

Ekurhuleni Metropolitan Municipality

Presentations by Gauteng Metros / Municipalities
on
Water Conservation / Water Demand Management

Vaal River System
Strategy Steering Committee
18 April 2012



a partnership that works
Infrastructure Services

⇒ Presentation Content

1. **COMPLIANCE WITH “DWA PROECT 15% TARGET”**
2. **WDM Projects & Anticipated Savings**
3. **Ekurhuleni Water Balances**
4. **Top 7 WC/WDM Projects**

⇒ Ekurhuleni Service Delivery Areas (SDAs)

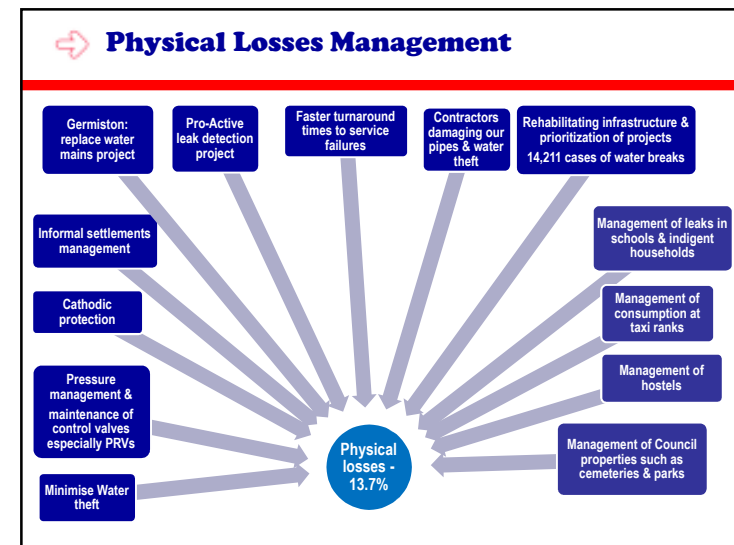
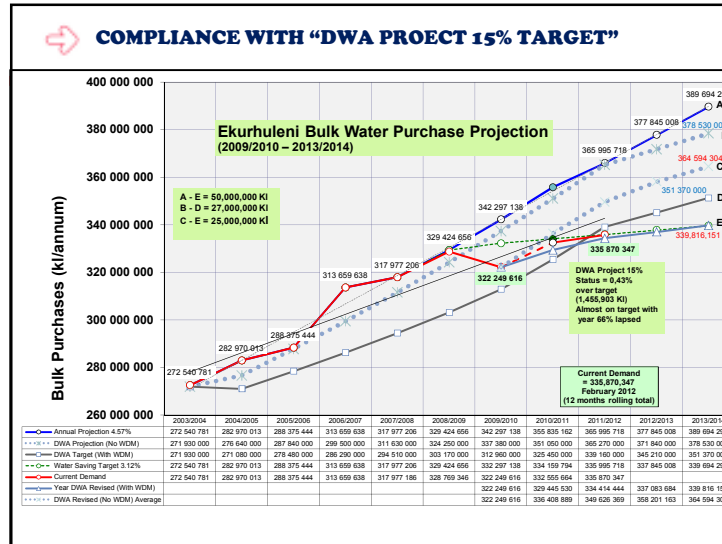


COMPLIANCE WITH “DWA PROECT 15% TARGET”

(EMM Water Demand Graphs 2009/2010 -2013/2014)



a partnership that works
Infrastructure Services



➔ WDM Related Projects & Anticipated Savings (2011/12 - 2013/14)

No	Main Project Names	Estimates (Rand)			Anticipated Savings (Kiloliter/Annum)		
		2011/12	2012/13	2012/14	2011/12	2012/13	2012/14
1	Preplacement of Mid-Block Mains	18,000,000	12,700,000	8,200,000	900,000	1,200,000	2,000,000
2	WDM Projects (strategic)	7,500,000	5,500,000	3,500,000	300,000	600,000	1,200,000
3	Pipeline Upgrading	30,000,000	57,000,000	26,000,000	1,400,000	2,000,000	2,500,000
4	Install combination meters in Industrial areas	10,000,000	40,000,000	43,000,000	600,000	1,200,000	1,600,000
6	Consolidation of Water Meters in Industrial Areas - Wadeville	3,000,000	8,000,000	9,000,000	400,000	1,200,000	1,400,000
8	Pressure Management	500,000	2,000,000	1,500,000	500,000	2,500,000	3,000,000
9	Tsakane/Langaville/Geluksdal leak Repair Project	1,000,000	35,000,000	56,000,000	300,000	2,500,000	6,000,000
TOTALS:		70,000,000	160,200,000	147,200,000	4,400,000	11,200,000	17,700,000
ACCUMULATIVE TOTALS:		70,000,000	230,200,000	377,400,000	4,400,000	15,600,000	33,300,000

➔ Preliminary OPEX cost required

The Table shows that a total of R 179million will be required per annum to implement and maintain WC/WDM.

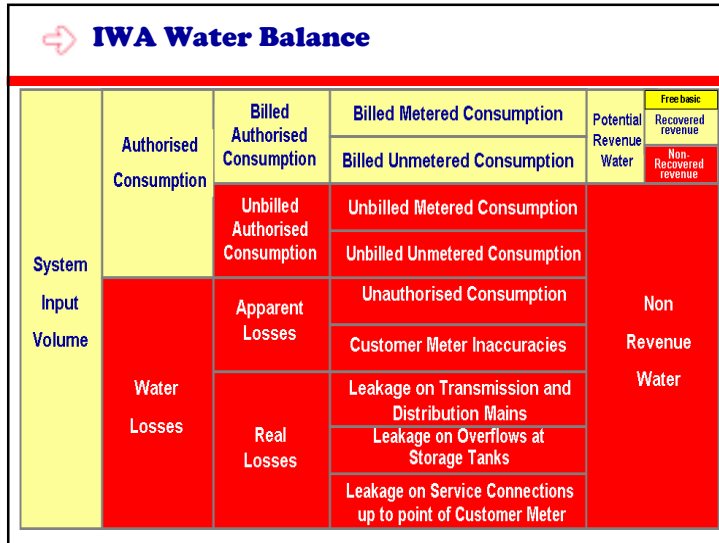
SDA	OPEX Budget Short term < 5 years/a	OPEX Budget Medium term 5 - 5 years/a	OPEX Budget Long term > 5 years/a	OPEX Total per annum
Benoni/Daverton Area	R 10 390 380	R 9 944 480	R 5 262 280	R 25 597 120
Brakpan/Springs/Kwathema Area	R 5 069 180	R 13 437 860	R 4 082 200	R 22 488 720
Samsonpark Area	R 432 000	R 7 289 000	R 5 955 520	R 13 676 520
Nigel/Tsokane/Dusika Area	R 9 355 480	R 8 300 000	R 1 510 400	R 19 165 880
Tenbisa Area	R 7 861 500	R 7 568 000	R 2 400 080	R 17 829 580
North East	R 33 898 320	R 46 533 820	R 19 129 480	R 99 561 620
Alberton/Tokosa/Katlehong Area	R 2 642 520	R 5 400 080	R 2 913 500	R 10 956 100
Ederwale Area	R 626 000	R 6 458 880	R 5 147 000	R 12 231 880
Germiston/Boksburg Area	R 2 677 940	R 2 594 960	R 1 566 100	R 6 239 000
Vosloorus area	R 7 313 080	R 5 175 480	R 2 257 000	R 14 745 560
South West	R 25 529 820	R 33 343 360	R 15 523 300	R 74 396 480
Regional Interventions	R 2 150 000	R 14 251 400	R 1 300 000	R 17 701 400
Ekurhuleni Total	R 13 628 060	R 54 398 620	R 31 369 680	R 179 395 760

➔ Revenue Enhancement – Key to current successes

- Importance of Municipality's Revenue Department
- Water Revenue falls under Chief Director W&S in EMM
- Issue of control at one point over NRW / Water Losses
- Monitor 133 RW meters - investigate anomalies
- Monitor consumption patterns
- Outgoing meters i.e. supply to Jhb – good working condition
- Top 500 Consumers – Audit, pressure test, consolidate – 250 already done – Saving R20m/annum – payback period = 6 months
- Indigent leak fixing – 5 000 per annum – up to 400kl / month
- Meter replacement programme – 36 000 per annum
- Meter Management Consultant – 3 Departments (Revenue, Finance, Electricity) – Filters raw data & calculates interim readings

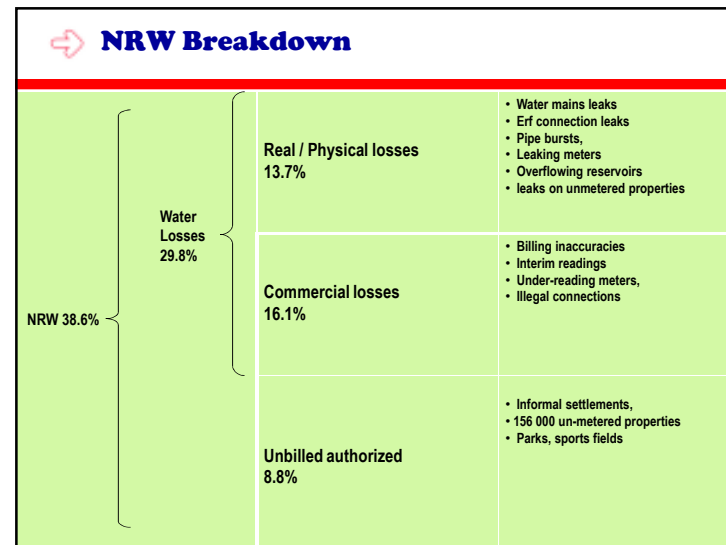
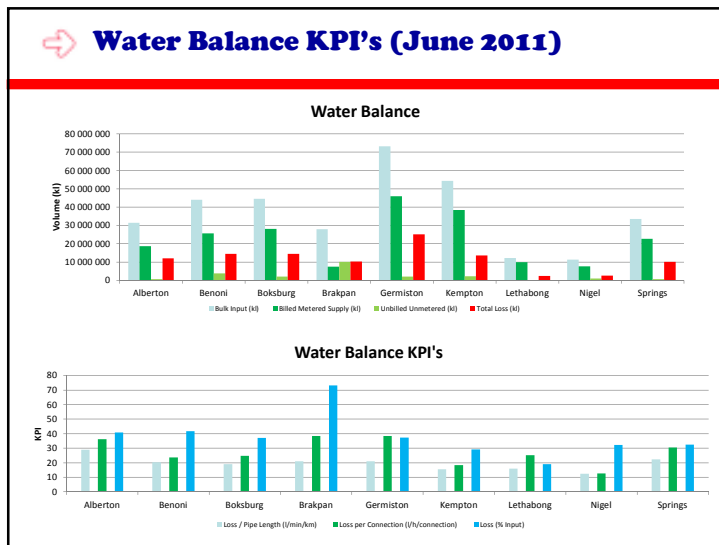
Ekurhuleni Water Balances





Ekurhuleni Water Balance – June 2011

SDA	System Input Volume (kl/annum)	Billed Authorised Consumption (kl/annum)	NRW (kl/annum)	NRW %
Alberton	31,432,964	18,605,800	12,827,164	40.8%
Benoni	43,967,596	25,598,536	18,369,060	41.8%
Boksburg	44,601,148	28,051,802	16,549,346	37.1%
Brakpan	27,880,296	7,487,935	20,392,361	73.1%
Germiston	73,202,976	45,948,724	27,254,252	37.2%
Kempton Park	54,339,368	38,438,696	15,900,672	29.3%
Lethabong	12,212,980	9,883,726	2,329,254	19.1%
Nigel	11,416,576	7,731,300	3,685,276	32.3%
Springs	33,501,760	22,649,886	10,851,874	32.4%
Ekurhuleni (Jun 2011)	332,555,664	204,396,405	128,159,259	38.5%
Ekurhuleni (Jun 2010)	322,821,747	193,973,397	128,848,350	39.9%
Ekurhuleni (Jun 2009)	329,424,656	201,338,050	128,086,606	38.9%



Top 7 WDM Projects



⇒ Top 7 WDM Projects

Replacement of Mid-Block Mains

Mid-block mains remain a problem, and is one of the biggest contributors towards water losses. Ekurhuleni has a definite plan to eradicate the mid-blocks over the next couple of years. R39m has been budgeted over the next 3 years for this purpose.

Pipeline Upgrading

The upgrading of municipal water mains is an ongoing pipeline rehabilitation process, and R113m has been budgeted over the next 3 years to attend to the older pipelines which have served their useful lifespan, and which are no longer economical to maintain.

Pressure Management

Pressure management is regarded as a quick-win initiative to reduce water losses, and the setting up of pressure management zones in Ekurhuleni is well advanced. However, the management of the installations needs to be outsourced until sufficient internal capacity has been created, and an as-and-when contractor needs to be put in place to effect the required day to maintenance activities associated with the proper and effective functioning of each installation.

⇒ Top 7 WDM Projects (Continued)

Tsakane/Langaville/Geluksdal Leak Repair Project (41 000 stands)

Based on the prioritization / sorting of zones from the highest to the lowest NRW, Tsakane/Langaville/Geluksdal was identified as the area within Ekurhuleni with the highest losses and therefore as the area with the biggest potential to reduce water losses.

Top 500 consumers

To improve and consolidate the Top 500 consumers meters by June 2016

Bulk meter Consumers

To audit and consolidate all bulk meter consumers (approximately 24 000 properties) by June 2022/2023 – 10 year programme

Replacement of Aged Domestic Meters

Replacement of all aged domestic meters (approximately 112 000 currently under-reading consumptions) by 2016.

⇒ EMM Action Plans & Scope of Work

- EMM has compiled 22 Action Plans aimed at reducing NRW / Water Losses
- Refer to ANNEXRE A for Details
- These action plans, some already implemented, have the objective to reduce NRW from 38.6% to 22% over the next 5 to 10 years
- All 22 Action Plans are being implemented simultaneously (importance of holistic approach)
- 1.5% to 2.5% NRW reduction per annum, depending on resources such as Financing, Institutional arrangements & outsourcing of shortfalls

