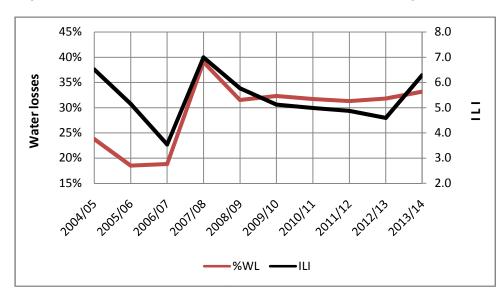
Figure 6: Ekurhuleni Metro NRW and SIV Trends and 2013/14 SIV Target

To date the metro has been unable to reduce its SIV and has not met its 2013/14 reconciliation strategy target. The target is however within range. ⁵The SIV has increased slightly faster than the population.

NRW has been relatively constant at about 39%, since 2007/8 with a slight drop in 2013/14 to 37.8%. This is however still above the metro average.

⁵ Appendix A figure 49

⁶Water losses have been relatively stable since 2008/9, at about 32%, but unlike NRW, show a slight increase in 2013/14, to 33.2%, well above metro average. Given the uncertainty of data in the



first 3 years, it would appear that the ILI was plateauing at about 5, only to jump in 2013/14 to 6.3. Ekurhuleni Metro has extremely high commercial losses. This needs to be validated as it could artificially lower physical losses.

Figure 7: Ekurhuleni Metro ILI and WL Trends

⁷Ekurhuleni's relatively high unbilled authorised consumption, previously said to be due to the large number of unmetered properties in Tsakane and Kathlehong, showed a substantial drop in 2013/14.

Per capita consumption has been relatively constant since 2007/8 for all 3 categories shown in **figure 8**.

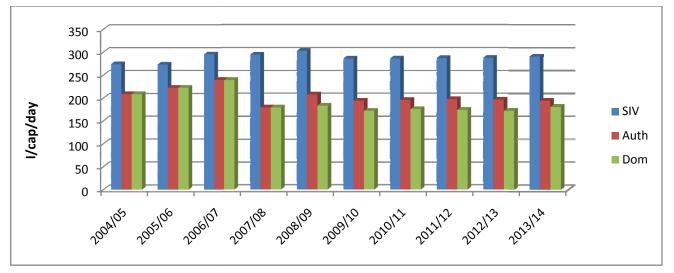
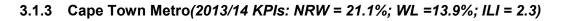


Figure 8: Ekurhuleni Metro Per Capita Consumption Trends

In summary the overall situation in Ekurhuleni has shown little improvement in recent years. Its SIV target is quite achievable, but will require the implementation of WC/WDM. Business as usual will not be good enough.

⁶ Appendix A figures 50,51

⁷ Appendix A figure 51



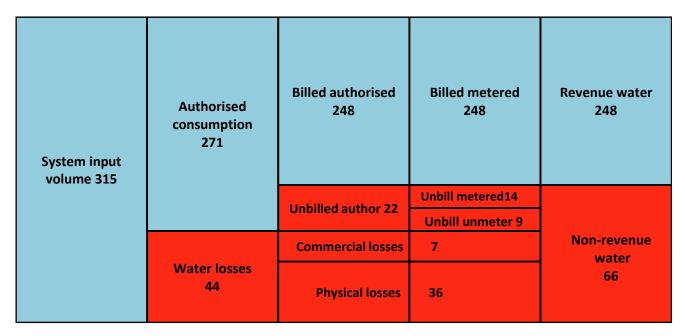
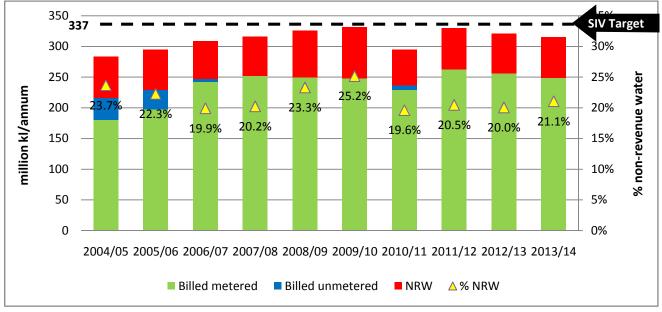


Figure 9: Cape Town Metro 2013/14 Water Balance(million kl/a) NTS

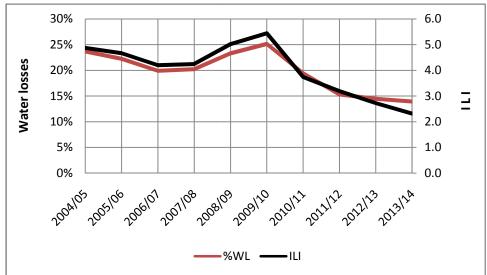


Cape Town Metro is the best performing metro.

Figure 10: Cape Town Metro 2013/14 Water Balanceand 2013/14 SIV Target

It comes as no surprise that Cape Town Metro has comfortably exceeded its reconciliation strategy 2013/14 target. Their current SIV is in fact less than that of 1999!The SIV shows a gradual decrease since 2009/10, (ignoring the unexplained anomaly in 2010/11).⁸The SIV has increased substantially less than population, due mainly to reduced consumption in the last four years.

⁸ Appendix A figure 52



NRW is relatively constant at a low 20%, whilst WL have declined from 24% to an extremely low

13.9%. ⁹Both total and physical losses and ILI show a consistent reduction. At these low levels, it will become increasingly difficult to further reduce them.

Figure 11: Cape Town Metro ILI and WL Trends

¹⁰It is encouraging to see that as a % of SIV, authorised consumption has increased in the long term.¹¹Unbilled authorised consumption has only been recorded since 2011/12 and has increased slightly since then. ¹²Commercial losses consistently decreased to 11% in 2012/13, only to increase in 2013/14 to17%.

The metro has very low unit consumption figures for all three categories shown in **figure 12**. These have reduced consistently since 2008/9, although domestic consumption increased inexplicably in 2013/14. Continued reduction may however prove difficult, given the already low figures.

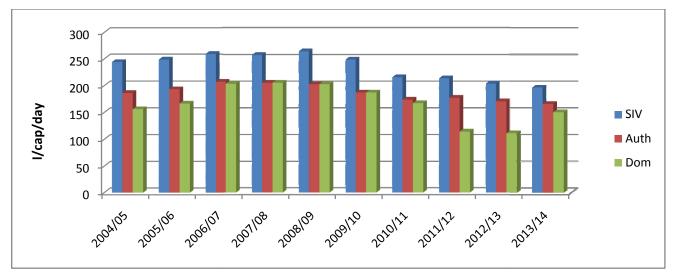


Figure 12: Cape Town Metro Per Capita Consumption Trends

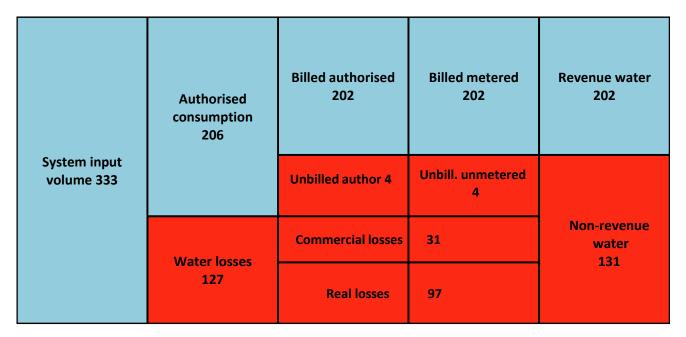
In summary Cape Town Metro sets a good example of what can be achieved, but further improvement will become ever more difficult and expensive.

⁹Appendix A figure 54

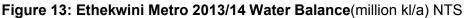
¹⁰ Appendix A figure 53

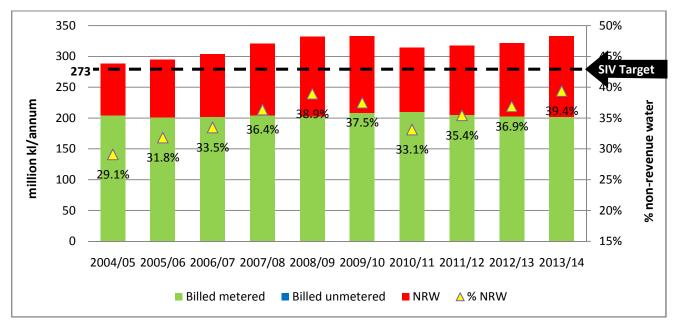
¹¹ Appendix A figure 54

¹² Appendix A figure 54



3.1.4 Ethekwini Metro(2013/14 KPIs: NRW = 39.4%; WL = 38.2%; ILI =6.8)





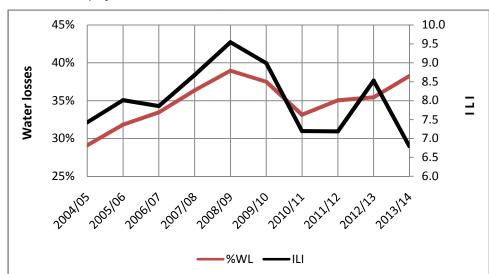


Ethekwini Metro has not come close to meeting their reconciliation strategy 2012/14 target and appears unlikely to do so in the near future. Apart from a once-off improvement in 2010/11, the Metro's recent performance has consistently deteriorated in terms of NRW and SIV. ¹³It is of concern that the increase in SIV since 2004/5 far exceeds the population growth. Data indicates that this is probably due to decreased efficiencies.

¹³ Appendix A figure 55

Recent NRW and WL increases are despite large WC/WDM efforts in recent years. ¹⁴The NRW and WL percentages are very similar, because of a very small, unbilled, consumption component, which has been reported since 2011/12, indicative of improved reporting. Billed consumption has been remarkably constant.

¹⁵Total and physical losses decreased from 2008/9 to 2010/11, whereafter they have increased.



Apart from an anomaly in 2012/13, the ILI has gradually declined to its 2013/14 value of 6.8, which is still above the average of 5.5. Why the % WL is increasing while the ILI is decreasing is perplexing and needs investigation.

Figure 15: Ethekwini Metro ILI and WL Trend

Although per capita SIV consumption decreased in 2010/11, it has since remained constant. Authorised and domestic consumption have remained fairly constant over the entire period.

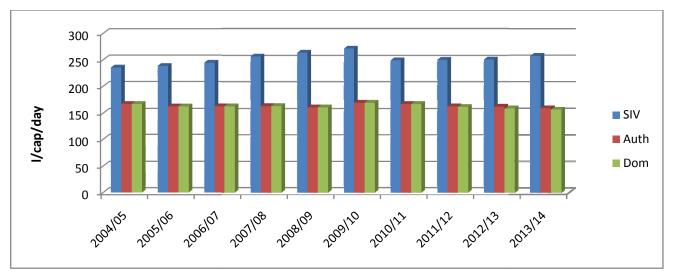


Figure 16: Ethekwini Metro Per Capita Consumption Trends

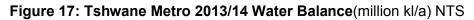
In summary, eThekwini's failure to meet its SIV target by a large margin and its increasingWL, despite huge expenditure on WC/WDM, are concerning. Why the ILI is reducing when the %WL is increasing needs investigation.

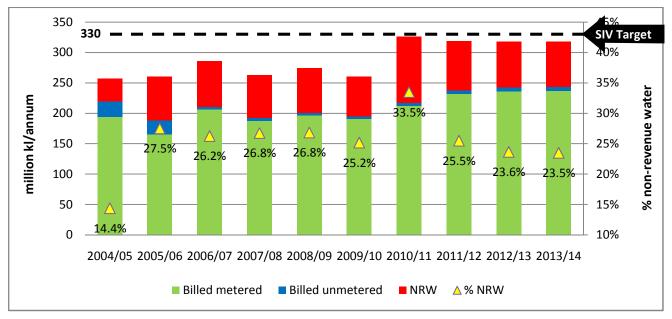
¹⁴ Appendix A figure 57

¹⁵ Appendix A figures 56, 57

Billed metered 237 **Billed authorised Revenue water** 243 243 Authorised consumption Billed 247 System input Unbill. volume 318 Unbilled author 3 unmetered 3 **Non-revenue Commercial losses** 14 water Water losses 75 71 **Real losses** 57

3.1.5 Tshwane Metro(2013/14 KPIs: NRW = 23.5%; WL = 22.4%; ILI = 4.4)





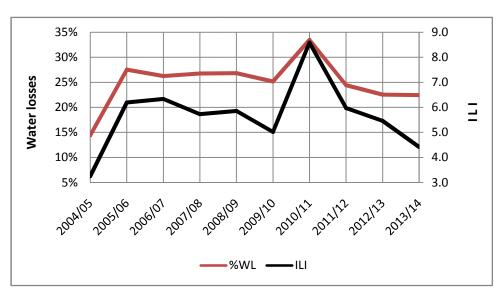


Tshwane Metro was one of only two metros to achieve their SIV target, this despite the fact that their SIV increased in 2011 because of the incorporation of Kungwini and Nokeng Tsa Taemane Municipalities into the metro. Since then there has been a small decrease in SIV.¹⁶SIV has increased over the long term less than the population. The SIV has been constant for the last 3 years, indicating reduced per capita consumption.

Both NRW and WL spiked in 2010/11, most likely due to the incorporation of the above areas. Fortunately, the metro has managed to reduce these values to below pre 2009/10 values. The

¹⁶ Appendix A figure 58

2013/14 NRW and WL values of 23.5% and 22.4% respectively are second only to those of Cape Town and well below the metro average. However reported recent drastic O&M and WC/WDM budget cuts could negate this good work and need to be closely monitored.



The impact of the incorporation of the two municipalities into Tshwane, on physical losses and the ILI is also apparent. Despite these setbacks, the metro has improved efficiency and their 2013/14 ILI of 4.4 is well below average.

Figure 19: Tshwane Metro ILI and WL Trends

¹⁷Unbilled authorised consumption, reported since 2011/12, is relatively low. ¹⁸Over the last 3 years authorised consumption has been relatively unchanged.

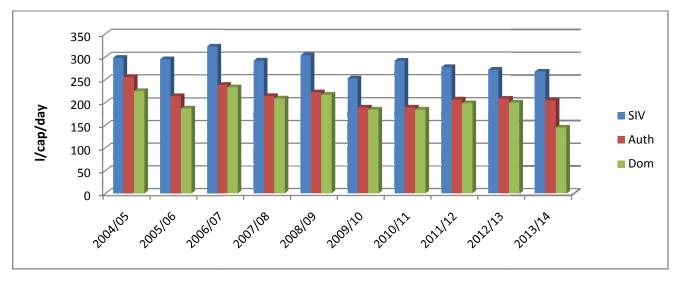


Figure 20: Tshwane Metro Per Capita Consumption Trends

Figure 20 indicates that per capita consumption has in gradually declined since 2010/11, with the exception of domestic consumption. The latter shows a sudden drop in 2013/14, which needs explanation.

In conclusion the negative impact of adding problematic municipalities to a metro can be clearly seen in the Tshwane scenario and the metro has done well to bring this under control, to meet their SIV target and to have relatively low NRW and WL. Reported recent O&M and WC/WDM budget cuts could negate this good work and needs monitoring.

¹⁷ Appendix A figure 60

¹⁸ Appendix A figure 59

				,
	Authorised	Billed authorised 62	Billed metered 61	Revenue water 62
	consumption 64		Billed	
System input volume 108		Unbilled author 2	Unbill. unmetered 2	
				Non-revenue

3.1.6 Nelson Mandela Bay Metro (2013/14 KPIs:NRW= 42.3%;WL= 40.3%;ILI= 6.2)

Figure 21: Nelson Mandela Bay Metro 2013/14 Water Balance(million kl/a) NTS

Water losses

44

The lifting of restrictions after the drought-forced consumption reduction of 2009/10 to 2010/11 has resulted in a worryingly sharp increase in SIV.

Commercial losses

Real losses

4

39

water

46

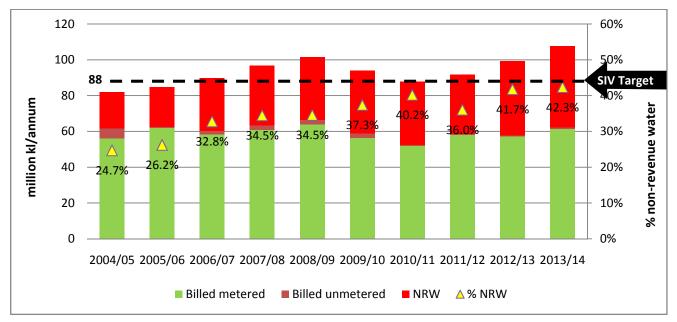
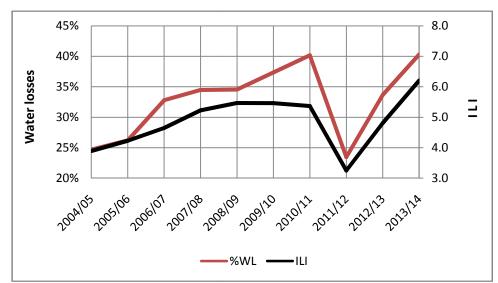


Figure 22: Nelson Mandela Bay Metro 2013/14 Water Balanceand 2013/14 SIV Target

¹⁹Despite the drop in 2010/11, the SIV in the long term has increased much faster than population growth. This is cause for huge concern, particularly as the metro have fallen short of their 2013/14 reconciliation strategy target, and appear unlikely to meet it any time soon.

¹⁹ Appendix A figure 61

NRW has increased almost relentlessly from 2004/5 to date, apart from a 2011/12 drop. The 2013/14 value of 42.3% is the highest of any metro. Similarly, WL, apart from a once-of, drop in 2011/12, have increased to 40.3%, the highest metro value.



Apart from an unexplained drop in 2011/12, the ILI and %WL have increased over the 10 year period. The 2013/14 ILI of 6.2 is well above the metro average. ²⁰Physical losses too are rising.

Figure 23:Nelson Mandela Bay Metro ILI and WL Trends

²¹Unbilled authorised consumption monitoring commenced in 2011/12, with extremely high values. In 2013/14 there was however a sudden reduction to what would appear to be more realistic values. This calls the reliability of the earlier data into question. ²²Authorised consumption has been relatively constant over the 10 year period, i.e. it has dropped as a % of SIV, which is concerning.

Figure 24 indicates that since the 2009/10/11 SIV per capita consumption drop, there has been a substantial increase. This is however not the case for authorised unit consumption, which rose in 2011/12 and has since dropped. The sudden drop in domestic consumption in 2012/13, together with its unrealistically low 2013/14 value of 83 I/c/d, need clarification.

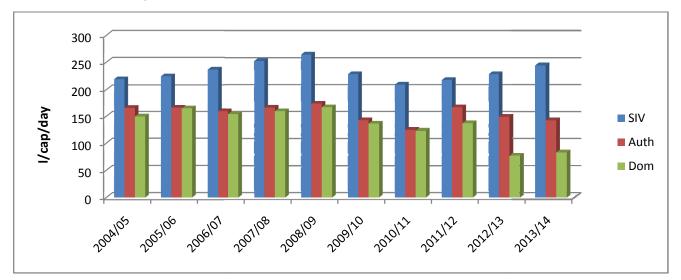


Figure 24: Nelson Mandela Bay Metro Per Capita Consumption Trends

This metro's performance is deteriorating and is cause for concern.

²⁰ Appendix A figure 63

²¹ Appendix A figure 63

²² Appendix A figure 62

Billed authorised Billed metered Revenue water 59 59 59 Authorised consumption 62 System input Unbilled volume 87 **Unbilled author 3** metered 3 **Non-revenue Commercial losses** 5 water Water losses 27 25 **Real losses** 20

3.1.7 Mangaung Metro(2013/14 KPIs: NRW = 31.4%; WL = 28.1%; ILI = 5.2)

Figure 25: Mangaung Metro 2013/14 Water Balance(million kl/a) NTS

Mangaung Metro has data that appears suspect, as it does not fit in with overall trends. 2010/11 and the first two years are relevant in this regard.

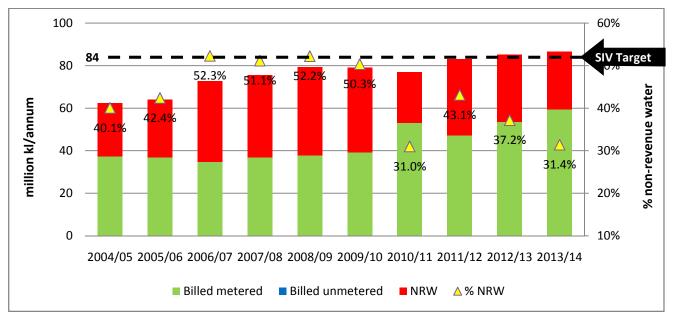
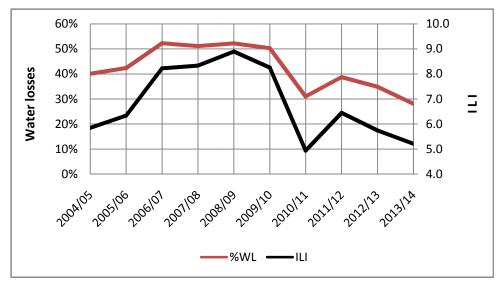


Figure 26: Mangaung Metro 2013/14 Water Balanceand 2013/14 SIV Target

²³Although the metro's SIV has increased substantially faster than its population, (due largely to increased per capita consumption, as will be discussed below), they narrowly missed achieving their SIV target, butthis is well within range. Ignoring the outliers, both NRW and WL have decreased from very high values in the period 2006/7 to 2009/10, to the much lower 2013/14 values of 31.4% and 28.1% respectively. This indicates a substantial improvement in performance.

²³ Appendix A figure 64



²⁴Despite the increase in SIV, physical losses have decreased, indicating a disturbing increase in per capita consumption. The metro's ILI dropped from 8.9 in 2008/9 to 5.2 in 2013/14, a huge improvement.

Figure 27: Mangaung Metro ILI and WL Trends

²⁵A big increase in authorised and billed consumptions since 2010/11 is encouraging.

This metro has some of the highest per capita consumption figures. This is particularly so for authorised and domestic unit consumption. When one considers that this metro does not have as much industrial consumption as some of the other larger metros, it is particularly unacceptable. **Figure 28** also shows a worrying upward trend in all three categories in recent years. Indications are that consumer targeted initiatives are needed to reduce per capita consumption. Looking at their tariff structure it becomes apparent that Mangaung's tariff blocks 2 to 5 are very flat and their water is cheap, compared to the other metros; thus not conducive to water conservation.

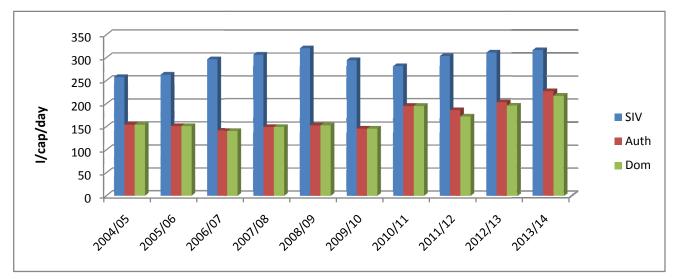
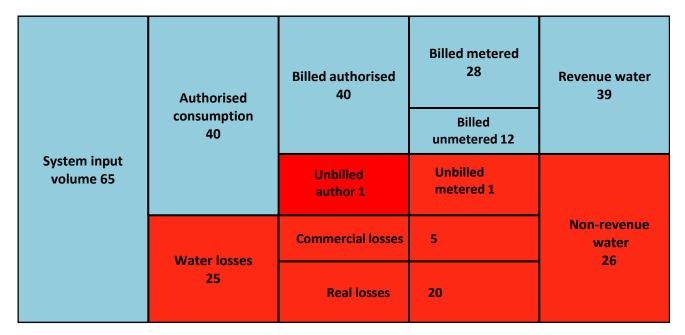


Figure 28: Mangaung Metro Per Capita Consumption Trends

It would appear that despite good efforts by the metro, the public is failing to conserve water. A steeper rising block tariff and community education are suggested.

²⁴ Appendix A figure 66

²⁵ Appendix A figure 65



3.1.8 Buffalo City Metro(2013/14 KPIs: NRW = 39.5%; WL = 38.0%; ILI = 4.1)

Figure 29: BuffaloCity Metro 2013/14 Water Balance(million kl/a) NTS

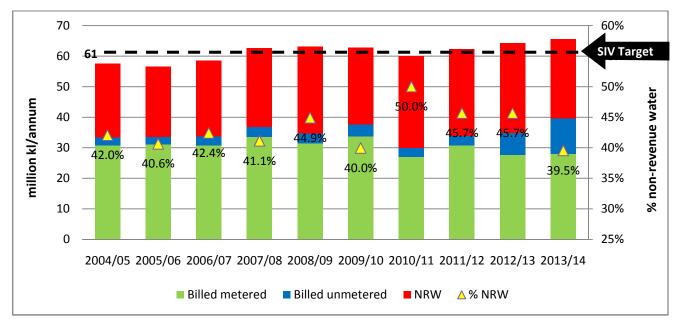
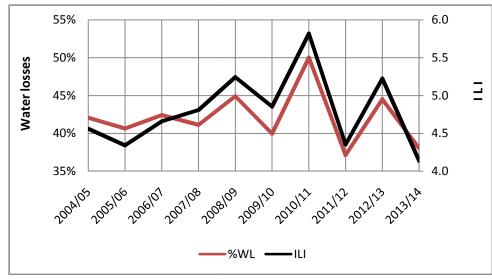


Figure 30: Buffalo City Metro NRW and SIV Trends and 2013/14 SIV Target

Buffalo City did not meet their SIV target, (which was only set in 2012). ²⁶Their SIV has shown a steady increase since 2010/11 and overall has increased at a faster rate than the population. The target should be achievable if the metro implements WC/WDM.

Historically Buffalo City has had very high NRW, so **figure 30**'s substantial drop to 39.5% in 2013/14 is to be welcomed, although still well above the metro average.

²⁶ Appendix A figure 67



WL and ILI peaked in 20010/11, then there was an unexplained drop, that followed a hunting pattern, and calls into question data accuracy. The 2013/14 WL of 38% is still a high value, but surprisingly the ILI of 4.1 is not.

Figure 31: Buffalo City Metro ILI and WL Trends

²⁷The improvement in ILI is reflected by the fact that physical losses have remained relatively constant, despite the overall increase in SIV.

The recent big increase in billed unmetered consumption needs clarification, especially as it appears to be partially at the expense of billed metered consumption. Nevertheless the overall recent improvement in billed consumption is welcomed. ²⁸Buffalo City started monitoring unbilled authorised consumption in 2011/12, but this showed a huge decrease the following two years, to the lowest values of any metro.²⁹Authorised consumption has grown with the SIV.

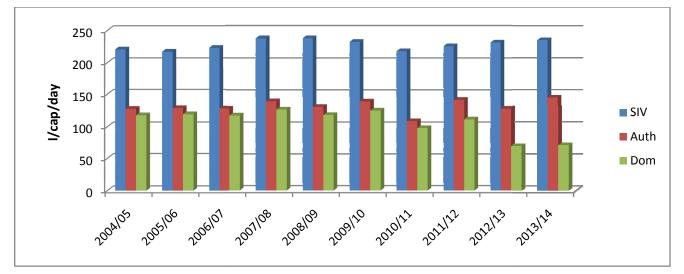




Figure 32 indicates a drop in all unit consumptions in 2010/11, followed by an increase in SIV and authorised unit consumptions and a big drop in unit domestic consumption to an unrealistic 70 l/c/d.

In conclusion, Buffalo City Metro has not met its SIV target and has high NRW and WL, yet a low ILI. It is characterised by a lack of clear recent trends, which makes a situational analysis difficult.

²⁷ Appendix A figure 69

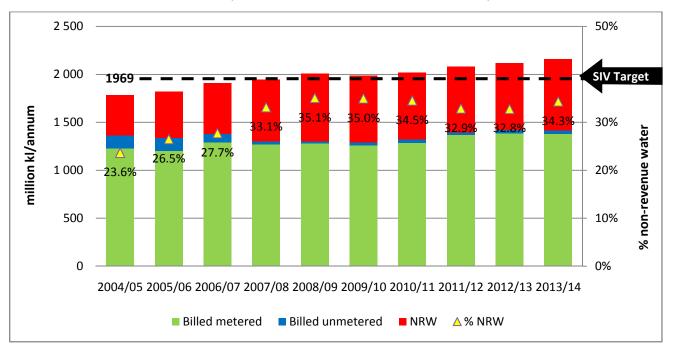
²⁸ Appendix A figure 69

²⁹ Appendix A figure 68

3.2 Combined metro results and trends

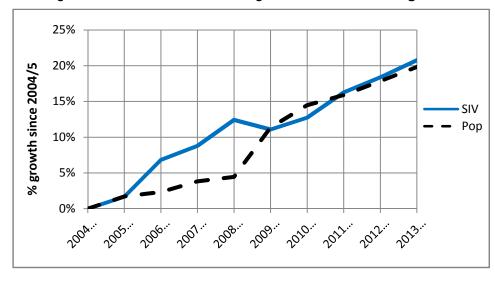
Trends for various key performance indicators for the eight metros combined, over the ten year period from 2004/5 to 2013/14, are summarised in the following sections and figures.

Although the metros have in recent years managed to reduce their % NRW, in 2013/14 it showed an increase. The NRW values in the first 3 years of analysis appear unrealistic and should be interpreted with caution. In recent years the metro NRW has beenrelatively stable at about 33%.





The metros' SIV shows a long term increase. Thereconciliation strategy 2013/14 SIV target of 1969 million kl/a was not met, being exceeded by about 10%. It appears unlikely that they will achieve this target in the short term, unless urgent action is taken. **Figure 34** shows clearly that in the longer

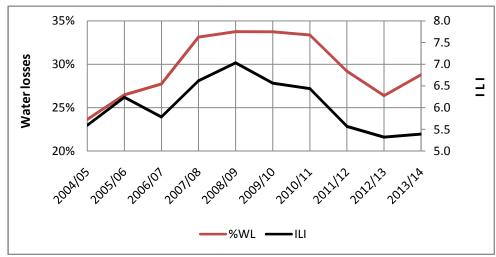


term the SIV has increased at the same rate as the population. This would seem to indicate that efficiency is not improving and that by implication WC/WDM is not being effectively implemented, if at all.

Figure 34: Combined Metro SIV and Population Growth Rates

Although the reconciliation strategy does not set a NRW target, based on the SIV target, the concomitant NRW volume should have been in the order of 538 million kl/a, a target that was far exceeded, (actual 741 mill kl/a).Billed consumption has shown little increase in the last three years.

³⁰Authorised consumption as a % of SIV dropped steeply to 2007/8, remained constant until 2010/11 and then rose to its 2013/14 value of 71% and may be stabilising at this value.³¹Unbilled authorised consumption has increased substantially, especially in the last 3 years.Although in recent years the



ILI and %WL have decreased, in the longer term there appears to be little improvement.

Figure 35: Combined Metro ILI and WL Trends

³²CARL in terms of kl per km mains per day has varied between 15 and 21 over the 10

year period and appears to be increasing. In terms of I/c/d it peaked in 2008/9, dropped until 2011/12 and has been constant since at 342 I/c/d.

³³The commercial loss component trend was stable from 2006/7 to 2011/12, whereafter it made a radical shift. It may be speculated that this is an indication that metros are moving away from using generalised guideline figures to more accurate values.

Based on the SIV target, an SIV per capita consumption target of 256 I/c/d was determined. From **figure 36** it can be seen that this was not met, with a 2013/14 value of 270 I/c/d. Since a drop in 2008/9, the SIV unit consumption has remained relatively constant. The authorised unit consumption on the other hand decreased until 2010/11, whereafter it increased. Domestic unit consumption shows a big drop in recent years, but as not all metros are able to differentiate accurately between domestic and non-domestic use, these values appear low, requiring verification.

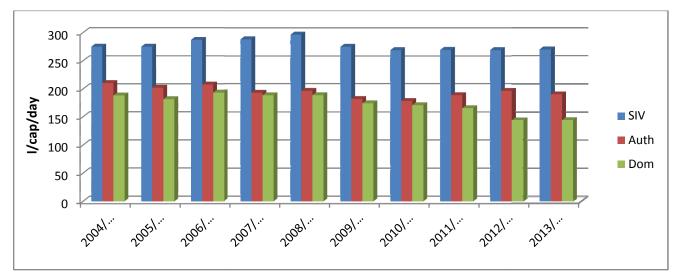


Figure 36: Combined Metro Per Capita Consumption Trends

- ³¹ Appendix A figures 72
- ³² Appendix A figure 73
- ³³ Appendix A figure 74

³⁰ Appendix A figures 71

Demographic data indicates that the household growth rate exceeds that of the population. This places an additional burden on metros that is not always appreciated. **Figure 37** below shows that in terms of households served, the SIV and authorised household consumptions have actually shown a downward trend. Thus although the metros' SIV has grown in line with their population increase, their SIV has grown slower than their rate of household growth. This implies that the metros' performance is in fact slightly better than initially suggested.

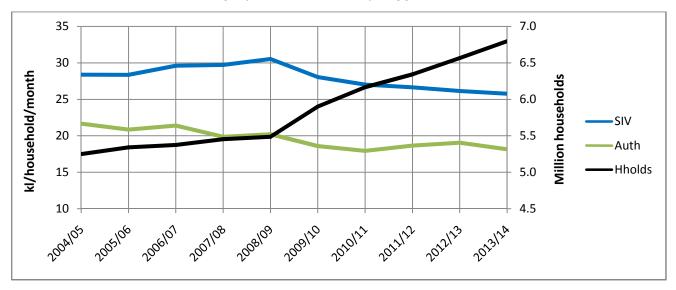
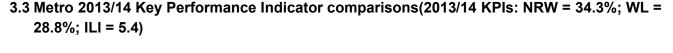


Figure 37: Combined Metro Households Versus Household Consumption Trends

³⁴Analysing the unit consumption in terms of connections shows a similar result with unit consumption per connection also decreasing for both SIV and authorised consumption. This would seem to imply that the number of connections is also increasing faster than population.³⁵Whilst this is indeed so, it is not however increasing as fast as the number of households, an indication of metro densification. In 2013/14 there were on average 1.9 households per connection.

³⁴ Appendix A figure 75

³⁵ Appendix A figure 76



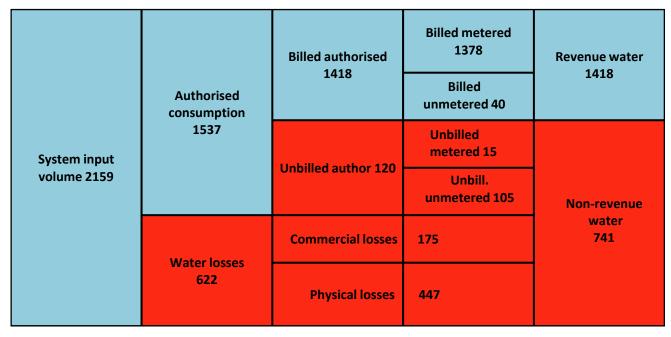


Figure 38: Combined Metro IWA Water Balance for 2013/14(million kl/a)NTS

Johannesburg Metro is by far the largest single urban water consumer at 577 million kl/annum, representing 27% of the metro water demand, a percentage that has been growing since 2006/7 and shows no sign of slowing. It is thus of paramount importance that Johannesburg Metro reduces its demand.

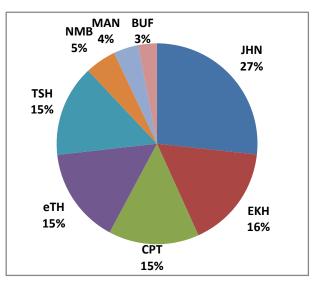


Figure 39: 2013/14 Metro SIV Split

Metro	Recon. target	2013/14 SIV	Projected 2014 SIV with WDM
JHN	455.72	576.76	510.4
EKH	339.82	356.64	338.8
СРТ	337.25	314.77	389.6
eTH	273.27	332.85	300 (est)
TSH	330.34	318.03	322.7
NMB	87.76	107.67	87.8
MAN	83.50	86.57	83.5 (est)
BUF	60.87	65.47	61.9
Total	1969	2159	2094

The metro SIV target performance individually and as a whole, is reflected in **table 1**. Also shown is the projected 2014 SIV that can be achieved with the implementation of WC/WDM.

Table 1: SIV Target, Actual and ProjectedSaving

Table 1 shows that according to the projected WC/WDM SIV, the reconciliation SIV target is realistic. In terms of performance against the reconciliation target, the Johannesburg, NM Bay and eThekwini metros were the worst performers, all exceeding their target by over 20%. Only Cape Town and Tshwane Metros met their targets. Buffalo City, Ekurhuleni and Mangaung exceeded their targets by 8%, 5% and 4% respectively. Overall the metros exceeded the target by 10%.

The worst performing metro in terms of NRW is NM Bay, followed by Johannesburg, both above 40%. Cape Town at 21% is again the best performer followed by Tshwane at 23.5%.

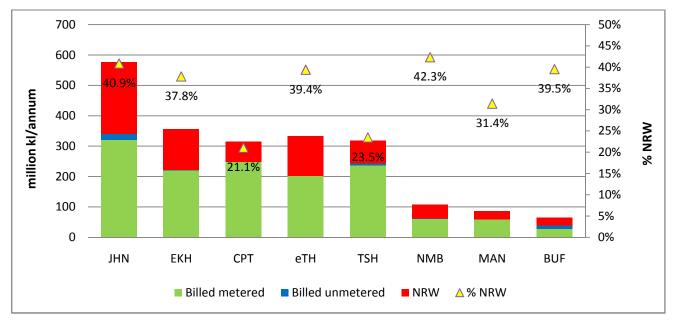


Figure 40: 2013/14 Metro NRW and SIV

Figure 41 compares the growth in population against that of SIV for each metro over the last six years. This period was used as it covers a time for which there is relatively good data and in this case going further back is of little benefit. It can immediately be seen how outstanding Cape Town's performance has been. The worst performing metro in this regard is clearly Mangaung.

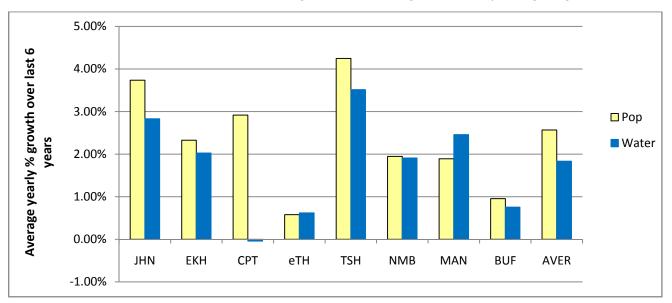


Figure 41: Metro Population and SIV growth over last 6 years

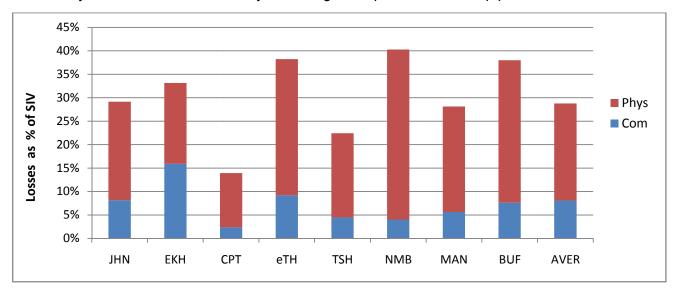


Figure 42shows that in terms of total water losses NM Bay metro is the worst perforer, closely followed by eThekwini and Buffalo City. Once again Cape Town is the top performer.

Figure 42: Metro 2013/14 Percentage Losses

Figure 43compares the CARL and UARL, through the ILI. Based on physical losses, Johannesburg is the worst performer, with an ILI of 7.5, that is losses of 7.5 times what could be expected from their system. With a suggested ILI target of 3, only Cape Town, with an ILI of 2.5, is able to comply.

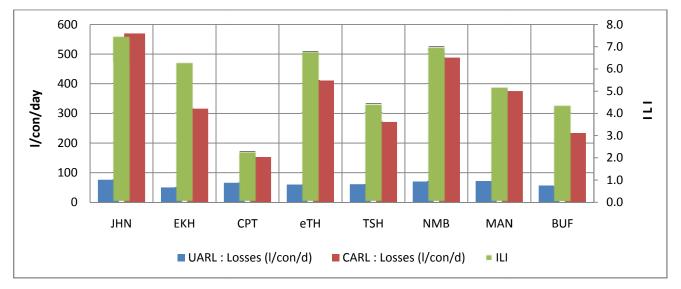


Figure 43: Metro 2013/14 Physical Losses and ILI

SIV per capita consumption in **figure 44** shows Johannesburg to have the highest unit consumption, followed closely by Mangaung. When one considers that the former has much more industrial demand than the latter, then the Mangaung performance is even worse. Best performer in this regard is Cape Town.

For authorised consumption Johannesburg and Mangaung again have the highest values, and NM Bay, Buffalo City, eThekwini and Cape Town have the lowest. Domestic consumption appears to be highest by a big margin in Mangaung and lowest in Buffalo City.

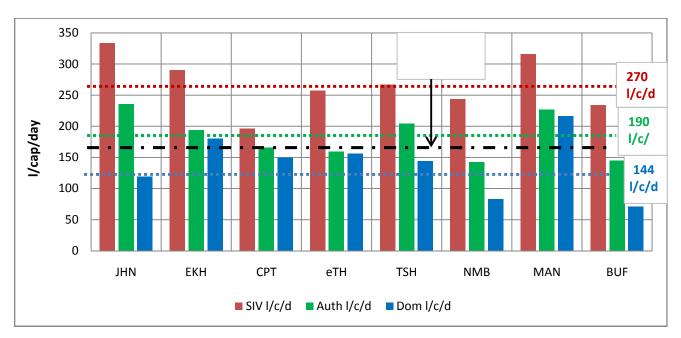


Figure 44: Metro 2013/14 Per Capita Consumption

³⁶Household unit consumption varies less between the metros, than does per capita consumption. Mangaung, Johannesburg and eThekwini have the highest SIV unit consumptions, whilst Mangaung and Johannesburg have the highest unit authorised consumptions. The lowest SIV unit consumption is in Cape Town and lowest authorised unit consumption in Buffalo City and NM Bay.

³⁷Lastly an analysis of unit consumption per connections shows that in terms of SIV/connection, Johannesburg has by far the highest value. The lowest is in Buffalo City. As regards authorised consumption, Johannesburg is again highest and Buffalo City lowest.

It is noteworthy that metro comparisons differ, depending against which of the 3 parameters, (i.e. capita, household or connection), is used. ³⁸Quite clearly the differences between the above graphs can be, at least partially, ascribed to the variation in the number of households per connection and further analysis shows that this is indeed so. Johannesburg has the highest number of households per connection at almost 3, well above the average of 2 and lowest (Buffalo City) of 1.

Although these figures can be interpreted in a number of ways, the underlying message is that the current water use per person in South Africa is extremely high, especially for a water scarce country. There is significant scope for reducing water use through a change in behaviour of the consumers and if this can be achieved, there will be sufficient water to support the growing population for many years ahead. This will of course require some change in mind-set by the consumers who must appreciate the true value of water and the necessity to save it, especially those in Mangaung Metro.

³⁹In 2013/14 there was a huge variation in how the metros split their commercial losses and in the size of these allocations. In this regard Ekurhuleni is an outlier with enormous commercial losses of 48%. Why this is so needs investigation.

³⁶ Appendix A figure 77

³⁷ Appendix A figure 78

³⁸ Appendix A figure 79

³⁹ Appendix A figure 80

3.4 Lost revenue

Using water production costs, the value of lost revenue can be calculated for the metros. This is shown in **table 2** below and amounts to R5.7 bn /year. It should be noted that some of the NRW is in the form of commercial losses, in which case the effective cost to the metro will not be the production cost of the water, but rather the loss in income based on the selling price, which will be considerably higher. The largest loss is not surprisingly in Johannesburg Metro, followed by the Ekurhuleni and eThekwini metros.

Metro	NRW (kl/annum)	Water pr Raw	oduction Bulk	rate (R/kl) Total	Loss (Rm)	Bulk provider
Johannesburg	235 626 577	1.6	6.35	7.93	1 868 518 756	Rand Water
Tshwane	74 689 396	1.6	6.00	7.58	566 145 622	Rand + Magalies
Ekurhuleni	134 866 886	1.6	6.35	7.93	1 069 494 406	Rand Water
eThekwini	131 021 634	1.6	4.70	6.28	822 815 862	Umgeni Water
Cape Town	66 343 962	1.6	6.50	8.08	536 059 216	Self
Nelson Mandela Bay	45 554 450	1.6	6.50	8.08	368 079 956	Self
Buffalo City	25 887 918	1.6	8.15	9.73	251 889 442	Amatola Water
Mangaung	27 195 616	1.6	5.05	6.63	180 306 934	Bloem Water
	741 186 439				5 663 310 193	R7.6/kl
Matas						

<u>Notes</u>:

Raw water = WR Man Charge + Water Research Fund Levy + WR Infrastructure Charge.

Bulk water = Water Board charge if relevant, otherwise average bulk cost for SA is used.

Costs are 2012/13 costs escalated to 2013/14 at previous year's escalation rate.

Tshwane assumption is 80% from Rand Water and 20% from Magalies Water.

Reference: Water Services Tariffs 2012/13: DWA (PULA) 2013

Table 2: Metro 2013/14 Lost Revenue

It is however not possible to reduce NRW to zero. An ILI of 3 is considered a realistic goal and as per **figure 45**, this equates to a saving of R1.6bn/annum. The largest potential saving lies in Johannesburg Metro, as a consequence of their combined high SIV and NRW.

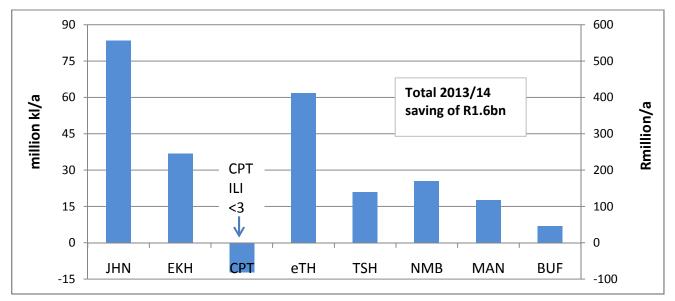


Figure 45: Metro 2013/14 Potential Saving Comparison

4 FINDINGS

- Data quality is consistently improving, however some data, prior to 2007/8, is of questionable reliability;
- The % NRW decreased from 35.1 in 2008/9 to 32.8 in 2012/13, wherafter it rose to 34.3 in 2013/14;
- The % WL decreased substantially from 33.8 in 2008/9 to 26.4 in 2012/13, wherafter it rose to 28.8 in 2013/14;
- The ILI decreased from 7 in 2008/9 to 5.3 in 2012/13, only to increase to 5.4 in 2013/14;
- Physical losses have been relatively constant since 2007/8, despite an increase in SIV;
- The metros supplied 2159 mill kl in 2013/14, falling short of the reconciliation target of 1969 mill kl/a. This target is in line with metro projected SIV with WC/WDM;
- Overall the SIV has increased in line with population growth, but slower than the household growth rate;
- The number of households per connection has increased, evidence of metro densification;
- Per capita consumption in terms of SIV has been relatively constant at 270 I/c/d since 2009/10. In terms of authorised consumption, this has increased since 2010/11. The current water use per person in South Africa is extremely high, especially for a water scarce country
- Unbilled authorised consumption has increased rapidly recently, for reasons unknown;
- Reducing the ILI to 3 will result in a saving of over R1.6 bn/annum;
- <u>Johannesburg Metro</u>: The metro hugely exceeded its SIV target and the recent increase in % NRW is concerning.Water resourceadequacy is of concern given the unavailability of any additional water before 2022. The metro has 2.8 households per connection, more than any other metro. There has been a huge increase in unbilled authorised consumption, (12% of SIV by 2013/14);
- <u>Ekurhuleni Metro</u> has shown little improvement in recent years and if its SIV target is to be met and its NRW and WL figures reduced, business as usual will not be good enough; it commercial losses need to be investigated as they may be artificially inflating these to reduce physical losses;
- <u>Cape Town Metro</u> is overall the best performing metro, but will face growing challenges to further improve;
- <u>eThekwini Metro's</u> failure to meet its SIV target and its increasingNRW and WL are cause for concern;
- <u>Tshwane Metro</u>: The negative impact of adding problematic municipalities to a metro can be clearly seen in the Tshwane scenario and the metro has done well to bring this under control, to meet their SIV target and to have relatively low NRW and WL:
- <u>Nelson Mandela Bay Metro's</u> situation is deteriorating rapidly and is a huge cause for concern;
- <u>Mangaung Metro</u> hasmade good progress in reducing WL and ILI, but despite this has very high per capita consumption, (and despite a relative lack of industry); in recent years there has been an upward trend. It would thus appear that the public is failing to play their part in conserving water. The metro's water is relatively cheap and their tariff structure is very flat for block 2 to 5, thus not conducive to water conservation; and
- <u>Buffalo City Metro</u> has not met its SIV target and has high NRW and WL, but is also characterised by a lack of clear trends, which makes a situational analysis difficult. Their reduced %NRW is however encouraging.

5 STRATEGIC RECOMMENDATIONS

- On-going monitoring and reporting of metros' water balances is crucial;
- Metros must increase their efforts to achieve their reconciliation targets and ensure water security; this is particularly important for the Gauteng metros where no additional water will be available until 2022;
- Reconciliation strategy targets need to be reviewed and updated as necessary;
- Metros should increase their efforts to reduce NRW and WL and the negative impact it has on their ability to generate own income and run a viable water business;
- Metros need to reduce per capita consumption, which is too high for a water scarce country;
- WC/WDM must be implemented; this should where needed include steps to increase consumer appreciation of the value of water;
- Political support to promote payment for water services and the persecution of illegal water connections and theft is vital;
- Johannesburg Metro's SIV must be closely monitored and the sudden, big, increase in NRW investigated;
- Ekurhuleni Metro must implement WC/WDM and validate their high commercial losses;
- Reasons for eThekwini Metro's failure to reduce their SIV, NRW and WL, given their WC/WDM initiative, need to be determined;
- The impact of Tshwane Metro's O&M budget cuts on their water losses must be closely monitored
- Nelson Mandela Bay Metro needs to put plans in place to curtail their downward spiral and reduce their high NRW;
- Mangaung Metro must take steps to reduce domestic consumption; they should consider revising their tariff structure; and
- Buffalo City must take steps to reduce their high NRW and WL.

Appendix A

Supplementary Figures



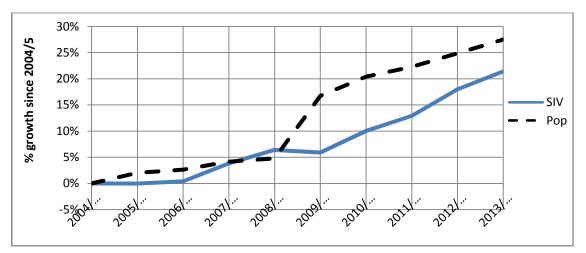


Figure 46 Johannesburg Metro SIV and Population Growth Rates

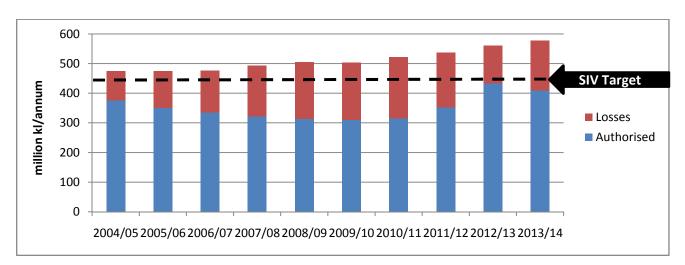


Figure 47: Johannesburg Metro SIV Component Trend and 2013/14 Target

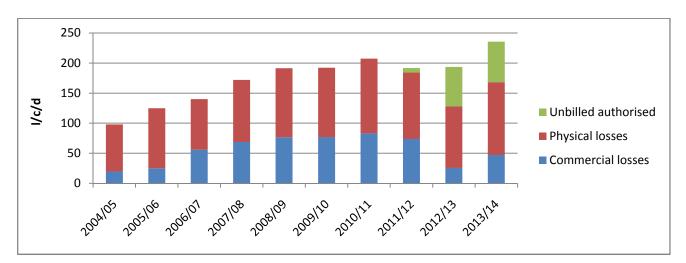


Figure 48: Johannesburg Metro NRW Component Trend

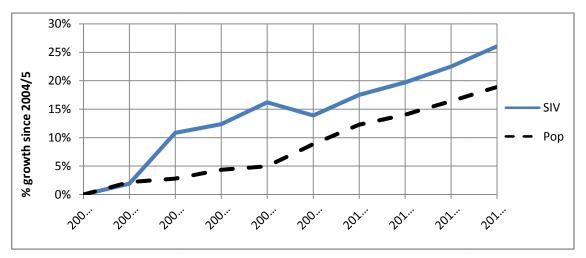


Figure 49: Ekurhuleni Metro SIV and Population Growth Rates

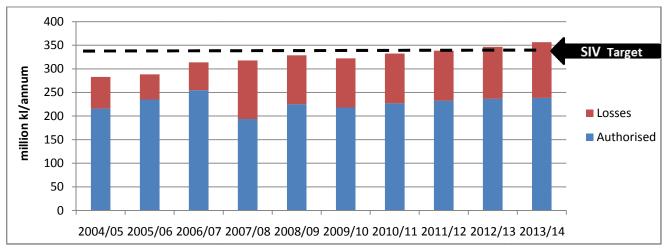


Figure 50: Ekurhuleni Metro SIV Component Trend and 2013/14 Target

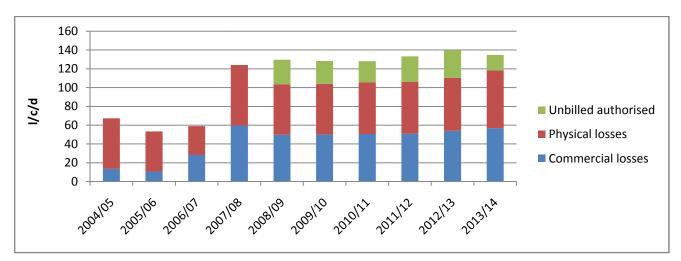


Figure 51: Ekurhuleni Metro NRW Component Trend

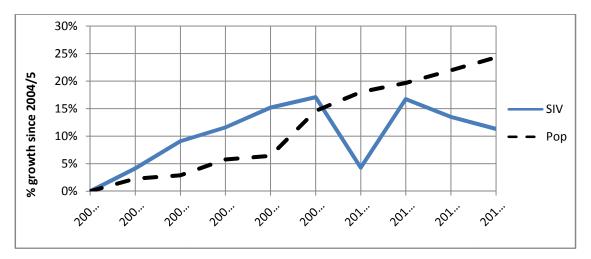


Figure 52: Cape Town Metro SIV and Population Growth Rates

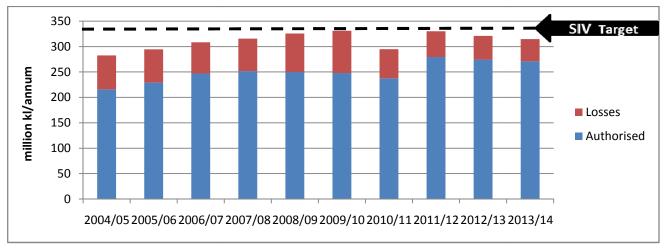


Figure 53: Cape Town Metro SIV Component Trend and 2013/14 Target

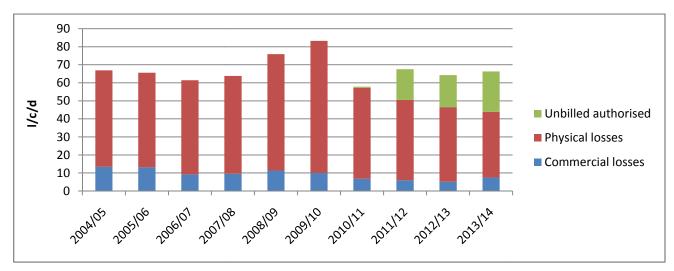


Figure 54: Cape Town Metro NRW Component Trend

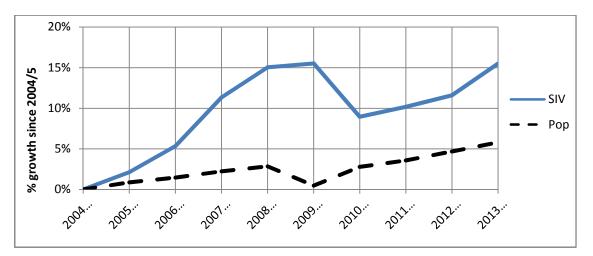


Figure 55: Ethekwini Metro SIV and Population Growth Rates

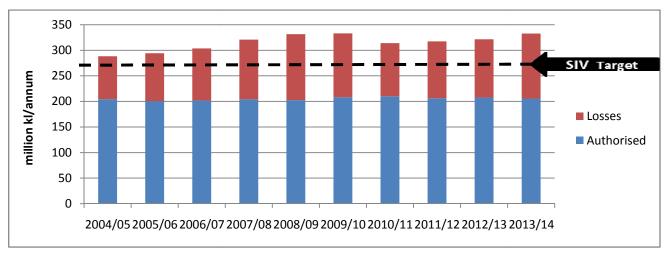


Figure 56: Ethekwini Metro SIV Component Trend and 2013/14 Target

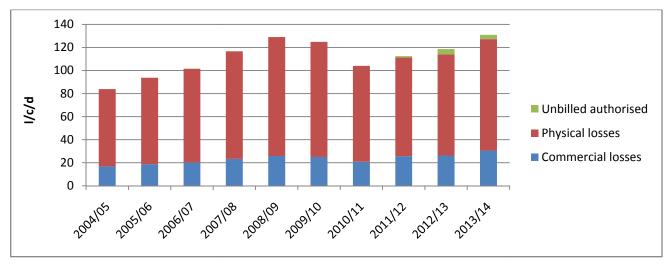


Figure 57: Ethekwini Metro NRW Component Trend

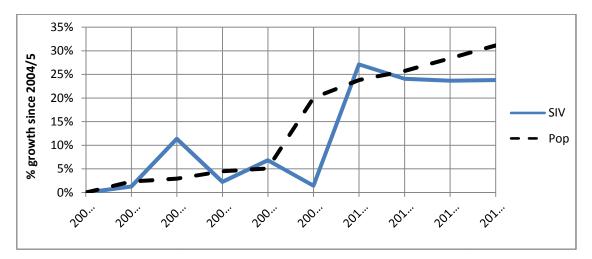


Figure 58: Tshwane Metro SIV and Population Growth Rates

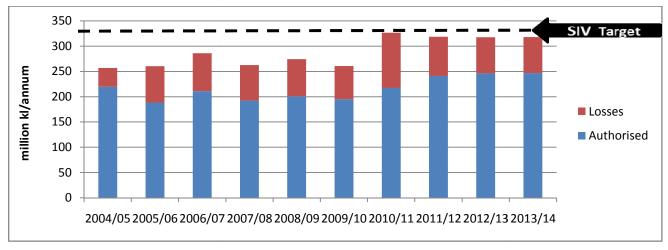


Figure 59: Tshwane Metro SIV Component Trend and 2013/14 Target

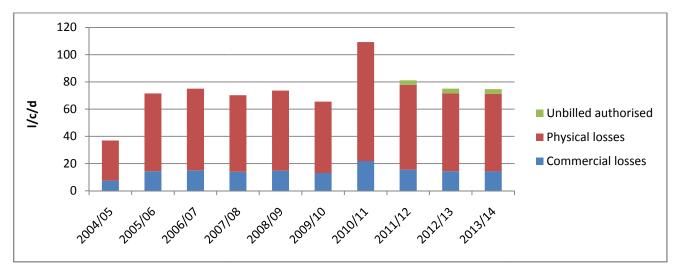


Figure 60: Tshwane Metro NRW Component Trend

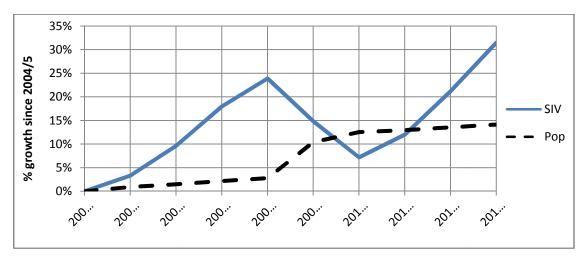


Figure 61: Nelson Mandela Bay Metro SIV and Population Growth Rates

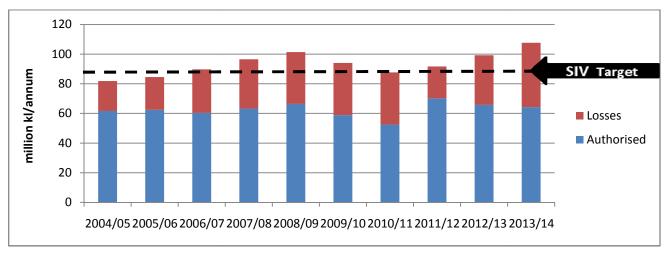


Figure 62: Nelson Mandela Bay Metro SIV Component Trend and 2013/14 Target

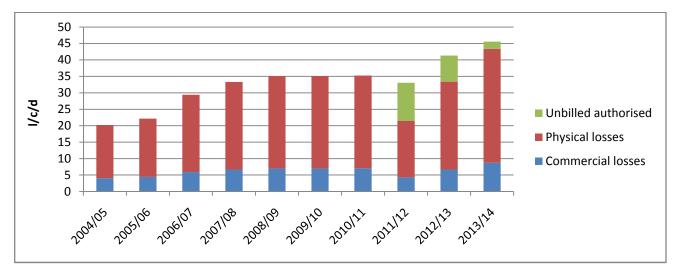


Figure 63: Nelson Mandela Bay Metro NRW Component Trend

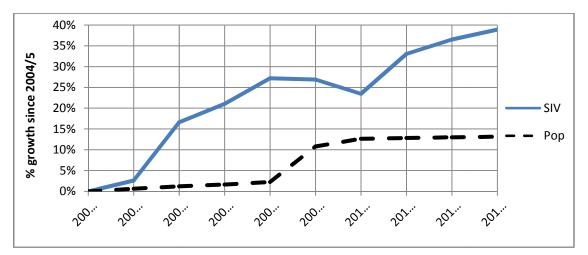


Figure 64: Mangaung Metro SIV and Population Growth Rates

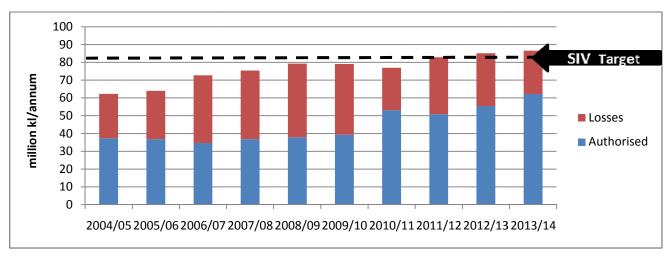


Figure 65: Mangaung SIV Component Trend and 2013/14 Target

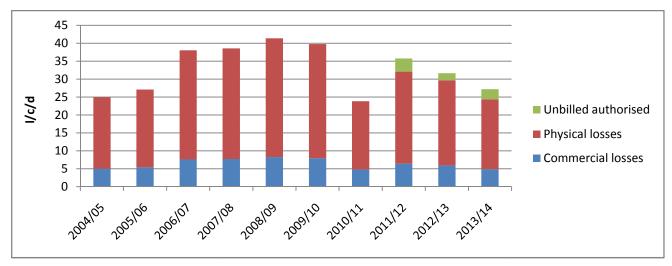


Figure 66: Mangaung Metro NRW Component Trend

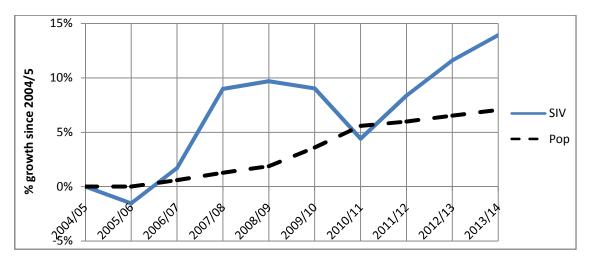


Figure 67: Buffalo City Metro SIV and Population Growth Rates

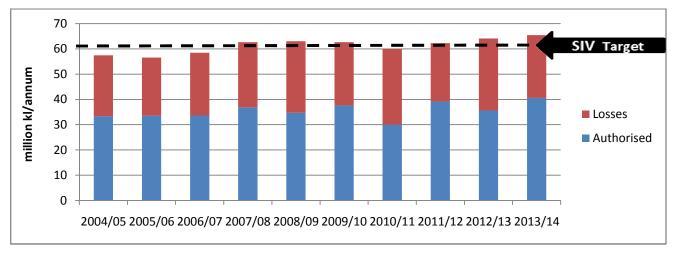


Figure 68: Buffalo City Metro SIV Component Trend and 2013/14 Target

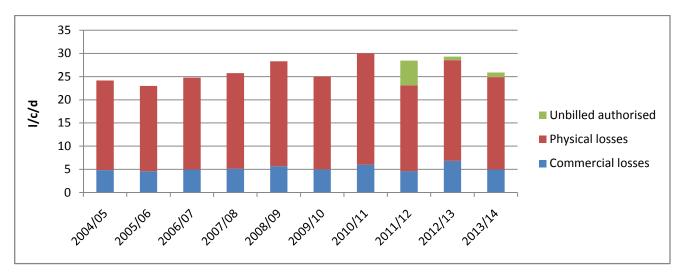
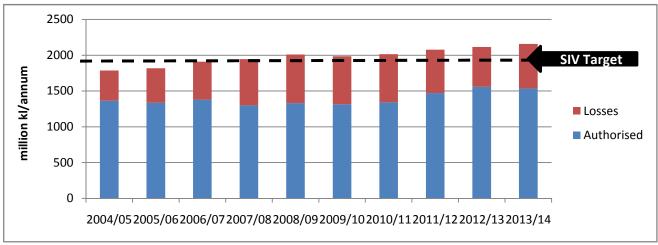


Figure 69: Buffalo City Metro NRW Component Trend



COMBINED METRO TRENDS

Figure 70: Combined Metro SIV Component Trend and 2013/14 Target

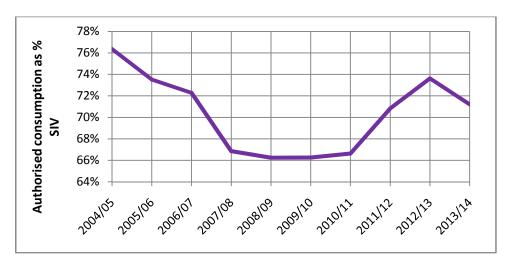


Figure 71: Authorised Consumption as % of SIV Trend

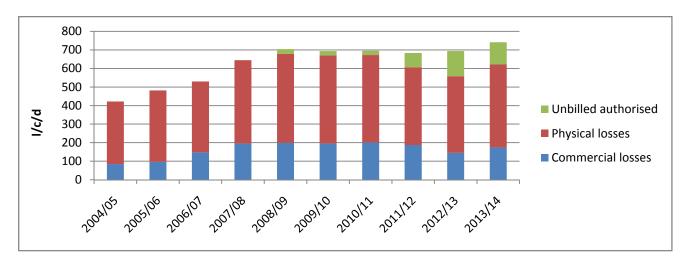


Figure 72: NRW Component Trend

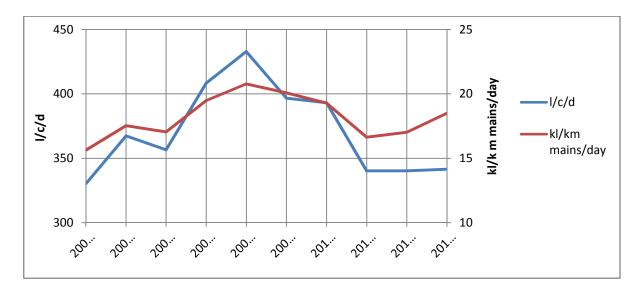


Figure 73: Combined Metro CARL Trend

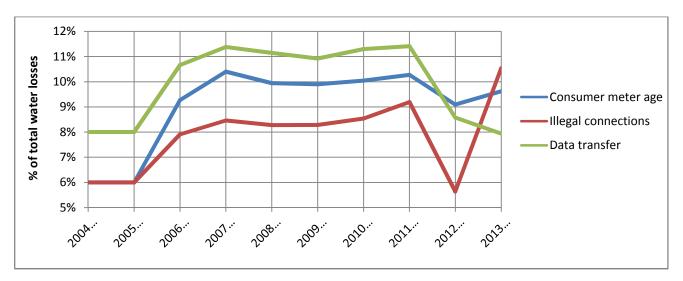
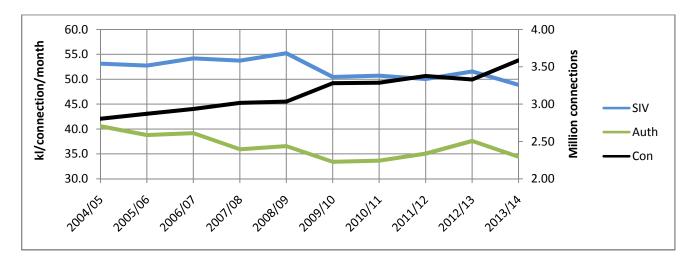


Figure 74: Combined Metro Commercial Loss Component Trends





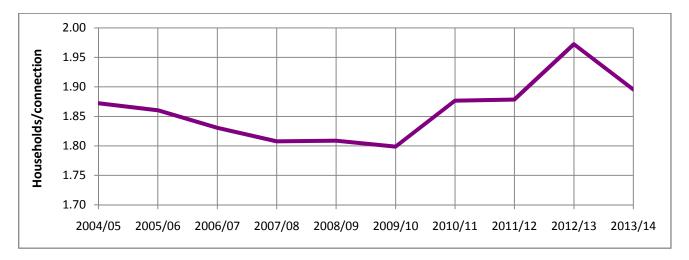
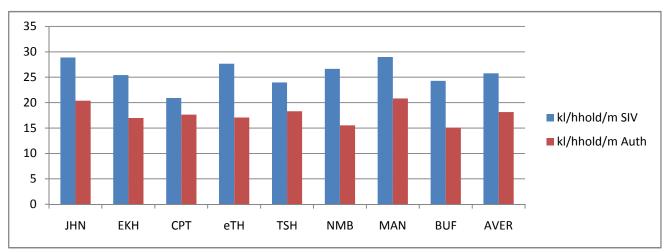


Figure 76: Combined Metro Households Per Connection Trend



METRO 2013/14 KPI COMPARISONS

Figure 77: Metro 2013/14 Household Consumption Comparison

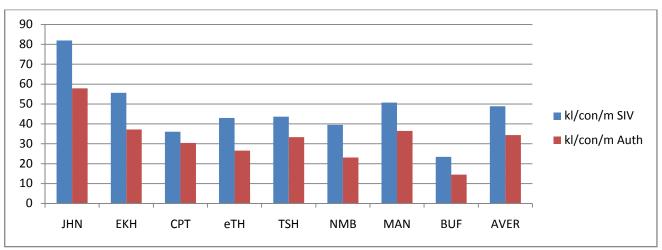


Figure 78: Metro 2013/14 Consumption Per Connection Comparison

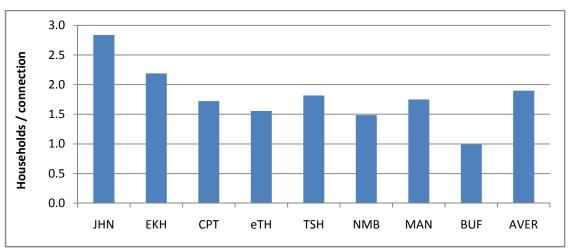


Figure 79: Metro 2013/14 Households Per Connection Comparison

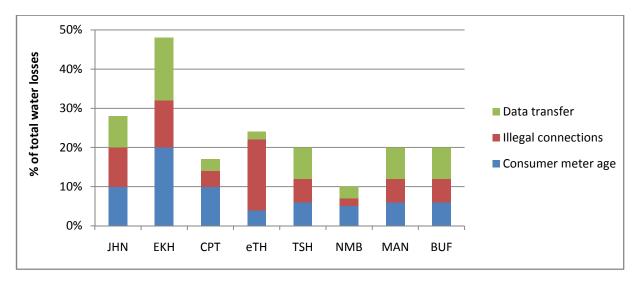


Figure 80: Metro 2013/14 Commercial Loss Comparison

Appendix B

Water Balance data for metropolitan municipalities

Note: Data based on original 2004/5 to 2011/12 and No Drop 2012/13 to 2013/14 spreadsheets, but pop figs amended and few changes made. Also limited alignment with the Municipal Benchmarking Initiative data was done.

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Indicator as % of system input volume % Revenue water 79.4% 73.7% 70.6% 65.1% 62.1% 61.8% 60.3% 64.3% 65.5% 55 % Non-revenue water 20.6% 22.4% 34.9% 37.9% 38.2% 38.7% 34.5% 44.5% 42.5% 42.6% 22.8% 34.9% 37.9% 38.2% 38.7% 34.5% 42.6% 22.8% 23.4% 34.9% 37.9% 38.2% 38.7% 34.3% 22.8% 22.8% 23.9% 33.3% 22.8% 33.3% 22.8% 33.3% 23.2% 33.3% 23.2% 33.3% 23.2% 33.3% 23.2% 33.3% 23.2% 33.3% 24.8% 24.2% 22.1% 10.1% 10.1% 24.2% 22.1% 10.1% 10.1% 10.2% 12.1% 10.1%	Projected SIV with WDM		kl/annum	No data	No data	No data	No data	No data	502 951 907	481 624 394	471 123 250	517 882 834	510 381 765
% Revenue water 73.3% 70.8% 65.1% 62.1% 61.8% 60.3% 64.3% 65.5% 55 % Non-revenue water 20.6% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 35.7% 34.3% 22.8% 24.6% 34.9% 37.9% 38.2% 39.7% 34.3% 22.8% 24.6% 34.9% 37.9% 38.2% 39.7% 34.3% 22.8% 24.6% 24.9% 34.9% 37.9% 38.2% 39.7% 34.3% 22.8% 24.9% 33.32 30.20 32.2 32.6 33.1 m*/ household / month 33 32 23 35.9 32.0 22.9 23 198 195 21.4 22.5 m*/ household / month 26 24 23 22.1 21 21 21.6 21.6 24.6 23.8 33 34.1 46.4 Domestic (&ND m*/ connection / month 26 24 23 22.1 21 20 16 19 22		١	'ear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
% Non-revenue water 20.6% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 38.7% 34.5% 44.6 % Water Losses 20.6% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 34.3% 22.6% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 34.3% 22.6% 26.8% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 34.3% 22.6% 26.8% 26.8% 29.4% 34.9% 37.9% 38.2% 39.7% 34.3% 22.6% 26.8	Indicator as % of system input volume												
% Water Losses 20.6% 26.3% 29.4% 34.9% 37.9% 38.2% 39.7% 34.3% 22.8% 22.8% System input volume unit consumption Litres / capita / day 353 346 346 352 359 320 323 326 331 m² / household / month 33 32 33 33 322 30 29 29 m² / household / month 73 70 68 69 74 61 63 63 63 63 63 63 64 64 63 63 64 64 63 63 64 6	% Revenue water			79.4%	73.7%	70.6%	65.1%	62.1%	61.8%	60.3%	64.3%	65.5%	59.1%
System input volume unit consumption Litres / capita / day Image: capita / day <td>% Non-revenue water</td> <td></td> <td></td> <td>20.6%</td> <td>26.3%</td> <td>29.4%</td> <td>34.9%</td> <td>37.9%</td> <td>38.2%</td> <td>39.7%</td> <td>35.7%</td> <td>34.5%</td> <td>40.9%</td>	% Non-revenue water			20.6%	26.3%	29.4%	34.9%	37.9%	38.2%	39.7%	35.7%	34.5%	40.9%
System input volume unit consumption Litres / capita / day Image: capita / day <td>% Water Losses</td> <td></td> <td></td> <td>20.6%</td> <td>26.3%</td> <td>29.4%</td> <td>34.9%</td> <td>37.9%</td> <td>38.2%</td> <td>39.7%</td> <td>34.3%</td> <td>22.8%</td> <td>29.2%</td>	% Water Losses			20.6%	26.3%	29.4%	34.9%	37.9%	38.2%	39.7%	34.3%	22.8%	29.2%
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m² / household / month 33 32 32 33 33 32 33 33 32 33 33 32 33 33 32 33<		-		050	240	240	050	050	200	202	200	224	224
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Authorised Unit Consumption Litres / capita / day 280 255 244 229 223 198 195 214 255 m² / household / month 26 24 23 21 21 20 18 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 19 22 188 188 188 188 188 188 188 188 188 188 188 20 22 19 11 13 12 10 7 7 19 11 13 12 10 7 18 11 15 18													29
Litres / capita / day 220 225 244 229 223 198 195 214 225 m ¹ / household / month 26 24 23 21 21 20 18 19 22 18 19 22 16	m³ / connection / month			75	70	68	69	74	61	63	63	83	82
m³ / household / month 26 24 23 21 21 20 18 19 22 m³ / connection / month 59 52 48 45 46 38 38 41 64 Domestic (&ND) m³ / connection / month 59 52 48 45 46 38 38 41 48 Non-domestic m³ / connection / month 59 52 48 45 46 38 38 41 48 Water loss indicators No data 102 123 136 123 128 112 76 m³ / household / month 7 8 9 11 13 12 22 10 7 m³ / connection / month 15 18 20 24 28 23 25 22 19 UARL : Losses (litres / connection / day) 15 18 20 24 26 24 26<	Authorised Unit Consumption												
m² / connection / month 59 52 48 45 46 38 38 41 64 Domestic (&ND) m² / connection / month 59 52 48 45 46 38 38 41 48 Non-domestic m² / connection / month No data No data <td< td=""><td>Litres / capita / day</td><td></td><td></td><td>280</td><td>255</td><td>244</td><td>229</td><td>223</td><td>198</td><td>195</td><td>214</td><td>255</td><td>236</td></td<>	Litres / capita / day			280	255	244	229	223	198	195	214	255	236
Domestic (&ND) m² / connection / month S9 52 48 45 46 38 38 41 48 Non-domestic m² / connection / month No data	m³ / household / month			26	24	23	21	21	20	18	19	22	20
Domestic (&ND) m² / connection / month S9 52 48 45 46 38 38 41 48 Non-domestic m² / connection / month No data	m ³ / connection / month	ors		59	52	48	45	46	38	38	41	64	58
Non-domestic m³ / connection / month Water loss indicatorsNo dataNo data													46
Water loss indicators Mater demand growth with WDM Mo data No data		e ind											191
Litres / capita / day Open withous hold / month Open without / month		60		NO Uata	NU Uata	No uala	NO udla	NO Udla	No uata	No udta	No uata	250	19.1
m³ / household / month 3 1	Water loss indicators	forr											
m³ / connection / month 15 18 20 24 28 23 25 22 19 UARL : Losses (litres / connection / day) 58 57 57 57 55 55 57 77 CARL : Losses (litres / connection / day) 406 485 394 478 554 461 492 424 501 Infrastructure Leakage Index (ILI) 7.0 8.5 7.0 8.4 9.7 8.4 9.0 7.8 6.5 CARL : Losses (m³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 1.55% 2.12% 2. % Water demand growth without WDM No data 1.62% 5.38% 2. % Water demand growth with WDM No data No data No data No data No data No data				73	91	102	123				112	76	98
UARL : Losses (litres / connection / day) 58 57 57 57 55 55 57 CARL : Losses (litres / connection / day) 406 485 394 478 554 461 492 424 501 Infrastructure Leakage Index (ILI) 7.0 8.5 7.0 8.4 9.7 8.4 9.0 7.8 6.5 CARL : Losses (m³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 2.12% 2. % Water demand growth without WDM No data	Litres / capita / day			7	8	9	11	13	12	12	10	7	8
CARL: Losses (litres / connection / day) 406 485 394 478 554 461 492 424 501 Infrastructure Leakage Index (ILI) 7.0 8.5 7.0 8.4 9.7 8.4 9.0 7.8 6.5 7.0 CARL: Losses (m³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 2.12% 2.12% % Water demand growth 0.043t No data No data No data No data No data 1.62% 1.62% 5.38% 2.1 % Water demand growth with WDM No data 0.64% 1.62% 0.64% 2.1 % Water demand growth with WDM No data 0.64% 0.64% 0.64% 0.64%						20	24	28	23	25	22	19	24
Infrastructure Leakage Index (ILI) 7.0 8.5 7.0 8.4 9.7 8.4 9.0 7.8 6.5 CARL : Losses (m ³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 2.12% 2. % Water demand growth Without WDM No data No	m³ / household / month			15	18	20				55			76
Infrastructure Leakage Index (ILI) 7.0 8.5 7.0 8.4 9.7 8.4 9.0 7.8 6.5 CARL : Losses (m ³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 2.12% 2. % Water demand growth Without WDM No data No	m² / household / month m² / connection / month						57	57	55	55	55	77	10
CARL: Losses (m³ / km mains / day) 20 26 21 26 29 29 31 26 24 % Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 1.55% 2.12% 2.11% % Water demand growth 0.04% 0.42% 3.42% 2.50% -0.47% 3.90% 2.63% 4.50% 2.1 % Water demand growth without WDM No data 1.62% 5.38% 2.1 % Water demand growth with WDM No data No data </td <td>m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day)</td> <td></td> <td></td> <td>58</td> <td>57</td> <td>57</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>570</td>	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day)			58	57	57							570
% Population growth 2.01% 0.60% 1.50% 0.60% 11.40% 3.15% 2.12%	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day)			58 406	57 485	57 394	478	554	461	492	424	501	
% Water demand growth -0.04% 0.42% 3.42% 2.50% -0.47% 3.90% 2.63% 4.50% 2.5% % Water demand growth without WDM No data	m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI)			58 406 7.0	57 485 8.5	57 394 7.0	478 8.4	554 9.7	461 8.4	492 9.0	424 7.8	501 6.5	570 7.5
% Water demand growth without WDM No data No data <td>m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day)</td> <td></td> <td></td> <td>58 406 7.0</td> <td>57 485 8.5 26</td> <td>57 394 7.0 21</td> <td>478 8.4 26</td> <td>554 9.7 29</td> <td>461 8.4 29</td> <td>492 9.0 31</td> <td>424 7.8 26</td> <td>501 6.5 24</td> <td>570 7.5 28</td>	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day)			58 406 7.0	57 485 8.5 26	57 394 7.0 21	478 8.4 26	554 9.7 29	461 8.4 29	492 9.0 31	424 7.8 26	501 6.5 24	570 7.5 28
% Water demand growth with WDM No data Accession (Comparison (Comp	m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth			58 406 7.0	57 485 8.5 26 2.01%	57 394 7.0 21 0.60%	478 8.4 26 1.50%	554 9.7 29 0.60%	461 8.4 29 11.40%	492 9.0 31 3.15%	424 7.8 26 1.55%	501 6.5 24 2.12%	570 7.5 28 2.12%
5 Year Annualised Population Growth	m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth			58 406 7.0 20	57 485 8.5 26 2.01% -0.04%	57 394 7.0 21 0.60% 0.42%	478 8.4 26 1.50% 3.42%	554 9.7 29 0.60% 2.50%	461 8.4 29 11.40% -0.47%	492 9.0 31 3.15% 3.90%	424 7.8 26 1.55% 2.63%	501 6.5 24 2.12% 4.50%	570 7.5 28 2.12% 2.91%
	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth % Water demand growth without WDM			58 406 7.0 20	57 485 8.5 26 2.01% -0.04%	57 394 7.0 21 0.60% 0.42%	478 8.4 26 1.50% 3.42%	554 9.7 29 0.60% 2.50%	461 8.4 29 11.40% -0.47%	492 9.0 31 3.15% 3.90%	424 7.8 26 1.55% 2.63%	501 6.5 24 2.12% 4.50%	570 7.5 28 2.12%
5 Year Annualised Water Growth 1.94% 2.38% 2.60% 2	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth % Water demand growth without WDM			58 406 7.0 20 No data	57 485 8.5 26 2.01% -0.04% No data	57 394 7.0 21 0.60% 0.42% No data	478 8.4 26 1.50% 3.42% No data	554 9.7 29 0.60% 2.50% No data	461 8.4 29 11.40% -0.47% No data	492 9.0 31 3.15% 3.90% 1.62%	424 7.8 26 1.55% 2.63% 1.62%	501 6.5 24 2.12% 4.50% 5.38%	570 7.5 28 2.12% 2.91%
	m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth without WDM % Water demand growth with WDM			58 406 7.0 20 No data	57 485 8.5 26 2.01% -0.04% No data	57 394 7.0 21 0.60% 0.42% No data	478 8.4 26 1.50% 3.42% No data	554 9.7 29 0.60% 2.50% No data	461 8.4 29 11.40% -0.47% No data No data	492 9.0 31 3.15% 3.90% 1.62% -4.24%	424 7.8 26 1.55% 2.63% 1.62% -2.18%	501 6.5 24 2.12% 4.50% 5.38% 9.93%	570 7.5 28 2.12% 2.91% 2.06%

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Build Build <th< th=""><th></th><th></th><th>Voar</th><th>1 Jul 04 -</th><th>1 Jul 05 -</th><th>1 Jul 06 -</th><th>1 Jul 07 -</th><th></th><th></th><th>1 Jul 10 -</th><th>1 Jul 11 -</th><th>1 Jul 12 -</th><th>1 Jul 13 -</th></th<>			Voar	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -			1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
Non-sector No. BAD BAD B State A <		-											30 Jun 14
Decomponent Diso Difficit Difficit <thdifficit< th=""> <</thdifficit<>	Population served		No	2 830 679		2 910 177	2 953 829	2 971 555	3 081 528		3 227 756	3 296 125	3 365 931
Bins Bins <th< td=""><td>Households served</td><td></td><td>No</td><td>892 587</td><td>912 185</td><td>917 658</td><td>931 422</td><td>937 010</td><td>936 763</td><td>1 015 484</td><td>1 078 979</td><td>1 122 991</td><td>1 168 804</td></th<>	Households served		No	892 587	912 185	917 658	931 422	937 010	936 763	1 015 484	1 078 979	1 122 991	1 168 804
Dyses 10: 377.20	Connections - total		No	377 263	378 727	396 390	421 409	426 295	497 570	501 954	517 012	578 496	533 952
Non-owner No. 0 0 0	Connections - metered		No	377 263	378 727	396 390	421 409	426 295	430 462	434 255	447 282	516 038	478 979
Description No 0 0 0 <th< td=""><td>Domestic</td><td></td><td>No</td><td>377 263</td><td>378 727</td><td>396 390</td><td>421 409</td><td>426 295</td><td>430 462</td><td>434 255</td><td>447 282</td><td>516 038</td><td>478 979</td></th<>	Domestic		No	377 263	378 727	396 390	421 409	426 295	430 462	434 255	447 282	516 038	478 979
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Lings of anima Pin Pin Pin Pin Pin Pin Pin Pin Pin Pin Pin		ata		24	24	23	22	22					2.2
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Community S O S S O S S O S S O S S O S S O S S O S S O S	Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Image consistency No. OPS UPS UPS UPS UPS UPS UPS Sub travier S. 0.	Apparent losses		%	20%	20%	48%	48%	48%	48%	48%	48%	49%	48%
Tops starting of values Top Set of s	Consumer meter age		%	6%	6%	20%	20%	20%	20%	20%	20%	20%	20%
System Normal Normal<	Illegal connections		%	6%	6%	12%	12%	12%	12%	12%	12%	12%	12%
Conserves Num 0 0 0 0 0 0 0 0 0 0 0 Conserves Wern 25700 47 25700 47 25425410 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205477 2527129 22438468 25249708 25205477 2527129 22438468 25249708 25205477 25271297 22438468 25249708 22439846 2526477 25217997 25271597 22438468 25249708 22649718 22649718 22649718 22649718 22649718 22649718 <td>Data transfer</td> <td></td> <td>%</td> <td>8%</td> <td>8%</td> <td>16%</td> <td>16%</td> <td>16%</td> <td>16%</td> <td>16%</td> <td>16%</td> <td>17%</td> <td>16%</td>	Data transfer		%	8%	8%	16%	16%	16%	16%	16%	16%	17%	16%
Conserves Num 0 0 0 0 0 0 0 0 0 0 0 Conserves Wern 25700 47 25700 47 25425410 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205467 25205477 2527129 22438468 25249708 25205477 2527129 22438468 25249708 25205477 25271297 22438468 25249708 22439846 2526477 25217997 25271597 22438468 25249708 22649718 22649718 22649718 22649718 22649718 22649718 <td>System input volume</td> <td></td> <td>kl/annum</td> <td>282 970 013</td> <td>288 375 444</td> <td>313 659 638</td> <td>317 977 186</td> <td>328 769 346</td> <td>322 249 616</td> <td>332 555 664</td> <td>338 742 752</td> <td>346 582 721</td> <td>356 640 839</td>	System input volume		kl/annum	282 970 013	288 375 444	313 659 638	317 977 186	328 769 346	322 249 616	332 555 664	338 742 752	346 582 721	356 640 839
Char Separation Separation <td></td> <td></td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td>0</td>				0	0	0	0	0	0		0	0	0
Name 13.70 MAP 23.00 4/17 24.62 1/0 10.80 AUT 20.20 2.00 201 2.00 2.00 201 2.00 2.00 201 2.00 2.00 20.20 2.00 201 2.00 2.00 20.20 2.00 201 2.00 2.00 20.20 2.00 201 2.00 2.00 20.20 2.00 <t< td=""><td></td><td></td><td></td><td>282 070 040</td><td>289 275 444</td><td>313 650 630</td><td>317 077 490</td><td>329 760 340</td><td>322 240 640</td><td>°</td><td>339 740 750</td><td>346 500 704</td><td>356 640 839</td></t<>				282 070 040	289 275 444	313 650 630	317 077 490	329 760 340	322 240 640	°	339 740 750	346 500 704	356 640 839
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Non-Reset Non-Network	Billed metered		kl/annum	215 700 847	235 004 771	254 623 170	193 888 712	199 057 077	193 973 397	204 396 405	205 497 030	206 909 884	221 764 593
Ebgot volume Signature Mammun 0 <td>Domestic</td> <td></td> <td>kl/annum</td> <td>215 700 847</td> <td>235 004 771</td> <td>254 623 170</td> <td>193 888 712</td> <td>199 057 077</td> <td>193 973 397</td> <td>204 396 405</td> <td>205 497 030</td> <td>206 909 884</td> <td>221 764 593</td>	Domestic		kl/annum	215 700 847	235 004 771	254 623 170	193 888 712	199 057 077	193 973 397	204 396 405	205 497 030	206 909 884	221 764 593
Bade unmetered Manum 0	Non-domestic		kl/annum	0	0	0	0	0	0	0	0	0	0
Unbilled authorised Open Subscription	Export volume	suc	kl/annum	0	0	0	0	0	0	0	0	0	0
Unbilled authorised Open Subscription		Ilatic	kl/annum	0	0	0	0	0	0	0	0	0	9 360
Unbilded meetered Mamum 0 0 0 0 25 Hd 9 22 24 Hd 9 920 22 739 114 27 219 241 0 Unbilded unreatered 0		alcu		0	0	-		26 149 925	24 189 593	-	_	20 / 50 531	16 601 864
Unblied unmeered Wamum 0		Ice C		0	0		•					23 433 331	10 001 004
Nater Losses Stanum 67 289 166 53 37 07 73 59 036 466 124 088 474 103 562 244 104 036 622 105 420 145 106 02 00 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 100 07 77 104 028 020 102 07 77 104 028 020 102 07 77 104 028 020 102 07 77 104 028 020 102 07 77 104 028 020 102 07 77 103 020 78 117 020 07 77 103 020 78 117 020 07 77 103 020 78 117 020 07 77 103 020 78 101 020 77 103 020 78 101 020 77 103 020 78 101 020 77 103 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78 101 020 78		alan		0	0	0	0	26 149 925	24 189 593		2/ 219 241	0	0
Commercial / Apparent losse Namum 13 433 833 10 674 15 23 337 80 95 82 468 49 709 22 40 96 1580 50 96 1670 50 98 2711 54 004 520 56 Physical (Real losses) Namum 53 83 33 42 69 538 30 68 98 42 52 006 53 82 740 44 55 53 53 32 761 50 98 771 50 20 776 50 20 50 776 <td>Unbilled unmetered</td> <td>ter B</td> <td>kl/annum</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>•</td> <td>0</td> <td></td> <td>16 601 864</td>	Unbilled unmetered	ter B	kl/annum	0	0	0	0	0	0	•	0		16 601 864
Nysical / Real losses Klannum 53 815 33 42 69 53 0.0 698 50 64 226 006 53 82 413 54 412 0.0 44 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 51 317.0 52 02 70 52 31 317.0 52 02 70 51 317.0 51 317.0 52 02 70 51 317.0 51 317.0 57 20 58 20 38 200 58 200 58 200 58 200 58 200 58 200 58 200 50 20 50 20 50 20	Water Losses	Wa	kl/annum	67 269 166	53 370 673	59 036 468	124 088 474	103 562 344	104 086 626	105 420 145	106 026 481	110 213 306	118 265 022
UARL Klannum 8 262 860 8 284 121 8 680 841 9 228 857 9 335 861 10 374 817 10 982 733 11 322 563 12 246 787 9 13 Potential real loss awing klannum 45 53 373 3 44 02 417 20 18 022 55 377 446 45 1658 43 53 023 43 825 683 43 875 783 13 47 875 13 47 875 13 47 875 13 47 875 13 47 875 13 47 875 13 47 875 13 47 875 13 47 875 13 22 486 18 34 7 823 368 83 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 34 7 823 583 3	Commercial / Apparent losses		kl/annum	13 453 833	10 674 135	28 337 505	59 562 468	49 709 925	49 961 580	50 601 670	50 892 711	54 004 520	56 767 211
Potential real loss saving No. No. </td <td>Physical / Real losses</td> <td></td> <td>kl/annum</td> <td>53 815 333</td> <td>42 696 538</td> <td>30 698 963</td> <td>64 526 006</td> <td>53 852 419</td> <td>54 125 046</td> <td>54 818 476</td> <td>55 133 770</td> <td>56 208 786</td> <td>61 497 811</td>	Physical / Real losses		kl/annum	53 815 333	42 696 538	30 698 963	64 526 006	53 852 419	54 125 046	54 818 476	55 133 770	56 208 786	61 497 811
Revenue water Non-Revenue water No data	UARL		kl/annum	8 262 060	8 294 121	8 680 941	9 228 857	9 335 861	10 574 817	10 992 793	11 322 563	12 246 787	9 778 767
Revenue water Non-Revenue water No data	Potential real loss saving		kl/annum	45 553 273	34 402 417	22 018 022	55 297 149	44 516 558	43 550 229	43 825 683	43 811 208	43 961 999	51 719 044
Non-Revenue water Kimmum 67 269 166 53 37 0 673 59 036 468 124 088 474 128 172 209 128 159 291 133 245 722 139 672 837 134 1 Projected SIV with VDM No data No		-											221 773 953
Projected SIV without WDM Kilannum No data No d													134 866 886
Projected SIV with WDM No data No data No data No data No data No data S22 429 616 S22 429 617 S22 43 517 S23 43 517 S33 43 517 S33 517 <td></td> <td>-</td> <td></td>		-											
Vear Jun-65 Jun-66 Jun-67 Jun-68 Jun-69 Jun-60 Jun-61 Jun-61 <td>-</td> <td></td> <td>kl/annum</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>352 004 304</td>	-		kl/annum										352 004 304
Indicator as % of system input volume Mon Mo Mon Mon	Projected SIV with WDM		kl/annum	No data	No data	No data	No data	No data	322 249 616	324 048 977	334 414 443	335 951 252	338 792 379
% Revenue water 76.2% 81.5% 61.2% 60.3% 60.2% 61.5% 60.7% 59.7% % Non-revenue water 23.8% 18.5% 18.8% 39.0% 33.5% 39.2% 31.5% 39.3% 40.3% System input volume unit consumption 23.8% 18.5% 18.8% 39.0% 31.5% 32.3% 31.7% 31.3% <t< td=""><td></td><td></td><td>rear ending</td><td>Jun-05</td><td>Jun-06</td><td>Jun-07</td><td>Jun-08</td><td>Jun-09</td><td>Jun-10</td><td>Jun-11</td><td>Jun-12</td><td>Jun-13</td><td>Jun-14</td></t<>			rear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
% Non-revenue water 23.8% 18.5% 18.8% 39.0% 39.8% 38.5% 39.3% 40.3% % Water Losses 23.8% 18.5% 18.8% 30.0% 31.5% 32.3% 31.7% 31.3% 31.8% System input volume unit consumption ILitres / capita / day 274 273 225 225 303 277 287 288 288 m*/ household month 26 26 28 29 29 27 26 26 28 m*/ household month 209 223 240 180 208 144 196 198 196 m*/ household month 209 223 240 180 208 144 196 198 196 Mordmexitic M*/ connection / month 209 223 244 180 38 34 38 34 38 34 38 34 38 34 38 34 38 34 38 34 38 38 3	Indicator as % of system input volume									ſ			
% Water Losses 23.8% 18.5% 18.8% 39.0% 31.5% 32.3% 31.7% 31.3% 31.8% System input volume unit consumption Litres / capita / day 27 226 28 29 29 27 26 26 m² / household / month 63 65 66 63 64 55 55 50 Litres / capita / day 209 223 240 180 208 194 196 198 196 m² / connection / month 20 21 23 17 20 19 19 18 18 Domestic (&ND) m² / connection / month 20 21 23 17 20 19 19 18 18 Water loss indicators 10 48 52 54 38 44 37 38 38 34 Water loss indicators 10 6 5 11 9 9 8 8 m² / household / month 15 1	% Revenue water			76.2%	81.5%	81.2%	61.0%	60.5%	60.2%	61.5%	60.7%	59.7%	62.2%
System input volume unit consumption Litres / capita / day 274 273 295 295 303 287 287 288 288 m*/ household / month 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 29 27 26 26 28 29 27 26 26 28 28 29 22 26 36 44 37 38 38 34 20 21 23 25 4 38 44 37 38 38 34 20 22 54 38 44 37 38 38 34 20 21 20 17 18 10 </td <td>% Non-revenue water</td> <td></td> <td></td> <td>23.8%</td> <td>18.5%</td> <td>18.8%</td> <td>39.0%</td> <td>39.5%</td> <td>39.8%</td> <td>38.5%</td> <td>39.3%</td> <td>40.3%</td> <td>37.8%</td>	% Non-revenue water			23.8%	18.5%	18.8%	39.0%	39.5%	39.8%	38.5%	39.3%	40.3%	37.8%
System input volume unit consumption Litres / capita / day 274 273 295 295 303 287 287 288 288 m*/ household / month 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 28 29 27 26 26 28 29 27 26 26 28 29 27 26 26 28 28 29 22 26 36 44 37 38 38 34 20 21 23 25 4 38 44 37 38 38 34 20 22 54 38 44 37 38 38 34 20 21 20 17 18 10 </td <td>% Water Losses</td> <td></td> <td></td> <td>23.8%</td> <td>18.5%</td> <td>18.8%</td> <td>39.0%</td> <td>31.5%</td> <td>32.3%</td> <td>31.7%</td> <td>31.3%</td> <td>31.8%</td> <td>33.2%</td>	% Water Losses			23.8%	18.5%	18.8%	39.0%	31.5%	32.3%	31.7%	31.3%	31.8%	33.2%
Litres / capita / day 274 273 295 295 303 287 288 288 m² / household / month 26 26 28 28 29 29 27 26 26 Authorised Unit Consumption 63 66 63 64 54 55 55 50 M' household / month 63 209 223 240 180 208 194 196 198 196 m² / connection / month 209 223 240 180 208 194 196 198 196 Mon-domestic m² / connection / month 209 223 240 180 208 184 37 38 38 34 Non-domestic m² / connection / month 48 52 54 38 44 37 38 38 34 Water / connection / month No data				2010/10				011070	02.070	0	0.1070	011070	001270
m² / household / month 26 26 28 29 29 27 26 26 m² / connection / month 63 63 66 63 64 54 55 55 50 Litres / capita / day 200 223 240 160 208 194 196 198 188 188 148 198 198 198 198 198 198 198 198 198 198 198 198 198 188			<u> </u>	074	070				007				
m² / connection / month 63 63 66 64 54 55 55 50 Litres / capita / day m² / connection / month 209 223 240 180 206 194 196 198 196 186 m² / connection / month 209 223 240 180 206 194 196 198 196 186 Domestic (&ND) m² / connection / month 0 48 52 54 38 44 37 38 38 34 Non-domestic m² / connection / month No data													290
Authorised Unit Consumption Image: constraint of the second													25
Litres / capita / day 200 223 240 160 208 194 196 198 196 m ² / household / month m ² / connection / month 20 21 23 17 20 19 19 198 188 18 Domestic (&ND) m ³ / connection / month Mo 48 52 54 38 44 37 38 38 34 38 34 38 34 38 34 38 34 38 34 38 38 34 38 34 38 38 34 38 38 34 38 38 34 38 38 34 38 38 38 34 38 38 34 38 38 34 38 38 34 38	m³ / connection / month			63	63	66	63	64	54	55	55	50	56
m² / household / month 20 21 23 17 20 19 19 18 18 m² / connection / month 48 52 54 38 44 37 38 38 34 Non-domestic (&ND) m² / connection / month 48 52 54 38 44 37 38 38 34 Non-domestic m² / connection / month 48 52 54 38 44 37 38 38 34 Water loss indicators No data	Authorised Unit Consumption												
m² / connection / month org 48 52 54 38 44 37 38 38 34 Domestic (&ND) m² / connection / month 48 52 54 38 44 37 38 38 33 34 Non-domestic m² / connection / month No data No data<	Litres / capita / day			209	223	240	180	208	194	196	198	196	194
Domestic (&ND) m² / connection / month 44 52 54 38 44 37 38 38 34 Non-domestic m² / connection / month Water loss indicators No data	m³ / household / month			20	21	23	17	20	19	19	18	18	17
Domestic (&ND) m² / connection / month Mo 44 52 54 38 44 37 38 38 34 Non-domestic m² / connection / month Water loss indicators No data No da	m ³ / connection / month	ors									38	34	37
Non-domestic m³ / connection / monthMoNo dataNo dat		dicat											37
Water loss indicators U Image: Constraint of the state of the sta													No data
m³ / household / month Image: Connection / month Image		nanc		no data	no data	No data	no data	no data	no data	no data	no data	no data	no data
m³ / household / month Image: Connection / day		rform											
m³ / connection / month 15 12 12 25 20 17 18 17 16 UARL : Losses (litres / connection / day) 60 60 60 60 60 60 60 60 60 58 60 60 58 CARL : Losses (litres / connection / day) 391 309 212 420 346 298 299 292 266 CARL : Losses (m³ / km mains / day) 6.5 5.1 3.5 7.0 5.8 5.1 5.0 4.9 4.6 CARL : Losses (m³ / km mains / day) 18 14 10 19 16 15 13 13 13 % Population growth 1.8 1.4 10 19 16 15 13 13 13 % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth with WDM No data No data No data No data No data No data <td></td> <td>96</td>													96
UARL: Losses (litres / connection / day) 60 60 60 60 60 60 60 60 58 60 60 58 CARL: Losses (litres / connection / day) 391 309 212 420 346 298 299 292 266 200 Infrastructure Leakage Index (ILI) 6.5 5.1 3.5 7.0 5.8 5.1 5.0 4.9 4.6 CARL: Losses (m ³ / km mains / day) 18 14 10 19 16 15 13 13 13 13 % Population growth 2.20% 0.60% 1.50% 0.60% 3.70% 3.15% 1.55% 2.12% % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth with WDM No data No data No data No data No data No data 0.64% 3.26% 3.20% 0.66% % Water demand growth with WDM No data No data	m³ / household / month	Ke		-	-								8
CARL: Losses (litres / connection / day) 391 309 212 420 346 298 299 292 266 Infrastructure Leakage Index (ILI) 6.5 5.1 3.5 7.0 5.8 5.1 5.0 4.9 4.6 CARL: Losses (m³ / km mains / day) 18 14 10 19 16 15 13 13 13 % Population growth 2.20% 0.60% 1.50% 0.60% 3.70% 3.15% 1.55% 2.12% % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth without WDM No data No data No data No data No data No data 0.64% 3.20% 1.86% 2.01% % Water demand growth with WDM No data No data No data No data No data No data 0.66% 3.20% 3.06% 3.20% 0.46% % Water demand growth with WDM No data No data No data	m ³ / connection / month			15	12	12	25	20	17	18	17	16	18
Infrastructure Leakage Index (ILI) 6.5 5.1 3.5 7.0 5.8 5.1 5.0 4.9 4.6 CARL : Losses (m ³ / km mains / day) 18 14 10 19 16 15 13 13 13 % Population growth 2.20% 0.60% 1.50% 0.60% 3.70% 3.15% 1.55% 2.12% % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth without WDM No data No data No data No data No data No data 0.64# 4.26% -0.67% % Water demand growth with WDM No data No data No data No data No data No data 0.64# 0.66% 3.20% 0.46% -0.67% % Water demand growth with WDM No data No data No data No data No data 0.64# 0.66% 3.20% 0.46% 0.66% 5 Year Annualised Population Growth Image: Compart of the compart of the compar	UARL : Losses (litres / connection / day)			60	60	60	60	60	58	60	60	58	50
Infrastructure Leakage Index (ILI) 6.5 5.1 3.5 7.0 5.8 5.1 5.0 4.9 4.6 CARL : Losses (m ³ / km mains / day) 18 14 10 19 16 15 13 13 13 13 % Population growth 2.20% 0.60% 1.50% 0.60% 3.70% 3.15% 1.55% 2.12% % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth without WDM No data No data No data No data No data No data 0.64% 3.6% 4.26% -0.67% % Water demand growth with WDM No data No data No data No data No data No data 0.64% 3.26% 3.20% 0.46% 5 Year Annualised Population Growth Image: Comparison of the state of	CARL : Losses (litres / connection / day)			391	309	212	420	346	298	299	292	266	316
CARL : Losses (m³ / km mains / day) 18 14 10 19 16 15 13 13 13 % Population growth 2.20% 0.60% 1.50% 0.60% 3.70% 3.15% 1.55% 2.12% % Water demand growth 1.91% 8.77% 1.38% 3.39% -1.98% 3.20% 1.86% 2.31% % Water demand growth without WDM No data No data No data No data No data No data 0.64% 4.26% -0.67% % Water demand growth with WDM No data No data No data No data No data No data 0.64% 0.56% 3.20% 0.46% 5 Year Annualised Population Growth Image: Comparison of the state of the sta				6.5	5.1						4.9	4.6	6.3
% Population growth Image: Constraint of the system Const													17
% Water demand growth Image: Constraint of the constrain				10									2.12%
% Water demand growth without WDM No data No data <td>· •</td> <td></td>	· •												
% Water demand growth with WDM No data Output Ou	-												2.90%
5 Year Annualised Population Growth	% Water demand growth without WDM			No data	No data		No data						1.94%
				No data	No data	No data	No data	No data	No data	0.56%	3.20%	0.46%	0.85%
5 Vear Annualized Water Growth	% Water demand growth with WDM				· · · · · · · · · · · · · · · · · · ·			, , , , , , , , , , , , , , , , , , ,					
5 Year Annualised Water Growth 2.63% 2.89% 1.55% 1.74%	-								3.28%	3.01%	3.03%	2.87%	2.89%

Undeted Neu 2015					- 7				_010			
Updated Nov 2015	_		1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	TOWN 1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
		Year	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served		No	3 169 041	3 241 420	3 260 871	3 352 175	3 372 289	3 631 564	3 740 018	3 792 371	3 864 951	3 938 918
Households served		No	873 735	893 691	899 054	924 224	929 768	1 062 161	1 068 560	1 058 950	1 091 375	1 124 805
Connections - total		No	542 017	554 397	557 725	573 339	576 778	604 248	604 248	623 191	633 820	652 492
Connections - metered		No	542 017	554 397	557 725	573 339	576 778	604 248	604 248	623 191	628 756	631 492
Domestic Non-domestic		No No	542 017	554 397	557 725	573 339	576 778	604 248	604 248	604 241 18 950	594 004 34 752	593 996 37 496
Connections - unmetered		No	0	0	0	0	0	0	0		5 064	21 000
Households / connection	Data	No	1.6	1.6	1.6		1.6	1.8	1.8		1.7	1.7
Length of mains	Input [km	9 345	9 559	9 616	9 885	9 944	10 418	10 418		10 263	10 867
Connections / km	Ē	No / km	58	58	58	58	58	58	58		62	60
Average system pressure		m	50	50	55	55	55	55	55	55	60	60
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Apparent losses		%	20%	20%	15%	15%	15%	12%	12%	12%	11%	17%
Consumer meter age		%	6%	6%	7%	7%	7%	6%	6%	6%	5%	10%
Illegal connections		%	6%	6%	3%	3%	3%	3%	3%	3%	3%	4%
Data transfer	<u> </u>	%	8%	8%	5%	5%	5%	3%	3%	3%	3%	3%
System input volume		kl/annum	282 738 423	294 495 896	308 431 938	315 555 297	325 691 626	331 062 488	294 861 095	330 040 938	320 921 723	314 773 795
Own sources		kl/annum	282 738 423	294 495 896	308 431 938	315 555 297	325 691 626	331 062 488	294 861 095	330 040 938	320 921 723	314 773 795
Other sources		kl/annum	0	229.049.402	246 079 552	254 745 949	240 700 409	047 797 036	027 649 470	070 407 420	274 447 702	270 990 566
Authorised Consumption Billed authorised		kl/annum kl/annum	215 778 554 215 778 554	228 918 192 228 918 192	246 978 552 246 978 552	251 745 818 251 745 818	249 790 408 249 790 408	247 787 926 247 787 926	237 618 170 237 028 448	279 497 420 262 499 805	274 447 703 256 624 501	270 880 566 248 429 833
Billed metered		ki/annum	180 746 365	228 918 192	246 978 552 242 740 152	251 745 818 251 745 818	249 790 408	247 787 926	237 028 448 229 078 955	262 499 805	256 624 501	248 429 833
Domestic		kl/annum	180 746 365	197 293 056	242 740 152	251 745 818	249 790 408	247 787 926	229 078 955	157 843 833	156 512 967	215 856 596
Non-domestic	ر س	kl/annum	100 740 305	131 233 030	242 740 152	251 745 616	249 790 406	2-11101-920 N	LL3 010 933	70 847 785	67 076 986	000 080
Export volume	tion:	kl/annum	0	0	0	0	0	0	0	33 808 187	33 034 548	32 573 237
Billed unmetered	culat	kl/annum	35 032 189	31 625 136	4 238 400	0	0	0	7 949 493	0	0	0
Unbilled authorised	Calc	kl/annum	0	0	0	0	0	0	589 722	16 997 615	17 823 202	22 450 733
Unbilled metered	ince	kl/annum	0	0	0	0	0	0	0	13 535 555	15 696 322	13 630 733
Unbilled unmetered	Bala	kl/annum	0	0	0	0	0	0	589 722	3 462 060	2 126 880	8 820 000
Water Losses	ater	kl/annum	66 959 869	65 577 704	61 453 386	63 809 479	75 901 218	83 274 562	57 242 925	50 543 518	46 474 020	43 893 229
Commercial / Apparent losses	Š	kl/annum	13 391 974	13 115 541	9 218 008	9 571 422	11 385 183	9 992 947	6 869 151	6 065 222	5 112 142	7 461 849
Physical / Real losses		kl/annum	53 567 895	52 462 163	52 235 378	54 238 057	64 516 035	73 281 615	50 373 774	44 478 296	41 361 878	36 431 380
UARL		kl/annum	10 983 329	11 234 187	12 431 777	12 779 818	12 856 478	13 468 792	13 468 792	13 912 834	15 150 201	15 715 431
Potential real loss saving		kl/annum	42 584 566	41 227 976	39 803 601	41 458 239	51 659 557	59 812 822	36 904 982	30 565 462	26 211 677	20 715 949
Revenue water		kl/annum	215 778 554	228 918 192	246 978 552	251 745 818	249 790 408	247 787 926	237 028 448	262 499 805	256 624 501	248 429 833
Non-Revenue water		kl/annum	66 959 869	65 577 704	61 453 386	63 809 479	75 901 218	83 274 562	57 832 647	67 541 133	64 297 222	66 343 962
Projected SIV without WDM		kl/annum	No data	No data	308 431 938	318 548 100	328 391 236	338 538 525	348 999 366	359 783 446	493 318 500	504 180 558
Projected SIV with WDM		kl/annum	No data DWA NIS	No data DWA NIS	308 431 938 DWA NIS	313 418 700 DWA NIS	317 900 587 DWA NIS	322 446 567 DWA NIS	327 057 552 DWA NIS	331 734 475 DWA NIS	383 907 600	389 598 189
Source of information			StatsSA	StatsSA	StatsSA	Municipality	-	Municipality	Municipality	MBI		
Comments							wunicidality					
							Municipality	maniopany	wurnopality	IVIDI		Jun-14
Indicator as % of system input volume	Ŷ	'ear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	
% Revenue water	, Y	'ear ending	Jun-05	Jun-06		Jun-08					Jun-13	78.9%
		/ear ending	Jun-05 76.3%	77.7%		Jun-08 79.8%					Jun-13 80.0%	21.1%
% Non-revenue water		′ear ending			Jun-07		Jun-09	Jun-10	Jun-11	Jun-12		13.9%
% Non-revenue water % Water Losses		'ear ending	76.3%	77.7%	Jun-07 80.1%	79.8%	Jun-09 76.7%	Jun-10 74.8%	Jun-11 80.4%	Jun-12 79.5%	80.0%	
% Non-revenue water % Water Losses System input volume unit consumption		'ear ending	76.3% 23.7% 23.7%	77.7% 22.3% 22.3%	Jun-07 80.1% 19.9%	79.8% 20.2% 20.2%	Jun-09 76.7% 23.3% 23.3%	Jun-10 74.8% 25.2% 25.2%	Jun-11 80.4% 19.6% 19.4%	Jun-12 79.5% 20.5% 15.3%	80.0% 20.0% 14.5%	
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day		/ear ending	76.3% 23.7% 23.7% 244	77.7% 22.3% 22.3% 249	Jun-07 80.1% 19.9% 19.9% 259	79.8% 20.2% 20.2% 258	Jun-09 76.7% 23.3% 23.3% 265	Jun-10 74.8% 25.2% 25.2% 25.2%	Jun-11 80.4% 19.6% 19.4% 216	Jun-12 79.5% 20.5% 15.3% 214	80.0% 20.0% 14.5% 204	196
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m³ / household / month		fear ending	76.3% 23.7% 23.7% 23.7% 244 27	77.7% 22.3% 22.3% 249 27	Jun-07 80.1% 19.9% 19.9% 259 29	79.8% 20.2% 20.2% 258 258 28	Jun-09 76.7% 23.3% 23.3% 265 29	Jun-10 74.8% 25.2% 25.2% 25.2% 25.0 250 26	Jun-11 80.4% 19.6% 19.4% 216 23	Jun-12 79.5% 20.5% 15.3% 214 23	80.0% 20.0% 14.5% 204 204 22	21
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month		fear ending	76.3% 23.7% 23.7% 244	77.7% 22.3% 22.3% 249	Jun-07 80.1% 19.9% 19.9% 259	79.8% 20.2% 20.2% 258 258 28	Jun-09 76.7% 23.3% 23.3% 265	Jun-10 74.8% 25.2% 25.2% 25.2%	Jun-11 80.4% 19.6% 19.4% 216	Jun-12 79.5% 20.5% 15.3% 214	80.0% 20.0% 14.5% 204	
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption		Year ending	76.3% 23.7% 23.7% 23.7% 244 27 43	77.7% 22.3% 22.3% 249 27 44	Jun-07 80.1% 19.9% 19.9% 259 29 29 46	79.8% 20.2% 20.2% 20.2% 258 258 28 46	Jun-09 76.7% 23.3% 23.3% 265 29 47	Jun-10 74.8% 25.2% 25.2% 25.2% 250 26 46	Jun-11 80.4% 19.6% 19.4% 216 23 41	Jun-12 79.5% 20.5% 15.3% 214 23 40	80.0% 20.0% 14.5% 204 22 38	21 36
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day		fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 8 187	77.7% 22.3% 22.3% 229 249 27 44	Jun-07 80.1% 19.9% 19.9% 259 29 29 46 208	79.8% 20.2% 20.2% 20.2% 258 28 28 46 206	Jun-09 76.7% 23.3% 23.3% 265 29 47 29 47	Jun-10 74.8% 25.2% 25.2% 250 26 26 46 46	Jun-11 80.4% 19.6% 19.4% 216 23 41 174	Jun-12 79.5% 20.5% 15.3% 214 23 40 177	80.0% 20.0% 14.5% 204 22 38 38	21 36 166
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day m ³ / household / month		fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 187 187 21	77.7% 22.3% 22.3% 249 27 44 193 21	Jun-07 80.1% 19.9% 259 29 46 208 23	79.8% 20.2% 20.2% 20.2% 258 28 28 46 206 23	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 203 22	Jun-10 74.8% 25.2% 25.2% 250 26 46 46 187 19	Jun-11 80.4% 19.6% 19.4% 216 23 41 174 19	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19	80.0% 20.0% 14.5% 204 22 38 171 18	21 36 166 18
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month Authorised Unit Consumption Litres / capita / day m³ / household / month m³ / connection / month	icators	fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 187 187 21 33	77.7% 22.3% 22.3% 249 27 44 193 21 34	Jun-07 80.1% 19.9% 259 29 46 208 23 37	79.8% 20.2% 20.2% 258 28 46 206 23 37	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 203 22 36	Jun-10 74.8% 25.2% 25.2% 250 26 46 46 187 19 34	Jun-11 80.4% 19.6% 19.4% 216 23 41 174 19 33	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19 33	80.0% 20.0% 14.5% 204 22 38 171 18 32	21 36 166 18 30
% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month Authorised Unit Consumption Litres / capita / day m³ / household / month m³ / connection / month Domestic (&ND) m³ / connection / month	indicators	fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 187 21 33 33	77.7% 22.3% 22.3% 249 27 44 193 21 34 34	Jun-07 80.1% 19.9% 259 29 46 208 23 37 37	79.8% 20.2% 20.2% 258 28 46 206 23 37 37	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 203 22 36 36 36	Jun-10 74.8% 25.2% 25.2% 250 26 46 46 187 19 34 34	Jun-11 80.4% 19.6% 19.4% 216 23 41 174 19 33 33	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19 33 24	80.0% 20.0% 14.5% 204 22 38 38 171 18 32 24	21 36 166 18
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% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month Authorised Unit Consumption Litres / capita / day m³ / household / month m³ / connection / month Domestic (&ND) m³ / connection / month Non-domestic m² / connection / month Water loss indicators	indicators	fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 187 21 33 33 No data	77.7% 22.3% 22.3% 249 27 44 193 21 34 34 34 No data	Jun-07 80.1% 19.9% 259 29 46 208 23 37 37 No data	79.8% 20.2% 20.2% 258 28 46 206 23 37 37 37 No data	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 22 203 22 36 36 36 No data	Jun-10 74.8% 25.2% 25.2% 250 26 46 46 187 19 34 34 No data	Jun-11 80.4% 19.6% 19.4% 216 23 41 174 19 33 33 No data	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19 33 24 312	80.0% 20.0% 14.5% 204 22 38 171 18 32 24 161	21 36 166 18 30 32 0
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% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m³ / household / month m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month Authorised Unit Consumption Litres / capita / day m³ / household / month Domestic (&ND) m³ / connection / month Non-domestic m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / household / month Mater loss indicators Litres / capita / day m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI)	performance indicators	fear ending	76.3% 23.7% 23.7% 23.7% 244 27 43 187 24 187 21 33 33 33 No data 58 6 10 56 271 4.9	77.7% 22.3% 22.3% 249 27 44 193 21 34 34 34 No data 55 6 10 56 6 10 56 259	Jun-07 80.1% 19.9% 259 29 46 208 23 37 37 No data 52 6 9 9 61 257 4.2	79.8% 20.2% 20.2% 258 28 28 28 28 28 28 28 28 28 20 20 23 37 37 37 No data 52 6 9 61 259 61	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 203 203 203 203 203 60 36 No data 62 7 11 61 306 5.0	Jun-10 74.8% 25.2% 25.2% 250 266 46 46 187 19 34 34 34 No data 63 7 7 111 61 332 5.4	Jun-11 80.4% 19.6% 19.4% 216 23 41 174 19 33 33 No data 42 42 4 8 61 228 3.7	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19 33 32 4 312 37 4 7 61 96 3.2	80.0% 20.0% 14.5% 204 22 38 171 18 32 24 161 33 33 4 6 65 179 2.7	21 36 166 18 30 32 0 32 0 31 31 3 6 6 66 153 2.3 9 1.91%
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% Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m³ / household / month Mathematical day m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month m³ / connection / month Domestic (&ND) m³ / connection / month Non-domestic m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth without WDM	performance indicators	fear ending	76.3% 23.7% 23.7% 244 27 43 187 21 33 33 No data 58 6 10 56 271 4.9 16	77.7% 22.3% 22.3% 249 27 44 193 21 34 34 34 No data 555 6 6 10 556 6 10 556 6 10 556 6 10 556 6 10 556 6 10 556 6 10 556 259 4.7 15 2.28% 4.16%	Jun-07 80.1% 19.9% 19.9% 259 29 46 208 23 37 37 No data 52 6 9 6 9 61 257 4.2 15 0.60% 4.73% No data	79.8% 20.2% 20.2% 20.2% 28 28 28 28 28 28 28 28 28 28 206 23 37 37 37 37 No data	Jun-09 76.7% 23.3% 23.3% 265 29 47 203 203 22 36 36 36 36 No data 62 7 7 11 61 306 5.0 18 0.60% 3.21% No data	Jun-10 74.8% 25.2% 25.2% 25.2% 25.2% 250 26 46 46 187 19 34 34 34 No data 63 7 7 111 61 332 5.4 19 7.69% 1.65% No data	Jun-11 80.4% 19.6% 19.4% 216 23 41 774 19 33 33 No data 42 44 8 61 228 3.7 13 2.99% -10.93% 3.09%	Jun-12 79.5% 20.5% 15.3% 214 23 40 177 19 33 24 312 37 4 7 61 196 3.2 11 1.40% 11.93% 3.09%	80.0% 20.0% 14.5% 204 22 38 171 18 32 24 161 33 3 4 6 6 5 5 179 2.7 11 1.91% -2.76% 37.12%	21 36 166 18 30 32 0 31 31 3 3 6 6 66 153 2.3 9 9 1.91% -1.92% 2.20%

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		Year	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
			30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served	-	No	3 348 998	3 377 914	3 398 167	3 423 865	3 444 398	3 364 810	3 442 365	3 468 289	3 505 502	3 543 113
Households served		No	895 155	902 884	908 289	915 149	920 629	956 136	956 706	942 934	972 448	1 002 888
Connections - total		No	381 254	398 331	410 455	420 044	431 856	442 721	460 723	474 193	476 436	645 125
Connections - metered		No	381 254	398 331	410 455	420 044	431 856	442 721	460 723	474 193	476 436	488 270
Domestic		No	381 254	398 331	410 455	420 044	431 856	442 721	460 723	474 193	476 436	488 270
Non-domestic		No	0	0	0	0	0	0	0	0	0	0
Connections - unmetered		No	0	0	0	0	0	0	0	0	0	156 855
Households / connection	Data	No	2.3	2.3	2.2	2.2	2.1	2.2	2.1	2.0	2.0	1.6
Length of mains	In put	km	10 572	10 782	10 922	11 659	11 311	11 643	12 124	12 479	11 472	12 219
Connections / km	<u>ہ</u>	No / km	36	37	38	36		38	38	38	42	53
Average system pressure		m	50	50	54	54	54	54	54	54	48	53
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
		%	20%	20%	20%		20%		20%	23%	23%	24%
Apparent losses						20%		20%				
Consumer meter age		%	6%	6%	6%	6%	6%	6%	6%	6%	7%	4%
Illegal connections		%	6%	6%	6%	6%	6%	6%	6%	9%	7%	18%
Data transfer		%	8%	8%	8%	8%	8%	8%	8%	8%	9%	2%
System input volume		kl/annum	288 217 464	294 379 376	303 628 029	320 877 966	331 525 801	332 941 393	314 000 000	317 551 273	321 595 048	332 848 060
Own sources		kl/annum	0	0	0	0	0	0	0	0	321 595 048	332 848 060
Other sources		kl/annum	288 217 464	294 379 376	303 628 029	320 877 966	331 525 801	332 941 393	314 000 000	317 551 273	0	0
Authorised Consumption		kl/annum	204 369 175	200 685 625	202 045 211	204 220 551	202 431 500	208 119 455	210 000 000	206 297 410	207 601 707	205 566 946
Billed authorised		kl/annum	204 369 175	200 685 625	202 045 211	204 220 551	202 431 500	208 119 455	210 000 000	205 086 705	202 961 287	201 826 426
Billed metered		kl/annum	204 369 175	200 685 625	202 045 211	204 220 551	202 431 500	208 119 455	210 000 000	205 086 705	202 961 287	201 826 426
Domestic		kl/annum	204 369 175	200 685 625	202 045 211	204 220 551	202 431 500	208 119 455	210 000 000	205 086 705	202 961 287	201 826 426
			No data									201 020 420
Non-domestic	s	kl/annum	NO data	No data	No data	No data	No data	No data	No data	No data	0	0
Exportvolume	ition	kl/annum	0	0	0	0	0	0	0	0	0	0
Billed unmetered	lcula	kl/annum	0	0	0	0	0	0	0	0	0	0
Unbilled authorised	e Ca	kl/annum	0	0	0	0	0	0	0	1 210 705	4 640 420	3 740 520
Unbilled metered	lanc	kl/annum	0	0	0	0	0	0	0	328 500	4 640 420	299 242
Unbilled unmetered	er Ba	kl/annum	0	0	0	0	0	0	0	882 205	0	3 441 278
Water Losses	Wate	kl/annum	83 848 289	93 693 751	101 582 818	116 657 415	129 094 301	124 821 938	104 000 000	111 253 863	113 993 341	127 281 114
Commercial / Apparent losses		kl/annum	16 769 658	18 738 750	20 316 564	23 331 483	25 818 860	24 964 388	20 800 000	25 693 552	26 218 468	30 547 467
Physical / Real losses		kl/annum	67 078 631	74 955 001	81 266 254	93 325 932	103 275 441	99 857 550	83 200 000	85 560 311	87 774 873	96 733 647
UARL		kl/annum	9 039 210	9 357 520	10 346 962	10 759 634	10 822 422	11 111 528	11 566 136	11 904 291	10 295 537	14 238 732
Potential real loss saving		kl/annum	58 039 421	65 597 481	70 919 293	82 566 298	92 453 019	88 746 022	71 633 864	73 656 020	77 479 336	82 494 914
Revenue water			204 369 175	200 685 625	202 045 211	204 220 551	202 431 500	208 119 455	210 000 000	205 086 705	202 961 287	201 826 426
		kl/annum										
Non-Revenue water		kl/annum	83 848 289	93 693 751	101 582 818	116 657 415	129 094 301	124 821 938	104 000 000	112 464 568	118 633 761	131 021 634
Projected SIV without WDM		kl/annum	No data	No data	303 628 029	308 668 254	313 792 147	319 001 097	324 296 515	329 679 837	331 064 069	332 448 300
Projected SIV with WDM		kl/annum	No data	No data	303 628 029	297 555 468	291 482 908	285 410 347	279 337 787	273 265 226	No data	<u>299203470</u>
	1	ear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
Indicator as % of system input volume												
% Revenue water			70.9%	68.2%	66.5%	63.6%	61.1%	62.5%	66.9%	64.6%	63.1%	60.6%
% Non-revenue water			29.1%	31.8%	33.5%	36.4%	38.9%	37.5%	33.1%	35.4%	36.9%	39.4%
% Water Losses			29.1%	31.8%	33.5%	36.4%	38.9%	37.5%	33.1%	35.0%	35.4%	38.2%
System input volume unit consumption												
Litres / capita / day			236	239	245	257	264	271	250	251	251	257
m ³ / household / month			27	27	28	29	30	29	27	28	28	28
m ³ / connection / month			63	62	62	64		63		56	56	43
Authorised Unit Consumption			03	JZ	32		- 04		57	50	30	
			407	400	400	400	401	400	407	400	100	450
Litres / capita / day			167	163	163	163	161	169	167	163	162	159
m ³ / household / month	s	L	19	19	19	19		18		18	18	17
m ³ / connection / month	ators		45	42	41	41	39	39		36	36	27
Domestic (&ND) m ³ / connection / month	indica		No data	No data	No data	No data	No data	No data	No data	No data	36	27
Non-domestic m ³ / connection / month	ance i		No data	No data	No data	No data	No data	No data	No data	No data	No data	No data
Water loss indicators												
Litres / capita / day	perform		69	76	82	93	103	102	83	88	89	98
m³ / household / month	Key _F		8	9	9	11	12	11	9	10	10	11
m ³ / connection / month			18	20	21	23	25	23	19	20	20	16
UARL : Losses (litres / connection / day)			65	64	69	70		69		69	59	60
CARL : Losses (litres / connection / day)			482	516	542	609		618	495	494	505	411
			7.4									
	l			8.0	7.9	8.7	9.5	9.0	7.2	7.2	8.5 21	6.8
Infrastructure Leakage Index (ILI)								23	19	10		22
Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day)			17	19	20	22						
Infrastructure Leakage Index (ILI)				19 0.86%	20 0.60%	22 0.76%	0.60%	-2.31%	2.30%	0.75%	1.07%	1.07%
Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day)												
Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth				0.86%	0.60%	0.76%	0.60%	-2.31%	2.30%	0.75%	1.07%	1.07%
Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth			17	0.86% 2.14%	0.60% 3.14%	0.76% 5.68%	0.60% 3.32%	-2.31% 0.43%	2.30% -5.69%	0.75% 1.13%	1.07% 1.27%	1.07% 3.50%
Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth % Water demand growth without WDM			17 No data	0.86% 2.14% No data	0.60% 3.14% No data	0.76% 5.68% No data	0.60% 3.32% No data	-2.31% 0.43% No data	2.30% -5.69% 1.66%	0.75% 1.13% 1.66%	1.07% 1.27% 0.42%	1.07% 3.50% 0.42%

Updated Nov 2015					spanty w		TSHV					
		Voar	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
	-	Year	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served		No	2 359 285	2 414 305	2 428 793	2 465 222	2 480 015	2 832 384	2 921 455	2 966 737	3 029 573	3 093 757
Households served		No	699 485	715 813	720 106	730 911	735 295	840 888	911 538	968 522	1 008 034	1 049 169
Connections - total		No	417 917	418 443	425 968	447 445	463 527	482 980	458 514	472 269	483 689	577 074
Connections - metered		No	412 723	413 424	420 919	442 320	458 372	477 747	432 675	445 655	456 889	530 674
Domestic		No	412 723	413 424	420 919	442 320	458 372	477 747	432 675	445 655	456 889	508 128
Non-domestic		No	0	0	0	0	0	0	0	0	0	22546
Connections - unmetered		No	5 194	5 019	5 049	5 125	5 155	5 233	25 839	26 614	26 800	46400
Households / connection	Data	No	1.7	1.7	1.7	1.6	1.6	1.7	2.0	2.1	2.1	1.8
Length of mains	Input	km	9 114	9 535	9 935	9 990	10 033	10 332	10 628	10 757	10 437	10 116
Connections / km	_	No / km	46	44	43	45	46	47	43	44	46	57
Average system pressure		m	50	50	50	50	50	50	50	50	50	55
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Apparent losses		%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Consumer meter age		%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
	-	%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Illegal connections												
Data transfer		%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
System input volume		kl/annum	256 866 038	260 206 214	286 103 619	262 654 995	274 447 660	260 630 972	326 554 616	318 733 465	317 641 091	318 032 271
Own sources		kl/annum	0	0	54 513 224	52 946 639	55 014 086	45 565 670	74 092 743	90 689 710	90 378 895	75 077 070
Other sources		kl/annum	256 866 038	260 206 214	231 590 395	209 708 356	219 433 574	215 065 302	252 461 873	228 043 755	227 262 196	242 955 201
Authorised Consumption		kl/annum	219 921 231	188 619 803	211 020 897	192 379 814	200 798 023	195 064 410	217 229 729	240 902 105	246 034 830	246 694 060
Billed authorised		kl/annum	219 921 231	188 619 803	211 020 897	192 379 814	200 798 023	195 064 410	217 229 729	237 530 661	242 528 725	243 342 875
Billed metered		kl/annum	193 798 328	165 074 984	206 405 472	187 764 389	196 182 598	190 864 302	212 465 189	232 338 974	236 099 849	236 843 363
Domestic		kl/annum	193 798 328	165 074 984	206 405 472	187 764 389	196 182 598	190 864 302	196 670 504	214 754 509	220 121 242	162 969 131
Non-domestic		kl/annum	0	0	0	0	0	0	0	0	0	57 744 956
Export volume	su	kl/annum	0	0	0	0	0	0	15 794 685	17 584 465	15 978 607	16 129 276
Billed unmetered	Ilatio	kl/annum	26 122 903	23 544 819	4 615 425	4 615 425	4 615 425	4 200 108	4 764 540	5 191 687	6 428 876	6 499 512
Unbilled authorised	Calcu	kl/annum	20122 000	20011010	0	0	0	1200 100	0	3 371 444	3 506 105	3 351 185
Unbilled metered) eo (kl/annum	0	0	0	0	0	0	0	0	0	0001100
	3alar		0	0	0	0	0	0	0	-	-	2 254 405
Unbilled unmetered	ater l	kl/annum	0	0	0	0	0	0	0	3 371 444	3 506 105	3 351 185
Water Losses	Ň	kl/annum	36 944 807	71 586 411	75 082 722	70 275 181	73 649 637	65 566 562	109 324 887	77 831 360	71 606 261	71 338 211
Commercial / Apparent losses		kl/annum	7 388 961	14 317 282	15 016 544	14 055 036	14 729 927	13 113 312	21 864 977	15 566 272	14 321 252	14 267 642
Physical / Real losses		kl/annum	29 555 846	57 269 129	60 066 178	56 220 145	58 919 710	52 453 250	87 459 910	62 265 088	57 285 009	57 070 569
UARL		kl/annum	9 095 431	9 241 558	9 482 936	9 814 320	10 063 250	10 445 567	10 185 524	10 428 802	10 490 414	12 923 225
Potential real loss saving		kl/annum	20 460 414	48 027 571	50 583 241	46 405 825	48 856 460	42 007 682	77 274 386	51 836 286	46 794 595	44 147 344
Revenue water		kl/annum	219 921 231	188 619 803	211 020 897	192 379 814	200 798 023	195 064 410	217 229 729	237 530 661	242 528 725	243 342 875
Non-Revenue water		kl/annum	36 944 807	71 586 411	75 082 722	70 275 181	73 649 637	65 566 562	109 324 887	81 202 804	75 112 366	74 689 396
Projected SIV without WDM								215 450 262				
riojecteu orv without wDM		kl/annum	No data	No data	No data	No data	No data	315 459 362	326 553 834	337 996 744	323 752 932	328 851 663
Projected SIV without WDM Projected SIV with WDM		kl/annum kl/annum	No data No data	No data No data	No data No data	No data No data	No data No data	315 459 362 315 459 362	326 553 834 319 067 302	337 996 744 327 009 930	323 752 932 321 396 401	328 851 663 322 744 849
	۱											
		kl/annum	No data	No data	No data	No data	No data	315 459 362	319 067 302	327 009 930	321 396 401	322 744 849
Projected SIV with WDM Indicator as % of system input volume	ì	kl/annum	No data Jun-05	No data Jun-06	No data Jun-07	No data Jun-08	No data Jun-09	315 459 362 Jun-10	319 067 302 Jun-11	327 009 930 Jun-12	321 396 401 Jun-13	322 744 849 Jun-14
Projected SIV with WDM Indicator as % of system input volume % Revenue water	Ì	kl/annum	No data Jun-05 85.6%	No data Jun-06 72.5%	No data Jun-07 73.8%	No data Jun-08 73.2%	No data Jun-09 73.2%	315 459 362 Jun-10 74.8%	319 067 302 Jun-11 66.5%	327 009 930 Jun-12 74.5%	321 396 401 Jun-13 76.4%	322 744 849 Jun-14 76.5%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water		kl/annum	No data Jun-05 85.6% 14.4%	No data Jun-06 72.5% 27.5%	No data Jun-07 73.8% 26.2%	No data Jun-08 73.2% 26.8%	No data Jun-09 73.2% 26.8%	315 459 362 Jun-10 74.8% 25.2%	319 067 302 Jun-11 66.5% 33.5%	327 009 930 Jun-12 74.5% 25.5%	321 396 401 Jun-13 76.4% 23.6%	322 744 849 Jun-14 76.5% 23.5%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses		kl/annum	No data Jun-05 85.6%	No data Jun-06 72.5%	No data Jun-07 73.8%	No data Jun-08 73.2%	No data Jun-09 73.2%	315 459 362 Jun-10 74.8%	319 067 302 Jun-11 66.5%	327 009 930 Jun-12 74.5%	321 396 401 Jun-13 76.4%	322 744 849 Jun-14 76.5%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption		kl/annum	No data Jun-05 85.6% 14.4%	No data Jun-06 72.5% 27.5% 27.5%	No data Jun-07 73.8% 26.2%	No data Jun-08 73.2% 26.8% 26.8%	No data Jun-09 73.2% 26.8%	315 459 362 Jun-10 74.8% 25.2% 25.2%	319 067 302 Jun-11 666.5% 33.5% 33.5%	327 009 930 Jun-12 74.5% 25.5% 24.4%	321 396 401 Jun-13 76.4% 23.6% 22.5%	322 744 849 Jun-14 76.5% 23.5% 22.4%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298	No data Jun-06 72.5% 27.5% 27.5% 22.5%	No data Jun-07 73.8% 26.2% 26.2% 323	No data Jun-08 73.2% 26.8% 26.8% 292	No data Jun-09 73.2% 26.8% 26.8% 303	315 459 362 Jun-10 74.8% 25.2% 25.2% 252	319 067 302 Jun-11 66.5% 33.5% 33.5% 291	327 009 930 Jun-12 74.5% 25.5% 24.4% 278	321 396 401 Jun-13 76.4% 23.6% 22.5% 223	322 744 849 Jun-14 76.5% 23.5% 22.4% 267
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m³ / household / month		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31	No data Jun-06 72.5% 27.5% 27.5% 27.5% 295 30	No data Jun-07 73.8% 26.2% 26.2% 323 323 33	No data Jun-08 73.2% 26.8% 26.8% 292 30	No data Jun-09 73.2% 26.8% 26.8% 303 303 31	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 252 26	319 067 302 Jun-11 66.5% 33.5% 291 28	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298	No data Jun-06 72.5% 27.5% 27.5% 22.5%	No data Jun-07 73.8% 26.2% 26.2% 323	No data Jun-08 73.2% 26.8% 26.8% 292	No data Jun-09 73.2% 26.8% 26.8% 303	315 459 362 Jun-10 74.8% 25.2% 25.2% 252	319 067 302 Jun-11 66.5% 33.5% 33.5% 291	327 009 930 Jun-12 74.5% 25.5% 24.4% 278	321 396 401 Jun-13 76.4% 23.6% 22.5% 223	322 744 849 Jun-14 76.5% 23.5% 22.4% 267
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51	No data Jun-06 72.5% 27.5% 27.5% 295 30 52	No data Jun-07 73.8% 26.2% 26.2% 323 333 56	No data Jun-08 73.2% 26.8% 26.8% 292 30 49	No data Jun-09 73.2% 26.8% 26.8% 303 31 49	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45	319 067 302 Jun-11 66.5% 33.5% 291 28 56	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 51 2255	No data Jun-06 72.5% 27.5% 27.5% 27.5% 295 30	No data Jun-07 73.8% 26.2% 26.2% 323 323 33	No data Jun-08 73.2% 26.8% 26.8% 292 30	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 2222	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 45 189	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52 52 208	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption		kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51	No data Jun-06 72.5% 27.5% 27.5% 295 30 52	No data Jun-07 73.8% 26.2% 26.2% 323 333 56	No data Jun-08 73.2% 26.8% 26.8% 292 30 49	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 222 222 23	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 252 26 45 189 19	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 189 189	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52 52 208 19	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day	tors	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 51 2255	No data Jun-06 72.5% 27.5% 27.5% 295 30 52 52 214	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 49 214	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 2222	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 45 189	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52 52 208	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month	Indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 51 2255 26	No data Jun-06 72.5% 27.5% 27.5% 295 30 52 30 52 214 214 22	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 238 24	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 214 214 22	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 222 222 23	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 252 26 45 189 19	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 189 189	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52 52 208 19	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month m ³ / connection / month	Indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 2255 266 44	No data Jun-06 72.5% 27.5% 27.5% 295 30 52 295 30 52 214 214 22 38	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 238 24 4	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 214 214 22 36	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 222 23 36	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 252 26 45 189 19 34	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189 189 18 37	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 273 25 52 52 208 19 40	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18 33
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Muthorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month m ³ / connection / month	ince indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 2255 266 44 44 44	No data Jun-06 72.5% 27.5% 27.5% 295 30 52 295 30 52 214 214 22 38 38 38	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 24 44 41 41	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 214 22 36 36 36	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 252 26 45 189 19 34 34 34	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189 189 18 37 37	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 25 52 52 208 19 40 40 40	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18 33 33 26
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ³ / connection / month	ince indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 2255 266 44 44 44	No data Jun-06 72.5% 27.5% 27.5% 295 30 52 295 30 52 214 214 22 38 38 38	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 24 44 41 41	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 214 22 36 36 36	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 252 26 45 189 19 34 34 34	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189 189 18 37 37	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39	321 396 401 Jun-13 76.4% 23.6% 22.5% 273 25 52 208 19 40 40 40 No data	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18 33 33 26
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Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ² / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 298 31 51 2255 266 44 44 44 No data 43 43 43 43	No data Jun-06 72.5% 27.5% 295 30 52 295 30 52 214 225 38 38 83 8 No data 81 81 81 81 81	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 24 44 41 41 41 No data 85 9 9 15	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 8 8	No data Jun-09 73.2% 26.8% 26.8% 303 31 49 222 23 36 36 36 36 No data 81 81 81 81	315 459 362 Jun-10 74.8% 25.2% 252 252 26 45 252 26 45 189 19 34 34 34 No data 63 63 63 61	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 56 189 189 18 37 37 No data 103 10 20	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39 No data 72 7 7 14	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 52 52 52 208 19 40 40 40 No data 55 65 66 12	322 744 849 Jun-14 76.5% 23.5% 22.4% 2267 24 44 44 204 18 33 266 213 63 63 63 63 61 0
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Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day)	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 2255 266 44 44 44 No data 44 No data 7 60 194	No data Jun-06 72.5% 27.5% 2295 30 52 30 52 214 225 38 38 38 38 No data 81 4 61 3375	No data Jun-07 73.8% 26.2% 26.2% 323 333 56 238 24 41 41 41 No data 85 9 15 61 386	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 8 13 60 3344	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 36 No data 81 81 81 359 348	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 3252 26 45 3252 26 45 33 4 34 34 34 34 No data 63 63 61 11 59 298	319 067 302 Jun-11 66.5% 33.5% 291 28 56 35 56 189 18 37 37 No data 103 100 20 61 523	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39 No data 72 72 71 14 60 381	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 273 25 52 208 19 40 40 40 40 No data 19 65 65 6 6 12 208	322 744 849 Jun-14 76.5% 23.5% 22.4% 267 24 44 44 204 18 33 266 213 63 66 213 66 36 61 10 61 61 271
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Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month M² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month Vater loss indicators Litres / capita / day m² / household / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month UARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day)	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 51 2255 266 44 44 44 No data 44 No data 7 60 194	No data Jun-06 72.5% 27.5% 2295 300 52 295 300 52 214 225 38 38 38 38 No data 81 4 61 375 6.2 6.2 16	No data Jun-07 73.8% 26.2% 26.2% 26.2% 238 333 56 238 24 41 41 85 24 41 41 No data 85 9 15 61 386 61 386 61 386 61 386	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 36 No data 78 60 344 5.7 75	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 No data 81 81 81 81 59 348 5,9 348 5,9 16	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 34 34 34 34 34 No data 63 63 6 11 59 298 5.0 14	319 067 302 Jun-11 66.5% 33.5% 291 28 56 35 56 189 18 37 37 No data 103 100 20 61 523 8.6 23	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39 No data 72 72 71 14 60 3361 6.0 16	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 20 273 25 52 208 19 40 40 40 40 No data 65 65 66 12 259 324 55 55 15	322 744 849 Jun-14 76.5% 23.5% 22.4% 22.4% 267 24 44 44 204 18 33 266 213 204 63 63 66 213 66 213 66 10 66 10 66 10 61 61 271 4.4 5
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month Vater loss indicators Litres / capita / day m² / household / month Water loss indicators Litres / capita / day m² / household / month M³ / connection / month UARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 298 31 51 2255 266 44 44 44 No data 43 44 7 60 194 3.2	No data Jun-06 72.5% 27.5% 2295 300 52 295 300 52 214 225 38 38 38 38 No data 81 4 61 375 6.2 16 2.33%	No data Jun-07 73.8% 26.2% 26.2% 26.2% 2323 333 56 238 24 41 41 41 No data 85 9 15 61 386 61 386 6.3 17 0.60%	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 36 36 No data 78 36 36 No data 57 57 51.50%	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 36 No data 81 81 81 81 81 59 348 59 348 5.9 16 0.60%	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 3252 26 45 3252 26 33 4 34 34 34 34 34 34 34 34 34 34 34 3	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 33 56 35 48 37 37 No data 103 103 100 200 61 523 8.6 23 8.6 23 3.14%	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39 No data 72 77 14 4 60 381 6.0 155%	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 20 273 25 52 208 19 40 40 40 40 40 8 40 40 40 40 40 55 5 5 5 5 5 5 5 5 5 5 5	322 744 849 Jun-14 76.5% 23.5% 22.4% 22.4% 267 24 44 44 204 18 33 266 213 26 63 213 63 63 66 213 63 66 213 63 65 212%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month M² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month Vater loss indicators Litres / capita / day m² / household / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month UARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day)	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 298 31 51 2255 266 44 44 44 No data 43 44 7 60 194 3.2	No data Jun-06 72.5% 27.5% 2295 300 52 295 300 52 214 225 38 38 38 38 No data 81 4 61 375 6.2 6.2 16	No data Jun-07 73.8% 26.2% 26.2% 26.2% 238 333 56 238 24 41 41 85 24 41 41 No data 85 9 15 61 386 61 386 61 386 61 386	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 36 No data 78 60 344 5.7 75	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 No data 81 81 81 81 59 348 5,9 348 5,9 16	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 34 35 34 34 34 No data 63 63 63 61 11 59 298 5.0 14	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 35 56 35 56 35 3189 189 189 189 189 189 189 189 37 37 No data 100 200 61 523 8.6 23 3.14% 25.29%	327 009 930 Jun-12 74.5% 25.5% 24.4% 24.4% 278 26 53 206 19 39 39 No data 72 7 7 14 4 60 361 6.0 155% -2.40%	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 20 273 25 52 20 208 19 40 40 40 8 40 8 40 8 40 8 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	322 744 849 Jun-14 76.5% 23.5% 22.4% 224% 244 44 204 18 33 26 213 26 213 63 63 63 63 66 100 61 61 2271 4.4 52.12% 0.12%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month Vater loss indicators Litres / capita / day m² / household / month Water loss indicators Litres / capita / day m² / household / month M³ / connection / month UARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 298 31 51 2255 266 44 44 44 No data 43 44 7 60 194 3.2	No data Jun-06 72.5% 27.5% 2295 300 52 295 300 52 214 225 38 38 38 38 No data 81 4 61 375 6.2 16 2.33%	No data Jun-07 73.8% 26.2% 26.2% 26.2% 2323 333 56 238 24 41 41 41 No data 85 9 15 61 386 61 386 6.3 17 0.60%	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 36 36 No data 78 36 36 No data 57 57 51.50%	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 36 No data 81 81 81 81 81 59 348 59 348 5.9 16 0.60%	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 3252 26 45 3252 26 33 4 34 34 34 34 34 34 34 34 34 34 34 3	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 33 56 35 48 37 37 No data 103 103 100 200 61 523 8.6 23 8.6 23 3.14%	327 009 930 Jun-12 74.5% 25.5% 24.4% 278 26 53 206 19 39 39 No data 72 77 14 4 60 381 6.0 155%	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 20 273 25 52 208 19 40 40 40 40 40 8 40 40 40 40 40 55 5 5 5 5 5 5 5 5 5 5 5	322 744 849 Jun-14 76.5% 23.5% 22.4% 224% 267 24 44 44 204 18 33 26 213 26 213 63 63 63 63 63 61 00 61 61 2211 4.4 55 2.12%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Authorised Unit Consumption Litres / capita / day m² / household / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 298 31 255 266 44 44 44 No data 43 44 7 60 194 3.2 9	No data Jun-06 72.5% 27.5% 2295 300 52 295 300 52 214 2214 2214 2214 38 38 38 No data 81 4 61 375 6.2 16 2.33% 1.30%	No data Jun-07 73.8% 26.2% 26.2% 233 333 56 238 24 41 41 85 238 24 41 41 85 61 386 61 386 61 386 61 386 63 17 0.60% 9.95%	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 13 60 344 5.7 7 5 1.50% -8.20%	No data Jun-09 73.2% 26.8% 26.8% 26.8% 26.8% 2007 2007 2007 2007 2007 2007 2007 200	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 45 26 45 30 45 30 48 34 34 34 No data 63 63 6 11 59 298 5.0 14 14.21% -5.03%	319 067 302 Jun-11 66.5% 33.5% 33.5% 291 28 56 35 56 35 56 35 3189 189 189 189 189 189 189 189 37 37 No data 100 200 61 523 8.6 23 3.14% 25.29%	327 009 930 Jun-12 74.5% 25.5% 24.4% 24.4% 278 26 53 206 19 39 39 No data 72 7 7 14 4 60 361 6.0 155% -2.40%	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 20 273 25 52 20 208 19 40 40 40 8 40 8 40 8 40 8 55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	322 744 849 Jun-14 76.5% 23.5% 22.4% 224% 244 44 204 18 33 26 213 26 213 63 63 63 63 66 100 61 271 4.4 15 2.12% 0.12%
Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ² / household / month Authorised Unit Consumption Litres / capita / day m ² / household / month M ² / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ² / connection / month Water loss indicators Litres / capita / day m ² / household / month Mon-domestic m ² / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Water demand growth % Water demand growth without WDM	performance indicators	kl/annum	No data Jun-05 85.6% 14.4% 14.4% 298 31 255 266 44 44 44 No data 43 44 7 60 194 3.2 9 9 194 3.2	No data Jun-06 72.5% 27.5% 275% 295 30 52 295 30 52 214 214 225 38 38 8 38 No data 81 4 61 375 6.2 16 2.33% 1.30% No data	No data Jun-07 73.8% 26.2% 26.2% 233 333 56 238 24 41 238 24 41 41 No data 85 9 15 661 3386 66.3 17 0.60% 9.95% No data	No data Jun-08 73.2% 26.8% 26.8% 292 30 49 292 30 49 214 222 36 36 36 No data 78 8 36 No data 13 60 344 5.7 5 1.50% -8.20% No data	No data Jun-09 73.2% 26.8% 26.8% 303 303 31 49 222 23 36 36 36 36 36 No data 81 81 81 81 359 348 5.9 348 5.9 16 0.60% 4.49% No data	315 459 362 Jun-10 74.8% 25.2% 25.2% 252 26 34 35 34 34 34 34 34 34 34 34 34 34 34 34 34	319 067 302 Jun-11 66.5% 33.5% 291 28 56 7 8 9 189 189 189 189 189 189 189 189 189	327 009 930 Jun-12 74.5% 25.5% 24.4% 24.4% 278 26 53 206 19 39 39 39 No data 72 7 7 14 60 361 6.0 16 1.55% -2.40% 3.50%	321 396 401 Jun-13 76.4% 23.6% 22.5% 225 52 52 52 52 52 52 52 52 52 52 66 61 12 59 65 65 65 65 65 52 53 53 55 53 55 53 55 53 55 53 55 53 55 53 55 53 55 53 55 53 53	322 744 849 Jun-14 76.5% 23.5% 22.4% 224 44 44 204 18 33 204 18 33 206 213 63 63 63 61 10 63 63 61 10 61 271 4.4 52.12% 0.12% 0.12%

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Updated Nov 2015		Vers	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
		Year	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served		No	1 023 900	1 033 109	1 039 307	1 046 235	1 052 509	1 130 395	1 152 123	1 156 562	1 162 535	1 168 529
Households served		No	278 753	281 261	282 946	284 833	286 546	330 303	324 281	313 395	319 490	325 705
Connections - total		No	197 508	199 286	200 480	201 817	203 030	203 774	205 755	204 882	217 716	219 321
Connections - metered		No	188 542	190 239	191 379	192 655	193 813	194 523	196 414	195 218	217 594	219 158
Domestic		No	188 542	190 239	191 379	192 655	193 813	194 523	196 414	195 218	207 809	209 211
Non-domestic		No	0	0	0	0	0	0	0	0	9 785	9 947
Connections - unmetered	a	No	8 966	9 047	9 101	9 162	9 217	9 251	9 341	9 664	122	163
Households / connection	ıt Data	No	1.4	1.4	1.4	1.4	1.4	1.6	1.6	1.5	1.5	1.5
Length of mains	Input	km	3 873	3 908	3 931	3 957	3 981	3 988	4 189	4 327	4 427	4 454
Connections / km		No / km	51	51	51	51	51	51	49	47	49	49
Average system pressure		m	50	50	60	60		60	60	60	60	60
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Apparent losses		%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Consumer meter age		%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Illegal connections		%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Data transfer		%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
System input volume		kl/annum	81 870 640	84 594 000	89 757 111	96 600 000	101 452 000	94 036 000	87 755 000	91 700 100	99 216 287	107 665 114
Own sources		kl/annum	81 870 640	84 594 000	89 757 111	96 600 000	101 452 000	94 036 000	87 755 000	91 700 100	99 216 287	107 665 114
Other sources		kl/annum	0	0	0	0	0	0	0	0	0	0
Authorised Consumption		kl/annum	61 672 000	62 435 000	60 344 783	63 300 000	66 414 272	58 914 000	52 501 520	70 202 390	65 795 067	64 274 558
Billed authorised		kl/annum	61 672 000	62 435 000	60 344 783	63 300 000	66 414 272	58 914 000	52 501 520	58 656 520	57 817 971	62 110 664
Billed metered		kl/annum	55 912 000	61 911 200	58 344 783	60 800 000	63 914 272	56 414 000	51 869 000	58 024 000	57 004 371	61 297 064
Domestic		kl/annum	55 912 000	61 911 200	58 344 783	60 800 000	63 914 272	56 414 000	51 869 000	58 024 000	32 622 396	35 412 884
Non-domestic		kl/annum	0	0	0	0	0	0	0	0	21 827 109	22 332 209
Export volume	tions	kl/annum	0	0	0	0	0	0	0	0	2 554 866	3 551 971
Billed unmetered	lculat	kl/annum	5 760 000	523 800	2 000 000	2 500 000	2 500 000	2 500 000	632 520	632 520	813 600	813 600
Unbilled authorised	ie Ca	kl/annum	0	0	0	0	0	0	0	11 545 870	7 977 096	2 163 894
Unbilled metered	alanc	kl/annum	0	0	0	0	0	0	0	5 920 870	5 992 770	10 792
Unbilled unmetered	ter B:	kl/annum	0	0	0	0	0	0	0	5 625 000	1 984 326	2 153 102
Water Losses	Wat	kl/annum	20 198 640	22 159 000	29 412 328	33 300 000	35 037 728	35 122 000	35 253 480	21 497 710	33 421 220	43 390 556
Commercial / Apparent losses		kl/annum	4 039 728	4 431 800	5 882 466	6 660 000	7 007 546	7 024 400	7 050 696	4 299 542	6 684 244	8 678 111
Physical / Real losses		kl/annum	16 158 912	17 727 200	23 529 862	26 640 000	28 030 182	28 097 600	28 202 784	17 198 168	26 736 976	34 712 445
UARL		kl/annum	4 155 801	4 193 212	5 062 002	5 095 761	5 126 388	5 142 190	5 256 131	5 295 236	5 559 508	5 598 271
Potential real loss saving		kl/annum	12 003 111	13 533 988	18 467 860	21 544 239	22 903 794	22 955 410	22 946 653	11 902 932	21 177 468	29 114 174
Revenue water		kl/annum	61 672 000	62 435 000	60 344 783	63 300 000	66 414 272	58 914 000	52 501 520	58 656 520	57 817 971	62 110 664
Non-Revenue water		kl/annum	20 198 640	22 159 000	29 412 328	33 300 000	35 037 728	35 122 000	35 253 480	33 043 580	41 398 316	45 554 450
Projected SIV without WDM		kl/annum	No data	No data	No data	No data	101 452 000	105 002 820	108 677 919	112 481 646	116 418 503	120 493 151
Projected SIV with WDM		kl/annum	No data	No data	No data	No data	101 452 000	98 712 625	95 973 250	93 233 875		07 755 405
								1 10		35 255 015	90 494 500	87 755 125
	١	lear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	90 494 500 Jun-13	37 755 125 Jun-14
Indicator as % of system input volume	<u>۱</u>	fear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11			
Indicator as % of system input volume % Revenue water	١	fear ending	Jun-05 75.3%	Jun-06 73.8%	Jun-07 67.2%	Jun-08 65.5%	Jun-09 65.5%	Jun-10 62.7%	Jun-11 59.8%			
	Y	fear ending								Jun-12	Jun-13	Jun-14
% Revenue water	١	fear ending	75.3%	73.8%	67.2%	65.5%	65.5%	62.7%	59.8%	Jun-12 64.0%	Jun-13 58.3%	Jun-14 57.7%
% Revenue water % Non-revenue water	Ì	fear ending	75.3% 24.7%	73.8% 26.2%	67.2% 32.8%	65.5% 34.5%	65.5% 34.5%	62.7% 37.3%	59.8% 40.2%	Jun-12 64.0% 36.0%	Jun-13 58.3% 41.7%	Jun-14 57.7% 42.3%
% Revenue water % Non-revenue water % Water Losses	١	/ear ending	75.3% 24.7%	73.8% 26.2%	67.2% 32.8%	65.5% 34.5%	65.5% 34.5%	62.7% 37.3%	59.8% 40.2%	Jun-12 64.0% 36.0%	Jun-13 58.3% 41.7%	Jun-14 57.7% 42.3%
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption	١	fear ending	75.3% 24.7% 24.7%	73.8% 26.2% 26.2%	67.2% 32.8% 32.8%	65.5% 34.5% 34.5%	65.5% 34.5% 34.5% 264	62.7% 37.3% 37.3%	59.8% 40.2% 40.2%	Jun-12 64.0% 36.0% 23.4%	Jun-13 58.3% 41.7% 33.7%	Jun-14 57.7% 42.3% 40.3%
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day	`	lear ending	75.3% 24.7% 24.7% 219	73.8% 26.2% 26.2% 224	67.2% 32.8% 32.8% 237	65.5% 34.5% 34.5% 253	65.5% 34.5% 34.5% 264 30	62.7% 37.3% 37.3% 228	59.8% 40.2% 40.2% 209	Jun-12 64.0% 36.0% 23.4% 217	Jun-13 58.3% 41.7% 33.7% 228	Jun-14 57.7% 42.3% 40.3% 244
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month		fear ending	75.3% 24.7% 24.7% 24.7% 219 24	73.8% 26.2% 26.2% 26.2% 224 224	67.2% 32.8% 32.8% 237 26	65.5% 34.5% 34.5% 253 28	65.5% 34.5% 34.5% 264 30	62.7% 37.3% 37.3% 228 24	59.8% 40.2% 40.2% 209 23	Jun-12 64.0% 36.0% 23.4% 217 217 24	Jun-13 58.3% 41.7% 33.7% 228 25	Jun-14 57.7% 42.3% 40.3% 244 27
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ² / household / month m ² / connection / month		fear ending	75.3% 24.7% 24.7% 24.7% 219 24	73.8% 26.2% 26.2% 26.2% 224 224	67.2% 32.8% 32.8% 237 26	65.5% 34.5% 34.5% 253 28	65.5% 34.5% 34.5% 264 30 42	62.7% 37.3% 37.3% 228 24	59.8% 40.2% 40.2% 209 23	Jun-12 64.0% 36.0% 23.4% 217 217 24	Jun-13 58.3% 41.7% 33.7% 228 25	Jun-14 57.7% 42.3% 40.3% 244 27
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ² / household / month m ³ / connection / month Authorised Unit Consumption		ear ending	75.3% 24.7% 24.7% 219 24 35	73.8% 26.2% 26.2% 224 25 35	67.2% 32.8% 32.8% 237 26 37	65.5% 34.5% 34.5% 253 28 40	65.5% 34.5% 34.5% 264 30 42 173	62.7% 37.3% 37.3% 228 24 38	59.8% 40.2% 40.2% 209 23 36	Jun-12 64.0% 36.0% 23.4% 217 24 37	Jun-13 58.3% 41.7% 33.7% 228 25 37	Jun-14 57.7% 42.3% 40.3% 244 27 40
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day	tors	fear ending	75.3% 24.7% 24.7% 219 24 35 165	73.8% 26.2% 26.2% 224 25 35 35	67.2% 32.8% 32.8% 237 26 37 26 37 59	65.5% 34.5% 34.5% 253 28 40 166	65.5% 34.5% 34.5% 264 30 42 173 19	62.7% 37.3% 37.3% 228 24 38 24 38 143	59.8% 40.2% 40.2% 209 23 36 	Jun-12 64.0% 36.0% 23.4% 217 24 37 4 37 166	Jun-13 58.3% 41.7% 33.7% 228 25 37 37 49	Jun-14 57.7% 42.3% 40.3% 244 27 40 142
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month		fear ending	75.3% 24.7% 24.7% 219 24 35 165 18	73.8% 26.2% 26.2% 224 25 35 166 18	67.2% 32.8% 32.8% 237 26 37 26 37 159 159	65.5% 34.5% 34.5% 253 28 40 166 19	65.5% 34.5% 264 30 42 173 19 27	62.7% 37.3% 37.3% 228 24 38 24 38 24 38 24 38 24 38 5 143	59.8% 40.2% 40.2% 209 23 36 	Jun-12 64.0% 36.0% 23.4% 217 24 37 4 37 166 19	Jun-13 58.3% 41.7% 33.7% 228 25 37 25 37 449 16	Jun-14 57.7% 42.3% 40.3% 244 27 40 142 142 16
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ² / connection / month	indicators	ear ending	75.3% 24.7% 24.7% 219 24 35 165 18 26	73.8% 26.2% 26.2% 224 25 35 166 18 26	67.2% 32.8% 32.8% 237 26 37 26 37 26 37 26 37 26 37 28 237 26 37 28 237 26 37 26 37 26 37 26 37 26 37 28 28 28 28 28 28 28 28 28 28 28 28 28	65.5% 34.5% 34.5% 253 28 40 166 19 26	65.5% 34.5% 264 30 42 173 19 27	62.7% 37.3% 37.3% 228 24 38 24 38 143 15 24	59.8% 40.2% 40.2% 209 23 36 125 13 21	Jun-12 64.0% 36.0% 23.4% 2177 24 37 24 37 166 19 29	Jun-13 58.3% 41.7% 33.7% 228 25 37 25 37 449 16 24	Jun-14 57.7% 42.3% 40.3% 244 27 40 142 16 23
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month	ance indicators	ear ending	75.3% 24.7% 24.7% 219 24 35 165 18 26 26 26	73.8% 26.2% 26.2% 224 25 35 166 18 26 26	67.2% 32.8% 32.8% 237 26 37 26 37 159 18 25 25	65.5% 34.5% 253 28 40 166 19 26 26	65.5% 34.5% 34.5% 264 30 42 173 19 27 27	62.7% 37.3% 37.3% 228 24 38 143 15 24 24 24	59.8% 40.2% 40.2% 209 23 36 125 13 21 21 21	Jun-12 64.0% 36.0% 23.4% 217 24 37 24 37 166 19 29 29 29	Jun-13 58.3% 41.7% 33.7% 228 25 37 25 37 149 16 24 24 17	Jun-14 57.7% 42.3% 40.3% 244 27 40 142 142 16 23 15
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ³ / connection / month	performance indicators	ear ending	75.3% 24.7% 24.7% 219 24 35 165 18 26 26 26	73.8% 26.2% 26.2% 224 25 35 166 18 26 26	67.2% 32.8% 32.8% 237 26 37 26 37 159 18 25 25	65.5% 34.5% 253 28 40 166 19 26 26	65.5% 34.5% 34.5% 264 30 42 173 19 27 27	62.7% 37.3% 37.3% 228 24 38 143 143 15 24 24 24	59.8% 40.2% 40.2% 209 23 36 125 13 21 21 21	Jun-12 64.0% 36.0% 23.4% 217 24 37 24 37 166 19 29 29 29	Jun-13 58.3% 41.7% 33.7% 228 25 37 25 37 149 16 24 24 17	Jun-14 57.7% 42.3% 40.3% 244 27 40 142 142 16 23 15
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% Water demand growth with WDM No data	Potential real loss saving Revenue water Non-Revenue water Projected SIV without WDM Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Non-domestic m ³ / connection / month Non-domestic m ³ / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Norfastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth	performance indicators	kl/annum kl/annum kl/annum kl/annum	16 555 379 37 363 127 24 965 280 No data No data Jun-05 59.9% 40.1% 40.1% 257 26 33 7 26 33 154 16 20 20 No data 154 16 20 20 No data 154 154 16 20 20 No data	18 265 040 36 855 554 27 106 874 No data Jun-06 57.6% 42.4% 42.4% 262 27 34 57.6 151 155 19 19 19 19 No data 151 151 155 19 34 57.6% 63 111 111 14 59 374 6.3 18 0.63%	26 713 192 34 681 776 38 014 431 No data Jun-07 47.7% 52.3% 52.3% 297 30 30 38 141 141 14 14 18 18 No data 155 16 20 64 525 8.2 25 8.2 25 0.60%	27 165 900 36 855 554 38 587 412 No data Jun-08 48.9% 51.1% 51.1% 307 31 40 150 155 19 19 No data 150 15 19 19 No data 150 15 19 19 19 19 19 19 19 19 19 19	29 384 143 37 912 025 41 381 522 No data No data Jun-09 47.8% 52.2% 52.2% 320 320 322 411 153 320 322 411 153 155 200 200 No data 155 200 200 No data 155 200 200 No data 155 200 200 No data	27 969 665 39 305 132 39 780 713 No data Jun-10 49.7% 50.3% 50.3% 295 30 39 39 30 39 39 30 39 30 39 30 39 30 39 30 39 30 30 39 30 39 30 39 30 39 30 39 30 39 30 39 30 50.3% 50	15 210 757 53 123 304 23 843 889 No data Jun-11 69.0% 31.0% 31.0% 282 282 283 38 31.0% 282 282 283 38 31.0% 282 282 283 38 31.0% 282 282 283 31.0% 282 283 283 283 283 283 283 283 283 283	21 699 132 47 174 698 35 759 280 82 933 978 82 933 978 43 172 56.9% 43.1% 38.7% 304 29 41 186 188 25 25 No data 118 111 16 64 413 6.4 19 0.15%	19 614 753 53 460 449 31 633 693 85 421 997 83 181 997 Jun-13 62.8% 37.2% 34.9% 34.9% 29 44 203 19 29 44 203 19 29 29 29 No data 10 10 15 70 402 5.77 18 8 0.14%	15 746 014 59 375 646 27 195 616 87 984 657 33 504 657 Jun-14 68.6% 31.4% 28.1% 28.1% 29 51 20 51 227 21 316 329 51 227 21 336 36 36 No data 89 88 14 4 72 3375 5.2 5.2 5.2 5.2 5.5 5.2 5.5 5.5 5.5 5.
5 Year Annualised Population Growth	Potential real loss saving Revenue water Non-Revenue water Projected SIV without WDM Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ² / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ² / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth	performance indicators	kl/annum kl/annum kl/annum kl/annum	16 555 379 37 363 127 24 965 280 No data No data Jun-05 59.9% 40.1% 40.1% 257 266 333 7 257 266 333 7 154 166 200 200 No data 103 103 100 113 59 345 5.88 16	18 265 040 36 855 554 27 106 874 No data Jun-06 57.6% 42.4% 42.4% 262 27 34 7 151 155 19 19 No data 111 111 111 144 59 374 6.3 18 0.63% 2.62%	26 713 192 34 681 776 38 014 431 No data Jun-07 47.7% 52.3% 52.3% 297 300 38 7 141 141 14 14 18 18 No data 155 16 200 64 525 8.2 25 0.60% 13.65%	27 165 900 36 855 554 38 587 412 No data Jun-08 48.9% 51.1% 51.1% 307 31 40 150 15 19 19 19 No data 157 16 20 64 533 8.3 25 0.40% 3.78%	29 384 143 37 912 025 41 381 522 No data No data Jun-09 47.8% 52.2% 52.2% 320 320 321 41 52.2% 0 0 0 0 0 0 No data 153 155 200 200 No data 155 200 200 No data 155 200 200 No data 155 200 200 0 0 0 0 0 0 0 0 0 0 0 0	27 969 665 39 305 132 39 780 713 No data Jun-10 49.7% 50.3% 50.3% 295 300 39 49.7% 50.3% 205 30 30 39 30 39 30 39 30 39 30 39 30 30 39 30 30 39 30 39 30 39 30 39 30 39 30 39 30 50.3% 50.	15 210 757 53 123 304 23 843 889 No data Jun-11 69.0% 31.0% 31.0% 282 282 283 38 195 199 266 266 No data 57 9 192 266 266 No data 51 51 63 3111 4.9 51.68% -2.68%	21 699 132 47 174 698 35 759 280 82 933 978 82 933 978 43 17% 56.9% 43.1% 38.7% 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 304 41 304 29 304 41 304 29 304 41 304 29 304 29 304 304 29 304 304 29 304 304 304 304 304 304 304 304 304 304	19 614 753 53 460 449 31 633 693 85 421 997 83 181 997 Jun-13 62.8% 37.2% 34.9% 34.9% 29 44 203 19 29 44 203 19 29 29 No data 10 10 15 70 402 5.77 18 0.14% 2.60%	15 746 014 59 375 646 27 195 616 87 984 657 33 504 657 Jun-14 68.6% 31.4% 28.1% 28.1% 29 51 227 21 316 29 51 227 21 36 36 36 No data 89 88 14 4 72 3375 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5.
	Potential real loss saving Revenue water Non-Revenue water Projected SIV without WDM Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ² / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ² / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth without WDM	performance indicators	kl/annum kl/annum kl/annum kl/annum	16 555 379 37 363 127 24 965 280 No data No data Jun-05 59.9% 40.1% 40.1% 40.1% 257 26 333 7 257 26 333 154 16 200 20 No data 103 100 113 59 345 5.8 16 10 10 345 5.8	18 265 040 36 855 554 27 106 874 No data Jun-06 57.6% 42.4% 42.4% 42.4% 7 262 27 34 7 151 151 151 19 19 No data 111 111 14 59 374 6.3 18 0.63% 2.62% No data	26 713 192 34 681 776 38 014 431 No data Jun-07 47.7% 52.3% 52.3% 297 300 38 7 297 300 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 141 141 141 141 141 141 141 141 141 14	27 165 900 36 855 554 38 587 412 No data Jun-08 48.9% 51.1% 51.1% 307 31 40 150 151 19 19 19 19 No data 157 16 20 64 533 8.3 25 0.40% 3.78% No data	29 384 143 37 912 025 41 381 522 No data No data Jun-09 47.8% 52.2% 52.2% 320 320 322 411 153 320 322 411 153 155 200 200 No data 167 167 177 222 644 568 8.9 27 0.60% 5.10% No data	27 969 665 39 305 132 39 780 713 No data Jun-10 49.7% 50.3% 50.3% 295 300 39 49.7% 50.3% 205 205 200 00 146 155 200 200 No data 148 155 200 63 519 8.3 26 8.37% -0.26% No data	15 210 757 53 123 304 23 843 889 No data Jun-11 69.0% 31.0% 31.0% 282 282 283 38 38 38 39 282 282 283 38 39 195 285 282 282 282 282 283 38 31.0% 282 282 282 282 282 282 283 38 31.0% 282 282 282 282 282 282 283 282 282 283 282 282	21 699 132 47 174 698 35 759 280 82 933 978 82 933 978 304 43.1% 38.7% 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 304 41 304 29 304 41 304 29 304 41 304 29 304 41 304 29 30 40 41 30 40 41 30 40 41 30 40 41 30 40 41 30 40 41 30 40 41 41 30 40 41 30 40 41 41 30 40 40 41 30 40 40 40 40 40 40 40 40 40 40 40 40 40	19 614 753 53 460 449 31 633 693 85 421 997 83 181 997 Jun-13 62.8% 37.2% 34.9% 34.9% 29 44 203 19 29 44 203 19 29 29 No data 10 108 100 155 700 402 5.77 18 0.14% 2.60% 3.00%	15 746 014 59 375 646 27 195 616 87 984 657 83 504 657 Jun-14 68.6% 31.4% 28.1% 28.1% 28.1% 29 51 20 51 227 21 366 36 No data 89 88 14 4 72 3375 5.2 5.2 15 0.15%
	Potential real loss saving Revenue water Non-Revenue water Projected SIV without WDM Projected SIV with WDM Indicator as % of system input volume % Revenue water % Non-revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth without WDM % Water demand growth with WDM	performance indicators	kl/annum kl/annum kl/annum kl/annum	16 555 379 37 363 127 24 965 280 No data No data Jun-05 59.9% 40.1% 40.1% 40.1% 257 26 333 7 257 26 333 154 16 200 20 No data 103 100 113 59 345 5.8 16 10 10 345 5.8	18 265 040 36 855 554 27 106 874 No data Jun-06 57.6% 42.4% 42.4% 42.4% 7 262 27 34 7 151 151 151 19 19 No data 111 111 14 59 374 6.3 18 0.63% 2.62% No data	26 713 192 34 681 776 38 014 431 No data Jun-07 47.7% 52.3% 52.3% 297 300 38 7 297 300 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 7 30 30 38 141 141 141 141 141 141 141 141 141 14	27 165 900 36 855 554 38 587 412 No data Jun-08 48.9% 51.1% 51.1% 307 31 40 150 151 19 19 19 19 No data 157 16 20 64 533 8.3 25 0.40% 3.78% No data	29 384 143 37 912 025 41 381 522 No data No data Jun-09 47.8% 52.2% 52.2% 320 320 322 411 153 320 322 411 153 155 200 200 No data 167 167 177 222 644 568 8.9 27 0.60% 5.10% No data	27 969 665 39 305 132 39 780 713 No data Jun-10 49.7% 50.3% 50.3% 50.3% 295 300 39 49.7% 50.3%	15 210 757 53 123 304 23 843 889 No data Jun-11 69.0% 31.0% 31.0% 282 282 283 38 38 38 38 38 39 195 285 282 282 282 282 283 38 31.0% 282 282 283 31.0% 282 282 283 283 283 283 283 283 283 283	21 699 132 47 174 698 35 759 280 82 933 978 82 933 978 30 43 172 56.9% 43.1% 38.7% 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 304 29 41 30 41 41 30 41 41 30 41 41 30 41 41 30 41 41 41 30 41 41 41 30 41 41 41 41 41 41 41 41 41 41 41 41 41	19 614 753 53 460 449 31 633 693 85 421 997 83 181 997 Jun-13 62.8% 37.2% 34.9% 34.9% 29 44 203 19 29 44 203 19 29 29 No data 10 10 15 70 402 5.77 18 0.14% 2.60% 3.00% 0.30%	15 746 014 59 375 646 27 195 616 87 984 657 83 504 657 Jun-14 68.6% 031.4% 28.1% 0 29 51 0 227 21 366 36 No data 89 88 14 72 375 5.2 15 0.15% 0.15% 1.74% 3.00%

Updated Nov 2015			· · ·		1		BUFI					
		Year	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
Demoleties as mod		-	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served		No	715 216	715 216	719 501	724 287	728 624	740 981	755 173	758 016	761 849	765 705
Households served		No	204 288	204 288	205 495	206 874	208 096	227 693	223 621	216 246	220 363	224 560
Connections - total	-	No	199 904	199 904	201 086	202 435	204 051	194 877	194 884	200 733	217 652	233 259
Connections - metered		No	156 828	156 828	157 754	158 813	160 081	152 884	152 889	157 478	109 908	111 565
Domestic		No	156 828	156 828	157 754	158 813	160 081	152 884	152 889	157 478	103 652	104 639
Non-domestic		No	0	0	0	0	0	0	0	0	6 256	6 926
Connections - unmetered	ta ta	No	43 077	43 077	43 331	43 622	43 970	41 993	41 995	43 255	107 744	121 694
Households / connection	ıt Data	No	1.0	1.0	1.0	1.0	1.0	1.2	1.1	1.1	1.0	1.0
Length of mains	Input	km	4 018	4 018	4 022	4 049	4 081	3 898	3 898	4 015	2 954	2 954
Connections / km		No / km	50	50	50	50	50	50	50	50	74	79
Average system pressure		m	50	50	50	50	50	50	50	50	50	55
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Apparent losses		%	20%	20%	20%	20%	20%	20%	20%	20%	24%	20%
Consumer meter age		%	6%	6%	6%	6%	6%	6%	6%	6%	8%	6%
Illegal connections		%	6%	6%	6%	6%	6%	6%	6%	6%	8%	6%
Data transfer		%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
System input volume		kl/annum	57 466 405	56 580 616	58 453 856	62 626 224	63 038 875	62 652 039	60 000 000	62 276 300	64 134 932	65 469 165
Own sources		kl/annum	57 466 405	56 580 616	58 453 856	62 626 224	63 038 875	62 652 039	60 000 000	62 276 300	36 297 319	36 774 434
Other sources		kl/annum	0	0	0	0	0	0	0	0	27 837 613	28 694 731
Authorised Consumption		kl/annum	33 303 452	33 585 568	33 660 073	36 869 253	34 733 505	37 620 667	30 000 000	39 160 850	35 591 309	40 587 056
Billed authorised		kl/annum	33 303 452	33 585 568	33 660 073	36 869 253	34 733 505	37 620 667	30 000 000	33 842 800	34 845 735	39 581 247
Billed metered		kl/annum	30 719 002	31 127 020	30 847 454	33 485 690	31 448 300	33 841 267	27 000 000	30 827 900	27 726 295	28 049 625
Domestic		kl/annum	30 7 19 002	31 127 020	30 847 454	33 485 690	31 448 300	33 841 267	27 000 000	30 827 900	19 293 645	19 706 752
Non-domestic		kl/annum	0	0	0	0	0	0	0	0	8 432 650	8 342 873
Export volume	suc	kl/annum	0	0	0	0	0	0	0	0	0	0
Billed unmetered	ulatic	kl/annum	2 584 450	2 458 548	2 812 619	3 383 563	3 285 205	3 779 400	3 000 000	3 014 900	7 119 440	11 531 622
Unbilled authorised	Calcı	kl/annum	0	0	0	0	0	0	0	5 318 050	745 574	1 005 809
Unbilled metered	nce	kl/annum	0	0	0	0	0	0	0	3 777 750	617 304	874 871
Unbilled unmetered	Bala	kl/annum	0	0	0	0	0	0	0	1 540 300	128 270	130 938
Water Losses	/ater	kl/annum	24 162 953	22 995 048	24 793 783	25 756 971	28 305 370	25 031 372	30 000 000	23 115 450	28 543 623	24 882 109
Commercial / Apparent losses	5	kl/annum	4 832 591	4 599 010	4 958 757	5 151 394	5 661 074	5 006 274	6 000 000	4 623 090	6 879 013	4 976 422
Physical / Real losses		kl/annum	19 330 362	18 396 038	19 835 026	20 605 577	22 644 296	20 025 098	24 000 000	18 492 360	21 664 610	19 905 687
UARL		kl/annum	4 238 436	4 238 436	4 256 983	4 285 549	4 319 769	4 125 554	4 125 691	4 249 518	4 148 108	4 813 567
Potential real loss saving		kl/annum	15 091 926	14 157 602	15 578 044	16 320 028	18 324 527	15 899 544	19 874 309	14 249 518	17 516 502	15 092 120
			33 303 452	33 585 568	33 660 073	36 869 253	34 733 505	37 620 667	30 000 000	33 842 800	34 845 735	39 581 247
Revenue water		kl/annum										
Non-Revenue water	-	kl/annum	24 162 953	22 995 048	24 793 783	25 756 971	28 305 370	25 031 372	30 000 000	28 433 500	29 289 197	25 887 918
Projected SIV without WDM		kl/annum	No data	No data	No data	No data	No data	No data	No data	62 276 300	63 272 721	64 285 084
Projected SIV with WDM		kl/annum	No data	No data	No data	No data	No data	No data	No data	62 276 300	62 072 721	61 885 084
		ear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
Indicator as % of system input volume	-											
% Revenue water			58.0%	59.4%	57.6%	58.9%	55.1%	60.0%	50.0%	54.3%	54.3%	60.5%
% Non-revenue water			42.0%	40.6%	42.4%	41.1%	44.9%	40.0%	50.0%	45.7%	45.7%	39.5%
% Water Losses			42.0%	40.6%	42.4%	41.1%	44.9%	40.0%	50.0%	37.1%	44.5%	38.0%
System input volume unit consumption												
Litres / capita / day			220	217	223	237	237	232	218	225	231	234
m³ / household / month			23	23	24	25	25	23	22	24	24	24
m ³ / connection / month			24	24	24	26		27	26	26	25	23
				24		20	26	21			25	
Authorised Unit Consumption												
Authorised Unit Consumption Litres / capita / day			128	129	128	139	131	139	109	142	128	145
-	10		128 14				131 14	139 14		142 15		145 15
Litres / capita / day	ators			129	128	139	131 14 14	139 14 16	109		128	145 15 14
Litres / capita / day m³ / household / month			14	129 14	128 14	139 15	131 14	139 14	109 11	15	128 13	145 15
Litres / capita / day m³ / household / month m³ / connection / month	indica		14 14	129 14 14	128 14 14	139 15 15	131 14 14	139 14 16	109 11 13	15 16	128 13 14	145 15 14
Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month	ance indica		14 14 14	129 14 14 14	128 14 14 14	139 15 15 15	131 14 14 14 14	139 14 16 16	109 11 13 13	15 16 16	128 13 14 11	145 15 14 14 12
Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month	ance indica		14 14 14	129 14 14 14	128 14 14 14	139 15 15 15	131 14 14 14 14	139 14 16 16	109 11 13 13	15 16 16	128 13 14 11	145 15 14 14 12
Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators	indica		14 14 14 No data	129 14 14 14 14 No data	128 14 14 14 14 No data	139 15 15 15 15 No data	131 14 14 14 14 No data	139 14 16 16 No data	109 11 13 13 13 No data	15 16 16 No data	128 13 14 14 11 112	145 15 14 12 100
Litres / capita / day m ² / household / month m ² / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ² / connection / month Water loss indicators Litres / capita / day	performance indica		14 14 14 No data 93	129 14 14 14 14 No data 88	128 14 14 14 14 No data 94	139 15 15 15 15 No data 97	131 14 14 14 14 No data	139 14 16 16 No data 93	109 11 13 13 13 No data 109	15 16 16 No data 84	128 13 14 11 112 103	145 15 14 12 100 89
Litres / capita / day m ² / household / month m ² / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ² / household / month	performance indica		14 14 14 No data 93 10	129 14 14 14 No data 88 9	128 14 14 14 No data 94 10	139 15 15 15 No data 97 10	131 14 14 14 14 No data 106 11	139 14 16 16 No data 93 9	109 11 13 13 No data 109 11	15 16 16 No data 84 9	128 13 14 11 112 103 103	145 15 14 12 100 89 9 9 9
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month	performance indica		14 14 14 No data 93 10 10	129 14 14 14 No data 88 9 10	128 14 14 14 No data 94 10 10	139 15 15 15 No data 97 10 11	131 14 14 14 14 No data 106 11 12	139 14 16 16 No data 93 9 9 11	109 11 13 13 13 No data 109 11 11 13	15 16 16 No data 84 9 10	128 13 14 11 112 103 103 11 11	145 15 14 12 100 89 9
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ² / household / month m ³ / connection / month UARL : Losses (litres / connection / day)	performance indica		14 14 14 No data 93 10 10 58	129 14 14 14 No data 88 9 10 58	128 14 14 14 No data 94 10 10 58	139 15 15 15 No data 97 10 11 58	131 14 14 14 14 No data 106 11 12 58	139 14 16 16 No data 93 9 11 11 58	109 11 13 13 No data 109 11 13 58	15 16 No data 84 9 10 58	128 13 14 11 112 103 103 11 11 52	145 15 14 12 100 89 9 9 9 9 57
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day)	performance indica		14 14 14 No data 93 10 10 58 265	129 14 14 14 No data 88 9 10 58 252	128 14 14 14 No data 94 10 10 58 270	139 15 15 15 No data 97 10 11 11 58 279	131 14 14 14 14 No data 106 11 12 58 304	139 14 16 16 No data 93 9 11 11 58 282	109 11 13 13 No data 109 11 13 58 337	15 16 16 No data 84 9 10 58 252	128 13 14 11 112 103 103 11 11 52 273	145 15 14 12 100 89 9 9 9 9 57 234 4.1
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI)	performance indica		14 14 14 No data 93 10 10 58 265 4.6	129 14 14 14 No data 88 9 10 58 252 4.3	128 14 14 14 No data 94 10 10 58 270 4.7	139 15 15 15 No data 97 10 11 58 279 4.8	131 14 14 14 No data 106 11 12 58 304 5.2	139 14 16 16 No data 93 9 11 58 282 4.9	109 11 13 13 No data 109 11 13 58 337 5.8	15 16 16 No data 84 9 10 58 252 4.4	128 13 14 11 112 103 103 11 11 52 273 5.2	145 15 14 12 100 89 9 9 9 9 57 234 4.1 18
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth	performance indica		14 14 14 No data 93 10 10 58 265 4.6	129 14 14 14 No data 88 9 10 58 252 4.3 13	128 14 14 14 No data 94 10 10 58 270 4.7 14	139 15 15 15 No data 97 10 11 58 279 4.8 14	131 14 14 14 No data 106 11 12 58 304 5.2 15	139 14 16 16 No data 93 9 11 58 282 4.9 4.9 14	109 11 13 13 No data 109 11 13 58 337 5.8 17	15 16 16 No data 84 9 10 58 252 252 4.4 13	128 13 14 11 112 103 111 11 52 273 5.2 20	145 15 14 12 100 89 9 9 9 9 57 234 4.1 18 0.51%
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth	performance indica		14 14 14 No data 93 00 10 58 265 4.6 13	129 14 14 14 No data 88 9 10 58 252 4.3 13 0.00% -1.54%	128 14 14 14 No data 94 10 10 58 270 4.7 14 0.60% 3.31%	139 15 15 No data 97 10 11 58 279 4.8 14 0.67% 7.14%	131 14 14 14 No data 106 11 12 58 304 5.2 15 0.60% 0.66%	139 14 16 No data 93 9 11 58 282 4.9 14 1.70% -0.61%	109 11 3 3 3 No data 109 11 13 58 337 5.8 337 5.8 17 1.92% -4.23%	15 16 16 No data 84 9 10 58 252 4.4 13 0.38% 3.79%	128 13 14 11 112 103 103 11 11 52 273 5.2 20 0.51% 2.98%	145 15 14 12 100 89 9 9 9 9 9 57 234 4.1 18 0.51% 2.08%
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Population growth % Water demand growth without WDM	performance indica		14 14 14 No data 93 93 00 10 58 265 4.6 13 13 10 205 4.6 13 10 10 10 10 10 10 10 10 10 10 10 10 10	129 14 14 No data 88 9 10 58 252 4.3 13 0.00% -1.54% No data	128 14 14 No data 94 10 10 58 270 4.7 14 0.60% 3.31% No data	139 15 15 No data 97 10 11 58 279 4.8 14 0.67% 7.14% No data	131 14 14 14 No data 106 11 12 58 304 5.2 15 0.60% 0.66% No data	139 14 16 No data 93 9 11 58 282 4.9 14 1.70% -0.61% No data	109 11 3 No data 109 110 13 58 337 5.8 17 1.92% -4.23% No data	15 16 16 No data 84 9 10 58 252 4.4 13 0.38% 3.79% No data	128 13 14 11 112 103 103 11 11 11 52 273 5.2 20 0.51% 2.98% 1.60%	145 15 14 12 100 89 9 9 9 9 9 9 9 9 9 9 57 234 4.1 18 0.51% 2.08% 1.60%
Litres / capita / day m ² / household / month m ³ / connection / month Domestic (&ND) m ² / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Water demand growth % Water demand growth without WDM % Water demand growth with WDM	performance indica		14 14 14 No data 93 00 10 58 265 4.6 13	129 14 14 14 No data 88 9 10 58 252 4.3 13 0.00% -1.54%	128 14 14 14 No data 94 10 10 58 270 4.7 14 0.60% 3.31%	139 15 15 No data 97 10 11 58 279 4.8 14 0.67% 7.14%	131 14 14 14 No data 106 11 12 58 304 5.2 15 0.60% 0.66%	139 14 16 No data 93 93 93 93 93 11 58 282 4.9 14 1.70% -0.61% No data No data	109 11 3 No data 109 110 13 58 337 5.8 337 5.8 17 1.92% -4.23% No data No data	15 16 16 No data 84 9 10 58 252 4.4 13 0.38% 3.79% No data No data	128 13 14 11 112 103 103 11 11 11 52 273 5.2 20 0.51% 2.98% 1.60% -0.33%	145 15 14 12 100 89 9 9 9 9 9 9 9 9 9 9 9 9 9 9 57 234 4.1 18 0.51% 2.08% 1.60% -0.30%
Litres / capita / day m ³ / household / month m ³ / connection / month Domestic (&ND) m ³ / connection / month Non-domestic m ³ / connection / month Water loss indicators Litres / capita / day m ³ / household / month m ³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m ³ / km mains / day) % Water demand growth % Water demand growth without WDM	performance indica		14 14 14 No data 93 93 00 10 58 265 4.6 13 13 10 205 4.6 13 10 10 10 10 10 10 10 10 10 10 10 10 10	129 14 14 No data 88 9 10 58 252 4.3 13 0.00% -1.54% No data	128 14 14 No data 94 10 10 58 270 4.7 14 0.60% 3.31% No data	139 15 15 No data 97 10 11 58 279 4.8 14 0.67% 7.14% No data	131 14 14 14 No data 106 11 12 58 304 5.2 15 0.60% 0.66% No data	139 14 16 No data 93 9 11 58 282 4.9 14 1.70% -0.61% No data	109 11 3 No data 109 110 13 58 337 5.8 17 1.92% -4.23% No data	15 16 16 No data 84 9 10 58 252 4.4 13 0.38% 3.79% No data	128 13 14 11 112 103 103 11 11 11 52 273 5.2 20 0.51% 2.98% 1.60%	145 15 14 12 100 89 9 9 9 9 9 9 9 9 9 57 234 4.1 18 0.51% 2.08% 1.60%

								PERSPECTIVE				
Updated Nov 2015	_	Vara	1 Jul 04 -	1 Jul 05 -	1 Jul 06 -	1 Jul 07 -	1 Jul 08 -	1 Jul 09 -	1 Jul 10 -	1 Jul 11 -	1 Jul 12 -	1 Jul 13 -
		Year	30 Jun 05	30 Jun 06	30 Jun 07	30 Jun 08	30 Jun 09	30 Jun 10	30 Jun 11	30 Jun 12	30 Jun 13	30 Jun 14
Population served		No	17 793 761	18 099 551	18 208 129	18 476 303	18 587 141	19 816 331	20 371 910	20 621 863	20 969 130	21 323 038
Households served		No	5 250 522	5 342 134	5 374 153	5 453 392	5 486 078	5 900 496	6 166 982	6 341 067	6 564 611	6 796 378
Connections - total		No	2 804 486	2 871 639	2 936 042	3 016 783	3 033 036	3 280 302	3 286 404	3 375 800	3 328 557	3 585 719
Connections - metered		No	2 457 058	2 557 435	2 642 937	2 759 330	2 811 028	2 973 035	2 956 661	3 046 122	2 958 844	3 070 724
Domestic		No	2 457 058	2 557 435	2 642 937	2 759 330	2 811 028	2 973 035	2 956 661	3 027 172	2 864 012	2 945 005
Non-domestic		No	0	0	0	0	0	0	0	18 950	94 832	125 719
Connections - unmetered	ta	No	347 428	314 205	293 105	257 453	222 008	307 267	329 743	329 678	369 713	514 995
Households / connection	ut Data	No	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.9
Length of mains	Input	km	59 257	60 180	61 390	63 246	63 209	64 824	67 006	69 056	66 549	66 211
Connections / km		No / km	47	48	48	48	48	51	49	49	50	54
Average system pressure			50	50	53	53	53	53	53	53	55	56
Time system pressurised		%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Apparent losses		%	20%	20%	28%	30%	29%	29%	30%	31%	24%	28%
Consumer meter age		%	6%	6%	9%	10%	10%	10%	10%	10%	9%	10%
Illegal connections		%	6%	6%	8%	8%	8%	8%	9%	9%	6%	11%
Data transfer		%	8%	8%	11%	11%	11%	11%	11%	11%	9%	8%
System input volume		kl/annum	1 787 408 771	1 817 350 178	1 909 458 405	1 944 774 121	2 009 569 099	1 985 614 506	2 015 253 568	2 078 290 807	2 115 650 080	2 158 763 399
Own sources		kl/annum	422 075 468	435 670 512	511 156 129	527 728 160	545 196 587	533 316 197	516 708 838	574 707 048	868 409 272	867 138 473
Other sources		kl/annum	1 365 333 303	1 381 679 666	1 398 302 276	1 417 045 961	1 464 372 512	1 452 298 309	1 498 544 730	1 503 583 759	1 247 240 808	1 291 624 926
Authorised Consumption		kl/annum	1 364 984 915	1 336 101 823	1 379 993 157	1 300 299 454	1 331 110 459	1 315 652 240	1 342 739 242	1 471 757 991	1 557 530 734	1 537 101 675
Billed authorised		kl/annum	1 364 984 915	1 336 101 823	1 379 993 157	1 300 299 454	1 304 960 534	1 291 462 647	1 319 410 406	1 394 929 798	1 422 171 426	1 417 576 960
Billed metered		kl/annum	1 225 977 509	1 204 002 568	1 287 661 946	1 269 960 683	1 279 901 121	1 259 720 492	1 287 386 853	1 368 306 503	1 387 068 822	1 377 897 424
Domestic		kl/annum	1 225 977 509	1 204 002 568	1 287 661 946	1 269 960 683	1 279 901 121	1 259 720 492	1 271 592 168	1 246 066 066	1 101 419 354	1 121 187 036
Non-domestic		kl/annum								70 847 785	229 483 438	200 116 330
Exportvolume	tions	kl/annum	0	0	0	0	0	0	15 794 685	51 392 652	56 166 030	56 594 058
Billed unmetered	culat	kl/annum	139 007 406	132 099 255	92 331 211	30 338 771	25 059 413	31 742 155	32 023 553	26 623 295	35 102 604	39 679 536
Unbilled authorised	e Cal	kl/annum	0	0	0	0	26 149 925	24 189 593	23 328 836	76 828 193	135 359 308	119 524 715
Unbilled metered	lanc	kl/annum	0	0	0	0	26 149 925	24 189 593	22 739 114	61 947 184	32 399 687	14 815 638
Unbilled unmetered	er Ba	kl/annum	0	0	0	0	0	0	589 722	14 881 009	102 959 621	104 709 077
Water Losses	Wat	kl/annum	422 423 856	481 248 355	529 465 248	644 474 667	678 458 640	669 962 266	672 514 326	606 532 816	558 119 346	621 661 724
Commercial / Apparent losses		kl/annum	84 484 771	96 249 671	147 368 454	194 849 179	199 199 427	194 930 442	200 926 872	187 225 307	144 694 376	174 681 467
Physical / Real losses		kl/annum	337 939 085	384 998 684	382 096 794	449 625 488	479 259 213	475 031 824	471 587 454	419 307 509	413 424 970	446 980 257
UARL		kl/annum	60 411 289	61 695 032	66 047 059	67 903 911	68 146 926	72 377 206	73 236 494	75 295 707	77 658 813	82 915 638
Potential real loss saving		kl/annum	277 527 796	323 303 652	316 049 736	381 721 577	411 112 286	402 654 618	398 350 960	344 011 802	335 766 157	364 064 620
Revenue water		kl/annum	1 364 984 915	1 336 101 823	1 379 993 157	1 300 299 454	1 304 960 534	1 291 462 647	1 319 410 406	1 394 929 798	1 422 171 426	1 417 576 960
Non-Revenue water		kl/annum	422 423 856	481 248 355	529 465 248	644 474 667	704 608 565	694 151 859	695 843 162	683 361 009	693 478 654	741 186 439
Projected SIV without WDM		kl/annum								2 152 197 298	2 305 938 422	2 348 925 210
Projected SIV with WDM		kl/annum								1 975 991 477		2 093 865 518
	١	rear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
Indicator as % of system input volume	١	rear ending	Jun-05	Jun-06	Jun-07	Jun-08	Jun-09	Jun-10	Jun-11	Jun-12	Jun-13	Jun-14
Indicator as % of system input volume % Revenue water	<u>ر</u>	Year ending	Jun-05 76.4%	Jun-06 73.5%	Jun-07 72.3%	Jun-08 66.9%	Jun-09 64.9%	Jun-10 65.0%	Jun-11 65.5%	Jun-12 67.1%	Jun-13 67.2%	Jun-14 65.7%
	١	fear ending										
% Revenue water	Ì	Year ending	76.4%	73.5%	72.3%	66.9%	64.9%	65.0%	65.5%	67.1%	67.2%	65.7%
% Revenue water % Non-revenue water)	rear ending	76.4% 23.6%	73.5% 26.5%	72.3% 27.7%	66.9% 33.1%	64.9% 35.1%	65.0% 35.0%	65.5% 34.5%	67.1% 32.9%	67.2% 32.8%	65.7% 34.3%
% Revenue water % Non-revenue water % Water Losses		/ear ending	76.4% 23.6%	73.5% 26.5%	72.3% 27.7%	66.9% 33.1%	64.9% 35.1%	65.0% 35.0%	65.5% 34.5%	67.1% 32.9%	67.2% 32.8%	65.7% 34.3%
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption		fear ending	76.4% 23.6% 23.6%	73.5% 26.5% 26.5%	72.3% 27.7% 27.7%	66.9% 33.1% 33.1%	64.9% 35.1% 33.8%	65.0% 35.0% 33.7%	65.5% 34.5% 33.4%	67.1% 32.9% 29.2%	67.2% 32.8% 26.4%	65.7% 34.3% 28.8%
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day		fear ending	76.4% 23.6% 23.6% 275	73.5% 26.5% 26.5% 275	72.3% 27.7% 27.7% 287	66.9% 33.1% 33.1% 288	64.9% 35.1% 33.8% 296	65.0% 35.0% 33.7% 275	65.5% 34.5% 33.4% 269	67.1% 32.9% 29.2% 269	67.2% 32.8% 26.4% 269	65.7% 34.3% 28.8% 270
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month		fear ending	76.4% 23.6% 23.6% 23.6% 275 275 28	73.5% 26.5% 26.5% 275 275	72.3% 27.7% 27.7% 287 30	66.9% 33.1% 33.1% 288 30	64.9% 35.1% 33.8% 296 31	65.0% 35.0% 33.7% 275 28	65.5% 34.5% 33.4% 269 27	67.1% 32.9% 29.2% 269 27	67.2% 32.8% 26.4% 269 269	65.7% 34.3% 28.8% 270 26
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month		fear ending	76.4% 23.6% 23.6% 23.6% 275 275 28	73.5% 26.5% 26.5% 275 275	72.3% 27.7% 27.7% 287 30	66.9% 33.1% 33.1% 288 30	64.9% 35.1% 33.8% 296 31	65.0% 35.0% 33.7% 275 28	65.5% 34.5% 33.4% 269 27	67.1% 32.9% 29.2% 269 27	67.2% 32.8% 26.4% 269 269	65.7% 34.3% 28.8% 270 26
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m ³ / household / month m ³ / connection / month Authorised Unit Consumption		fear ending	76.4% 23.6% 23.6% 23.5% 275 28 53	73.5% 26.5% 26.5% 275 28 53	72.3% 27.7% 27.7% 287 30 54	66.9% 33.1% 33.1% 288 30 54	64.9% 35.1% 33.8% 296 31 55	65.0% 35.0% 33.7% 275 28 50	65.5% 34.5% 33.4% 269 27 51	67.1% 32.9% 29.2% 269 27 50	67.2% 32.8% 26.4% 269 269 26 52	65.7% 34.3% 28.8% 270 26 49
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day		fear ending	76.4% 23.6% 23.6% 275 28 53 275 28 275 28 275 28 275 28 275 28 275 28 275 28 275 28 275 28 275 28 275 28 23.6%	73.5% 26.5% 26.5% 275 28 53 53 202	72.3% 27.7% 27.7% 287 30 54 287 30	66.9% 33.1% 33.1% 288 30 54 54 193	64.9% 35.1% 33.8% 296 31 55 55 196	65.0% 35.0% 33.7% 275 28 50 182	65.5% 34.5% 33.4% 269 27 51 178	67.1% 32.9% 29.2% 269 27 50 	67.2% 32.8% 26.4% 269 269 26 52 52 196	65.7% 34.3% 28.8% 270 26 49 190 18
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month	ndicators		76.4% 23.6% 23.6% 275 28 53 275 28 53 210 210 22	73.5% 26.5% 26.5% 275 28 53 53 202 202 21	72.3% 27.7% 27.7% 287 30 54 288 208 21	66.9% 33.1% 33.1% 288 30 54 54 193 20	64.9% 35.1% 33.8% 296 31 55 5 196 20	65.0% 35.0% 33.7% 275 28 50 182 182 19	65.5% 34.5% 33.4% 269 27 51 71 178 178	67.1% 32.9% 29.2% 269 27 50 189 189	67.2% 32.8% 26.4% 269 269 26 52 52 196 19	65.7% 34.3% 28.8% 270 26 49
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Matter Consumption Litres / capita / day Litres / capita / day M³ / connection / month Litres / capita / day m³ / household / month m³ / connection / month			76.4% 23.6% 23.6% 275 28 53 275 28 53 210 220 210 22 41	73.5% 26.5% 26.5% 275 28 53 53 202 202 21 39	72.3% 27.7% 27.7% 287 30 54 288 208 208 21 39	66.9% 33.1% 33.1% 288 30 54 54 193 20 36	64.9% 35.1% 33.8% 296 31 55 5 196 20 37	65.0% 35.0% 33.7% 275 28 50 182 182 19 33	65.5% 34.5% 33.4% 269 27 51 7178 178 18 34	67.1% 32.9% 29.2% 269 27 50 27 50 189 19 35	67.2% 32.8% 26.4% 269 269 26 52 52 196 19 19 38	65.7% 34.3% 28.8% 270 26 49 190 18 34
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Mathematical for the system Authorised Unit Consumption Litres / capita / day m² / household / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m³ / connection / month	nce indicators		76.4% 23.6% 23.6% 275 28 53 275 28 53 210 220 210 22 41	73.5% 26.5% 26.5% 275 28 53 53 202 202 21 39	72.3% 27.7% 27.7% 287 30 54 288 208 208 21 39	66.9% 33.1% 33.1% 288 30 54 54 193 20 36	64.9% 35.1% 33.8% 296 31 55 5 196 20 37	65.0% 35.0% 33.7% 275 28 50 182 182 19 33	65.5% 34.5% 33.4% 269 27 51 7178 178 18 34	67.1% 32.9% 29.2% 269 27 50 27 50 189 19 35	67.2% 32.8% 26.4% 269 269 26 52 52 196 19 19 38	65.7% 34.3% 28.8% 270 26 49 190 18 34
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Matter Consumption Litres / capita / day m² / household / month Authorised Unit Consumption Litres / capita / day m² / household / month m³ / connection / month Domestic (&ND) m³ / connection / month Non-domestic m³ / connection / month	nce indicators		76.4% 23.6% 23.6% 275 28 53 275 28 53 210 220 210 22 41	73.5% 26.5% 26.5% 275 28 53 53 202 202 21 39	72.3% 27.7% 27.7% 287 30 54 288 208 208 21 39	66.9% 33.1% 33.1% 288 30 54 54 193 20 36	64.9% 35.1% 33.8% 296 31 55 5 196 20 37	65.0% 35.0% 33.7% 275 28 50 182 182 19 33	65.5% 34.5% 33.4% 269 27 51 7178 178 18 34	67.1% 32.9% 29.2% 269 27 50 27 50 189 19 35	67.2% 32.8% 26.4% 269 269 26 52 52 196 19 19 38	65.7% 34.3% 28.8% 270 26 49 190 18 34
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month M³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / household / month m³ / connection / month Domestic (&ND) m³ / connection / month Non-domestic m³ / connection / month Water loss indicators			76.4% 23.6% 23.6% 275 28 53 210 22 41 41	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39	72.3% 27.7% 27.7% 287 30 54 208 21 39 39 39	66.9% 33.1% 33.1% 288 30 54 193 20 36 36 36	64.9% 35.1% 33.8% 296 311 55 196 20 37 37 37	65.0% 35.0% 33.7% 275 28 50 182 19 33 33 33	65.5% 34.5% 33.4% 269 27 51 178 178 18 34 34	67.1% 32.9% 29.2% 269 27 50 189 19 35 34	67.2% 32.8% 26.4% 269 269 269 52 52 196 19 38 33	65.7% 34.3% 28.8% 270 26 49 190 18 34 31
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Mathematical day m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day	performance indicators		76.4% 23.6% 23.6% 275 28 53 210 22 41 41 41 65	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39	72.3% 27.7% 27.7% 287 300 54 208 208 211 399 39 39 39	66.9% 33.1% 33.1% 288 30 54 193 20 36 36 36 36 36 96	64.9% 35.1% 33.8% 296 311 55 196 20 37 37 37 37 37	65.0% 33.7% 33.7% 275 28 50 182 182 19 33 33 33 33 33 93	65.5% 34.5% 33.4% 269 27 51 178 178 18 34 34 34 34 90	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 34 81	67.2% 32.8% 26.4% 269 269 269 269 52 30 196 19 38 33 33 33 33 73	65.7% 34.3% 28.8% 270 26 49 190 18 34 34 31 80 80
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m³ / connection / month Authorised Unit Consumption Litres / capita / day m³ / connection / month May - connection / month m³ / nousehold / month m³ / connection / month Domestic (&ND) m² / connection / month Non-domestic m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month	performance indicators		76.4% 23.6% 23.6% 275 28 53 28 53 210 22 41 41 41 41 65 7	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 208 21 39 39 39 39 39 39 39 39 39	66.9% 33.1% 33.1% 288 30 54 193 20 36 36 36 36 36 36 36 36 36 36 36 36 36	64.9% 35.1% 33.8% 296 311 55 196 200 377 377 377 377 100 100	65.0% 33.7% 33.7% 275 28 50 182 182 19 33 33 33 33 9 9 9	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 90 90 90	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 25 34 81 81 81 8	67.2% 32.8% 26.4% 269 269 269 269 52 52 196 199 388 333 33 73 73	65.7% 34.3% 28.8% 270 26 49 190 18 34 34 31 31 80 80 80 80
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% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Matorised Unit Consumption Litres / capita / day m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / household / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month UARL : Losses (litres / connection / day)	performance indicators		76.4% 23.6% 23.6% 275 28 53 210 220 41 41 41 41 65 7 7 13 59	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39 39 39 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 208 21 39 39 39 39 39 39 39 39 39 39 5 6 208 21 5 62	66.9% 33.1% 33.1% 288 300 54 193 200 366 366 366 366 366 100 188 62	64.9% 35.1% 33.8% 296 31 55 196 20 37 37 37 37 37 196 20 196 20 37 196 20 37 196 20 37 37 37 37 37 37 37 37 37 37 37 37 37	65.0% 33.7% 33.7% 275 28 50 182 19 33 33 33 33 33 99 177 60	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 34 90 90 90 91 17 61	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 189 19 35 34 189 19 35 5 34 5 34	67.2% 32.8% 26.4% 269 269 269 269 52 52 196 199 388 333 7 7 7 7 7 144 64	65.7% 34.3% 28.8% 270 26 49 190 18 34 34 31 31 80 80 80 88 44 63
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month Main / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month Main / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month Water loss indicators Litres / capita / day m² / household / month m² / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day)	performance indicators		76.4% 23.6% 23.6% 275 28 53 28 53 210 22 41 41 41 41 65 7 7 13 59 330	73.5% 26.5% 26.5% 275 28 53 53 202 21 39 39 39 39 39 39 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 287 30 54 287 30 54 208 21 39 39 39 39 39 39 39 39 39 55 62 562 562 57	66.9% 33.1% 33.1% 288 300 54 193 200 366 366 366 366 100 188 62 408	64.9% 35.1% 33.8% 296 31 55 196 20 37 37 37 37 100 100 10 10 10 9 62 433	65.0% 335.0% 33.7% 275 28 50 182 19 33 33 33 33 33 33 33 33 33 33 33 33 33	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 34 34 34 34 34 34 34 34 34	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 34 8 15 61 340	67.2% 32.8% 26.4% 269 269 26 52 52 196 19 38 33 33 7 7 14 4 64 340	65.7% 34.3% 28.8% 270 26 49 190 18 34 34 31 34 34 31 34 34 31 34 33 342
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / household / month m² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / household / month m³ / household / month uare loss indicators Litres / capita / day m³ / household / month m³ / household / month m³ / lousehold / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI)	performance indicators		76.4% 23.6% 23.6% 275 28 53 28 53 210 22 41 41 41 41 65 7 7 13 59 330 5.59	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39 39 39 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 208 21 39 39 39 39 39 39 39 39 39 39 39 5 5 7 5.79	66.9% 33.1% 33.1% 288 300 54 193 200 366 366 366 366 100 188 6.62	64.9% 35.1% 33.8% 296 311 55 196 200 377 377 377 377 196 200 377 377 377 377 377 377 377 377 377 3	65.0% 33.7% 33.7% 275 28 50 182 19 33 33 33 33 33 33 33 33 33 33 33 33 33	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 34 34 34 34 34 34 34 34 34	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 189 19 35 34 189 19 35 34 189 19 35 5 34 5 5 34	67.2% 32.8% 26.4% 269 269 269 269 52 38 33 33 33 33 33 33 33 33 33 33 33 33	65.7% 34.3% 28.8% 270 26 49 190 18 34 34 31 34 31 80 80 80 80 81 44 63 342 5.39
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% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month m² / household / month m² / household / month m³ / connection / month Domestic (&ND) m² / connection / month Non-domestic m³ / connection / month Water loss indicators Litres / capita / day m³ / household / month m³ / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth	performance indicators		76.4% 23.6% 23.6% 275 28 53 28 53 210 22 41 41 41 41 65 7 7 13 59 330 5.59	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39 39 39 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 288 287 30 54 208 21 39 39 39 39 39 39 39 39 39 39 39 39 39	66.9% 33.1% 33.1% 288 300 54 300 54 300 300 36 36 36 36 36 36 36 36 36 36 36 36 36	64.9% 35.1% 33.8% 296 31 55 20 37 37 37 37 37 37 37 37 37 37 37 37 37	65.0% 33.7% 33.7% 275 28 50 182 182 19 33 33 33 33 33 33 33 33 33 33 33 33 33	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 34 34 34 34 34 34 34 34 34	67.1% 32.9% 29.2% 269 27 50 3189 19 35 34 34 35 34 34 5 5 61 340 5.57 17 1.23%	67.2% 32.8% 26.4% 269 269 26 52 38 33 33 33 7 7 196 38 33 33 7 7 196 4 38 33 33 7 7 196 532 7 7 14 64 340 5.32 77 1.68%	65.7% 34.3% 28.8% 270 266 49 190 188 34 34 31 34 31 34 34 31 34 31 34 31 34 31 34 31 34 31 34 31 34 31 34 34 33 42 5.39 18 34 5.39
% Revenue water % Non-revenue water % Water Losses System input volume unit consumption Litres / capita / day m² / household / month m² / connection / month Authorised Unit Consumption Litres / capita / day m² / household / month M² / connection / month Domestic (&ND) m² / connection / month Non-domestic m² / connection / month Water loss indicators Litres / capita / day m² / household / month m² / household / month Water loss indicators Litres / capita / day m² / household / month m² / household / month m² / connection / month UARL : Losses (litres / connection / day) CARL : Losses (litres / connection / day) Infrastructure Leakage Index (ILI) CARL : Losses (m³ / km mains / day) % Population growth % Water demand growth	performance indicators		76.4% 23.6% 23.6% 275 28 53 28 53 210 22 41 41 41 41 65 7 7 13 59 330 5.59	73.5% 26.5% 26.5% 275 28 53 202 202 21 39 39 39 39 39 39 39 39 39 39 39 39 39	72.3% 27.7% 27.7% 287 30 54 288 287 30 54 208 21 39 39 39 39 39 39 39 39 39 39 39 39 39	66.9% 33.1% 33.1% 288 300 54 300 54 300 300 36 36 36 36 36 36 36 36 36 36 36 36 36	64.9% 35.1% 33.8% 296 31 55 20 37 37 37 37 37 37 37 37 37 37 37 37 37	65.0% 33.7% 33.7% 275 28 50 182 182 19 33 33 33 33 33 33 33 33 33 33 33 33 33	65.5% 34.5% 33.4% 269 27 51 178 18 34 34 34 34 34 34 34 34 34 34 34 34 34	67.1% 32.9% 29.2% 269 27 50 189 19 35 34 34 8 15 61 340 5.57 17 1.23%	67.2% 32.8% 26.4% 269 269 26 52 38 33 33 33 7 7 196 38 33 33 7 7 196 4 38 33 33 7 7 196 532 7 7 14 64 340 5.32 77 1.68%	65.7% 34.3% 28.8% 270 266 49 190 188 34 34 31 34 31 34 34 31 34 31 34 31 34 31 34 31 34 31 34 31 34 31 34 34 33 42 5.39 18 34 5.39
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