

Rand Water Demand vs Vaal Recon Scenario B (excl WC/WDM)

Kobie Maré
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1 Explanation of Growth Variations between 2009/10 Actual and 2009/10 Projected High Scenario excl WC/WDM

After the October 2010 VRS SSC Meeting Rand Water was requested to investigate and explain the variations in growth of certain bulk consumers: The Metro's and Mines were consuming 112 mil k/a less than their Projected values, while Emfuleni and Other consumers were exceeding their Projected values by 27 mil k/a

- 1.1 The Metro's were consuming 79 mil k/a less than their Projected values because of:
- The higher than Normal rainfall during 2009/10 in the Rand Water area of supply
 - The recent inclusion of Odi Projected consumptions (25 mil k/a) into the Tshwane Projections
 - The growth in Tshwane demands were smaller than Projected due to a part of its growth happening in Kungwini West area adjacent to Tshwane East



1 Explanation of Growth Variations between 2009/10 Actual and 2009/10 Projected High Scenario excl WC/WDM

- 1.2 The Mines were consuming 23 mil k/a less than their Projected values because of:
- The higher than Normal rainfall during 2009/10
 - The lower production in the general mining industry due to the economic recession
 - The exceedence of municipal demand in the Rustenburg area by 8 mil k/a
 - The capping of Rand Water infrastructure capacity to the Rustenburg mining area



1 Explanation of Growth Variations between 2009/10 Actual and 2009/10 Projected High Scenario excl WC/WDM

- 1.3 Emfuleni and Other bulk users were exceeding their Projected demands by 169 mil k/a because of:
- Emfuleni demand exceeded Projected by 5 mil k/a due to constraint of low pressure in certain areas limiting the full implementation of pressure reduction
 - Rustenburg demand exceeded Projected by 8 mil k/a due to limited implementation of water demand reduction and limited utilization of local resources
 - Thembisile demand was 11 mil k/a, while it had zero Projected value because it was unforeseen in 2004/05 when scenarios were developed.



1 Explanation of Growth Variations between 2009/10 Actual and 2009/10 Projected High Scenario excl WC/WDM

- Thembisile, Kungwini and Victor Khanye losses are high and now add to Rand Water's and IVRS' losses; demand reduction efforts should be increased
- Rand Water Raw Sales exceeded its Projected value by 82 mil k/a because it was not provided for in the 2009/10 Projections
- Rand Water Un-Accounted for Water (JAW) exceeded its Projected value by 63 mil k/a because it was not fully provided for in the 2009/10 Projections



2 Effect of Rainfall on Rand Water Abstraction Volumes

- Rand Water is currently investigating the effect of rainfall on its abstraction volumes, which in turn are affected by the demands of its bulk consumers and end consumers.
- The purpose of this investigation is to separate the effect of rainfall from other influences such as variations in the economy and also water demand reduction initiatives
- Early indications are that there is a good correlation between abnormal rainfall and abnormal abstraction volumes. Higher than normal rainfall usually results in lower than normal potable water demand.



3 Rand Water Interventions to Reduce Unnecessary Water Demand

3.1 Rand Water Internal WDM Project

• Due to the growth in UAW in Rand Water from 2.9% in 2004/05 to 4.3% in 2009/10, Rand Water has started a process to investigate its internal un-accounted for water to determine the potential to reduce unnecessary demand

3.2 Rand Water External WDM Project

• Due to the general under-investment in WC/WDM in its area of supply, Rand Water started a process to partially co-fund approved water demand reduction projects with municipalities and DWA
• DWA and several municipalities have appointed Rand Water as Implementing Agent to implement WC/WDM projects in its area of supply as well as in adjacent areas such as Western Highveld



4 Rand Water Water Use License

• Rand Water applied for a water use license to make provision for the anticipated growth in demand in its area of service. No WC/WDM was assumed in these calculations

• DWA has indicated that it might not be able to approve such an application unless WC/WDM has been implemented to its satisfaction

• These and other conditions still have to be negotiated in the near future, but its potential impact on all interested and affected parties will be significant



THANK YOU



Project 15%

- The MEC for Local Government in Gauteng announced the launch of Project 15% on 17 September 2009
- The project has the objective to reduce water demand in Gauteng municipalities by 15% over the 5-year period to 2014
- Municipalities pledged their commitment to the project
- All Water Sector role-players are now required to cooperate, i.e. DWA, DLG, DBSA, Rand Water and Municipalities
- Total WDM funding need: R3bn over 5 years to reduce demand by 550 Ml/d



Rand Water Commitment

- Rand Water, as sector partner in the Gauteng Province, is committed towards the demand reduction initiative
- Rand Water has to balance demand with supply while keeping affordability in mind
- It is in line with Rand Water's corporate strategy to provide support where needed



Rand Water Planning of Infrastructure Development

- Internal estimate:
 - Can reduce 2025 demand by 800 Ml/d, or about 15%
- DWA launching 'Project 15%'
- Need leadership and funding
- Could defer major projects, and reduce scope
- Contractually bound to supply 'orders'
- Timing is critical
- Rand Water using 'base case' in its planning (high growth; no WDM)



Rand Water's Role re WDM

- Bulk Water Supply (Primary activity – per service agreement and paid through bulk water tariff)
 - Supply planning and implementation to meet realistic demand requests
 - Auditing and improvement of internal efficiencies within Rand Water's own infrastructure (reduction of physical, billing and payment losses)
 - Supply control (if required due to non-payment or exceedence of quotas)
 - Tariff-based funding discounts as incentive for demand reduction (passing on savings on reduced loan repayment if raw or bulk infrastructure is deferred)
 - Penalty tariff (if required - tariff structured to dis-incentivize exceedence quotas)



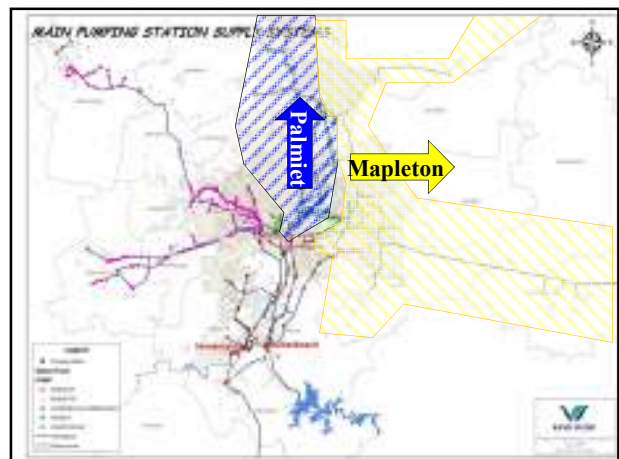
Rand Water's Role re WDM

- Implementing Agent (Other activity – upon request and on cost recovery basis)
 - Cooperating with other role-players to guide the overall project
 - Area of Service-wide water efficiency assessment
 - Assist munics to do basic measurements and draft business plans for funding applications
 - Assist munics to implement interventions
 - Assist munics to maintain and sustain interventions after implementation
 - Funding of selected projects on risk/return basis (Project funding off-balance sheet if there is a large short-term saving to munic)
 - Funding of selected projects that will enhance Rand Water's long-term sustainability (Project funding via tariff if it will save future capital investment by Rand Water) – see next 4 slides



Rand Water Infrastructure Development Priorities

- The next slide shows the major Rand Water supply areas that require infrastructure upgrading in the near future



Current Funding of selected WC/WDM Projects by Rand Water

- Based on RW infrastructure development priorities
- Operational budget 2009/2010: R10m
 - RW Internal assessment R 2.8m
 - RW High level customer assessment R 0.7m
 - RW customer assistance (Gauteng) R 4.0m
 - Ekurhuleni R 2.0m
 - Emfuleni R 1.0m
 - Lesedi R 1.0m
 - RW customer assistance (Non-GP) R 2.5m
 - Thembisile R 1.0m
 - Goven Mbeki R 0.5m
 - Metsimaholo R 0.5m
 - Ngwathe R 0.5m



Future Funding of selected WC/WDM Projects by Rand Water

- Rand Water is currently investigating the business case for WDM funding by Rand Water
 - Rand Water's Planning Section is simulating the impact of Project 15% on its infrastructure expansion programme
 - Rand Water's Finance Division will use the output of the planning scenarios to simulate the impact on capital expenditure, funding, loan repayment costs, tariffs and tariff structures
 - The effect of these analyses will inform Rand water and its customers regarding the appropriate level and method of passing on savings or additional costs
- Dept of Water Affairs will be requested to do the same re their planned inter-basin transfer scheme upgrades
- Dept of Local Government will be requested to do the same re their planned allocations for MIG projects

