

**SUPPORT TO THE CONTINUATION OF THE WATER RECONCILIATION STRATEGY
FOR THE WESTERN CAPE WATER SUPPLY SYSTEM**

STRATEGY STEERING COMMITTEE MEETING #12

DATE: 15 OCTOBER 2014 **TIME:** 09H00 – 15H00
VENUE: DEPARTMENT OF AGRICULTURE EISENBURG
CHAIR: MR TENDANI NDIWANI, DWA D:NWRP

ATTENDEES:

NAME		AFFILIATION	POSITION
Isa Thompson	IT	DWS D:NWRP	Study Manager
Tendani Nditwani	TN	DWS D:NWRP	Act. Director
Paul Herbst	PH	DWS D: WUE	
Jannie Fourie	JF	DWS D: WUE	
Tinashe Chizema	TC	DWS D:OA	
Anneke Schreuder	ASch	DWS RO Bellville	Berg WMA
Derril Daniels	DD	DWS RO Bellville	Berg WMA
Nicolette Vermaak	NV	DWS RO Bellville	Groundwater Berg
Mike Smart	MS	DWS RO Bellville	Groundwater Breede-Gouritz
Boniswa Hene	BH	DWS RO Bellville	D: Water Use & Regulation
Simpiwe Mashicila	SM	DWS RO Bellville	RBIG
Wilna Kloppers	WK	DWS RO Bellville	Water resource protection
Bertrand van Zyl	BvZ	DWS D: NWRI	Southern Operations
Marius Brand	MB	D: Local Government	
Niel Muller	NM	D: Human Settlement	
AkhonaNdletyana		DEA&DP	
Peter Flower	PF	City of Cape Town	D: Water & Sanitation
Zolile Basholo	ZB	City of Cape Town	WC/WDM
Collin Mubadiro	CM	City of Cape Town	WC/WDM
Paul Rhode	PR	City of Cape Town	Bulk Water
Barry Wood	BW	City of Cape Town	Bulk Water
Melissa De Sousa-Alves	MDSA	City of Cape Town	WC/WDM
Peter Keuck	PK	Dep. of Agriculture	
Nisbert Chimboza	NC	Green Cape	
Nic Faasen	NF	West Coast DM	
Andre Kowalewski	AK	Drakenstein LM	
Willie Enright	WE	Berg River Main IB	
Louis Bruwer	LB	Central-Breede WUA	
Richard Edson	RE	Overberg Water Board	CEO

NAME	AFFILIATION	POSITION
Rowena Hay RH	Umvoto Africa	Study Director
Dr Kornelius Riemann KR	Umvoto Africa	Study Leader
David McGibbon DM	Umvoto Africa	
Jaco Human JH	Worley Parsons	

APOLOGIES:

NAME	AFFILIATION	POSITION
Livhuwani Mabuda LM	DWS CD: IWRP	Chair Person
Fanus Fourie FF	DWS D: WRPS	Integrated Hydrological Planning
Jenny Pashkin JP	DWS D: WRPS	Systems Operation
Menard Mugumo MM	DWS D:OA	CE South
Okkie van den Bergh OvdB	DWS D: OA	Acting Director
Dewald Coetzee DC	DWS D: NWRI	Director Southern Operations
Rashid Khan RK	DWS RO Bellville	Chief Director
Ashia Petersen AP	DWS RO Bellville	D: Institutional Establishment
Dr Hildegarde Fast HF	D: Local Government	
Andre Roux AR	Dep. of Agriculture	
Catherine Bill CB	DEA&DP	
WD Bourbon-Leftley WDBL	Berg IB	
Dries van Taak DvT	Stellenbosch LM	
Esias de Jager EdJ	Stellenbosch LM	
Nathan Jacobs NJ	Witzenberg LM	

MINUTES

ITEM	DETAIL	ACTION	TIME
1	<p>Welcome and Introduction</p> <p>Mrs Isa Thompson (IT) opened the meeting and stated that Mr Tendani Nditwani (TN) will stand in for the chairperson, Mr Livhuwani Mabuda, who is not available.</p> <p>IT then asked for a round of introduction.</p> <p>TN stated that the purpose of the meeting is to check what progress has been made and to update the Reconciliation Strategy.</p>		
2	<p>Attendance and Apologies</p> <p>Attendance and noted apologies were captured on the attendance register.</p>		
3	<p>Acceptance of Agenda</p> <p>The agenda was accepted with one change:</p> <ul style="list-style-type: none"> Item no. 7 "Update of Reconciliation Strategy" is moved to before Item no.5. 		

ITEM	DETAIL	ACTION	TIME
4	Approval of Minutes of Meeting No. 11 (09 April 2014)		
4.1	<p>The minutes of the last SSC Meeting No. 11 of 9 April 2014 were approved with the following amendments:</p> <p>Item 5.2 on Page 5: NC and JP submitted detailed comments to KR, which will be incorporated. Kornelius Riemann (KR) stated that Umvoto will amend the minutes accordingly. IT indicated that there are no major changes, just clarifications and approved that once the amendments are made the minutes can be approved and re-distributed.</p> <p>Item 7.4.1 on Page 9: IT noted that Mr Rashid Khan's name had been misspelt.</p>	KR	
5	Update of Reconciliation Strategy		
5.1	<p>Water consumption</p> <p>KR stated that the system yield is 596 million m³/a and that the current allocations total 584.1 million m³/a. The usage from July 2013 – June 2014 was 508 million m³ of which 338.1 million m³ was for domestic / industrial use and 170 million m³ capped for agricultural use.</p> <p>KR stated that the CCT's use is declining, while the West Coast DM use is stable for the Swartland WTW at 6.5 million m³ and increasing for the abstraction feeding the Withoogte WTW that supplies Saldanha LM. The West Coast DM is already abstracting 5.2 million m³ more than their allocation and Stellenbosch LM is abstracting 1.5 million m³ more than their allocation. The West Coast DM submitted a new licence application to the DWS. Since 2010 there has been a decline in total domestic use for the WCWSS, which is a direct result of the decreasing consumption by the CCT.</p> <p>KR stated that there are inconsistencies in the numbers of the agricultural usage and that he is currently in discussion with the DWS to resolve these.</p>	PSP	
5.2	<p>Water use efficiency:</p> <p>The non-revenue water (NRW) for all municipalities is within acceptable limits, but the NRW percentage figures mostly show an increase from the last financial year. Zolile Basholo (ZB) pointed out that the CCT reduced the volume of their NRW and also reduced their system input volume, which resulted in an increase in the overall NRW percentage.</p> <p>The agricultural sector started to report on their water losses and results from two areas are available for the reporting; viz. Wynland WUA and Zonderend IB. The Wynland WUA receives water via pipelines and has low losses. They have a good handle on water efficiency and where the losses are occurring. The Zonderend IB receives water directly from the Riviersonderend River and just assumes transmission losses of 25% between the releases from the dam and the abstraction point. There are no measurements available to verify the actual losses. The same applies to most other irrigation boards pumping from the rivers.</p>		

ITEM	<u>DETAIL</u>	<u>ACTION</u>	<u>TIME</u>
5.3	<p>Water Requirement Scenarios:</p> <p>The water requirement scenarios are based on high and low growth rates for the CCT, West Coast DM and Stellenbosch LM as well as the growth in the agricultural sector, which can only grow up to the capped allocation of 173.6 million m³/a.</p> <p>The predicted industrial growth in water requirements for the Saldanha Bay area seems to fall within the predicted water requirements for the West Coast DM.</p> <p>It was agreed to keep the base year for the water requirement scenarios as 2012/2013.</p>	PSP	Oct-14
5.4	<p>Status Report October 2014:</p> <p>KR requested that all comments on the Status Report are sent to the team by the 25th October 2014 so that the final update can be sent out before the end of the month. The Status Report will also be updated with the discussions and comments raised during the meeting. The updated reconciliation scenarios indicated that the next water augmentation intervention should be in place to provide water by 2022. A decision about the next scheme to implement is required by end 2015 at the latest. The various schemes that can be considered are the Berg River-Voëlvelei Augmentation scheme, the TMG aquifer scheme, desalination of seawater and re-use of water.</p> <p>Willie Enright (WE) commented that the irrigators in the Lower Berg River have an allocation of 3 000 m³/ha from Voëlvelei Dam, assuming that the remaining 4 000 m³/ha for their full quota comes directly from the Berg River run-off and inflow from tributaries like the Klein Berg River and 24 Rivers. This assumption is not valid anymore and more water from Voëlvelei Dam must be made available. The model must be updated to determine the required additional releases and the impact this has on total water availability from the system.</p> <p>Bertrand van Zyl (BvZ) stated that the billing figures that he had provided to the team are the abstraction from the river from the last financial year and not the actual use from the system, as the figures exclude the system losses. Instead the figures used in modelling or the actual releases from the dams should be used. He undertook to make these available to the team soonest.</p> <p>WE stated that any water being used in 1998 and registered is considered existing legal use and now forms the allocation. If the full allocation is not used, then the water is lost. Additional water for abstraction after this date can only be obtained through a licence..</p> <p>IT requested that the CCT comment on their application for water from the system. Paul Rhode (PR) stated that the Berg River Dam is complete and that its full yield has been allocated to the CCT but the use still needs to be licensed. The CCT sent a Water Use Licence Application to the DWS in 2011, which is still outstanding. Zolile Basholo (ZB) wanted to know what the status of the licence approval is. Derril Daniels (DD) replied that the DWS are busy processing the licence and it will be completed soon. However, there are some issues that still need clarification. WE commented that if the West Coast DM requires more water, it will have to be taken from the Berg River Dam and therefore less could be allocated to the CCT.</p>	BvZ	Oct-14
		DWS	

ITEM	DETAIL	ACTION	TIME
	<p>BvZ suggested that a study is undertaken to clarify the allocations and use of correct water usage data for future scenarios and modelling purposes. It was agreed that this is important to verify how much water is used and how much is still available for future allocations. More water will also need to come from the system in a drought situation.</p>	PSP	Dec-14
6	Aspects that affects the WC WSS		
6.1	Water Conservation and Water Demand Management (WC/WDM)		
6.1.1	Report on CCT's progress with WC/WDM		
	<p>Collin Mubadiro (CM) has submitted the CCT's report to KR. KR confirmed that he will update the relevant section in the Status Report October 2014. The report will also be attached to the Minutes.</p>	KR	Oct-14
6.1.2	<p>WC/WDM in the agricultural sector</p> <p>Peter Keuck (PK) stated that the Department of Agriculture currently supports the remote sensing irrigation project (www.fruitlook.co.za) until April 2015. Currently it has 537 users registered with 1013 irrigation blocks covering 18 332 ha. PK would like the government to fund the project for a further 3 years. IT asked how successful the project is? PK stated that feedback shows improved irrigation efficiency, plant management and improved productivity. PK mentioned that the project also impacts positively on growth, soil conditions and pests and not only on the efficiency of the irrigation process. The number of users is an indication of the success of the project. There are however challenges such as lack of internet coverage in some farming areas and therefore PK would like to build in a phone application. They would also like to extend the project to the Breede and Olifants/Doorn areas.</p> <p>Paul Herbst (PH) stated that in order to quantify water losses they need to know how much water is released from the dam and what the actual usage is. Jannie Fourie (JF) commented that the problem in quantifying actual usage is that there are no measurements taken. WE stated that if DWS made a decision that all farmers need to measure their usage then they would do it. The problem however is not that the farmers use too much water; it is the losses in the distribution system. Louis Bruwer (LB) commented that the existing canal infrastructure in the Central Breede WUA was not designed to enable measurement and that it will be very expensive to install the meters now.</p> <p>Peter Flower (PF) stated that everyone is working to use less water but it is impossible to quantify savings without measurements. ZB asked what the DWS's position is on forcing farmers to measure water usage. Derril Daniels (DD) stated that to put measuring devices in is complicated, but that it will be one of the DWS's conditions for any new licence approval. WE agreed that farmers should measure water usage but stated that it is pointless to monitor these minor losses and miss the larger losses in the river distribution.</p> <p>There are roughly 6 000 irrigators in every catchment area and it will be difficult to monitor all of them. The registration and verification processes in the different areas need to be completed. The Breede and Gouritz CMAs were merged into the Breede-Gouritz CMA and the registration and verification process for this area are being done by BG-CMA. They are already far progressed with the Central Breede</p>		

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6.2	<p>area as well.</p> <p>DWS Policy and Strategic Issues</p> <p>Unfortunately, Marie Brisley (MB) could not make the meeting to do a presentation. IT stated that a presentation by MB was done a month before at the WC PLC meeting and most people attending this WCWSS Reconciliation Strategy SSC meeting were there.</p> <p>The progress with implementation of the NWRS2 will be presented to stakeholders in the WC during November 2014.</p>		
7	Monitoring the Progress with the WC WSS		
7.1	<p>Progress with current studies: CCT</p> <p>PR mentioned that the CCT's water demand management has been able to keep water usage in 2013/14 below what was used in 2000.</p>		
7.1.1	<p>Water re-use feasibility study</p> <p>Aurecon commenced the study in May 2014 and it is meant to be completed by mid-2015. A literature review and conceptual plan of possible schemes is currently underway and then two of these plans will be further studied in more detail at feasibility level. The study will have to prove to the public that the potable water produced is safe to drink.</p>		
7.1.2	<p>Desalination feasibility study</p> <p>WorleyParsons RSA began the study in 2012 and the report should be finalized by the end of 2014, or early 2015. Additional work of how to supply the possible growth-node north of Table Bay has been added to the study. Four possible locations for a plant had been identified, viz. False Bay, Saldanha Bay, Melkbos Strand and Koeberg Power Station. The CCT got an in-principle agreement from Eskom that the inlet and outlet structures at the Koeberg Power Station can be used for a desalination plant's marine works. This will decrease costs and reduce the time lines for implementation. The conceptual layout has been finalized and interim costs were shown in the presentation. The capital and operation costs are very high but desalination has the benefit of supplying potable water directly into the reticulation system.</p> <p>A pilot plant will be constructed at Koeberg Power Station and run for a period of 12 – 24 months for sea water quality monitoring.</p>		
7.1.3	<p>TMG Aquifer feasibility study</p> <p>The Exploratory Phase of the TMG Aquifer Feasibility Study has been concluded in 2012. However, the CCT plans to extend the Exploratory Phase with additional drilling and testing, as an additional site close to the Theewaterskloof Dam was identified at the end of the study. The exploration, as well as a recommendation for the way forward will be completed by June 2017. As part of that study, the CCT will be applying for a water licence from DWS for full development of the aquifer. Baseline monitoring is continuing.</p>		
7.1.4	<p>Lourens River Diversion feasibility study</p> <p>This scheme will divert surplus winter water from the Lourens River for supply to the CCT. The feasibility study for the Lourens River Scheme will go out to tender in early 2015.</p>		

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7.1.5	<p>Cape Flats and Newlands aquifers feasibility study</p> <p>PR described the various challenges of utilising the CFA, especially that the CFA is situated under an urban environment which makes installation and safeguarding of boreholes and pipelines more expensive and increases the risk of pollution entering the aquifer.</p> <p>A situation assessment of the CFA was completed in early 2014 and alternative suggestions made for the use of the CFA water. These uses include flood management, local fire fighting, food security, community greening and local-scale sanitation, also for schools.</p> <p>A workshop was held in August 2014 where spatial planning, coastal impact, non-potable water use and environmental concerns were discussed. Meetings of the team and CCT are still ongoing to develop an integrated and holistic management plan for the CFA.</p>		
7.2	Progress with current studies: DWS		
7.2.1	<p>Surface water feasibility studies</p> <p>Tinashe Chizema (TC) stated that the feasibility study was completed and a service provider will hopefully be appointed by February 2015 to begin the EIA for the Berg River Voëlvelei Augmentation scheme.</p>		
7.2.2	<p>Langebaan Road Aquifer Artificial Recharge scheme</p> <p>Nicolette Vermaak (NV) stated that a meeting between the CSIR and the DWS to agree on the ToR and contractual issues had been postponed and therefore there was no new feedback. The intention is to commence the comprehensive feasibility study in early 2015.</p> <p>Nic Faasen (NF) commented that the theft of cables in the Langebaan Wellfield had cost R600 000 to replace and increase security measures and would take until the end of October 2014 to complete.</p>		
7.2.3	<p>WC WSS Annual Operating Analysis and Real-time Project</p> <p>BvZ stated that the contract of the consultant appointed ends in November 2014 and that all the work will be completed by that time.</p> <p>ZB asked what reports have been produced. BvZ responded that a modelling report will be completed soon. Monthly reports on the status of the dams compared to the predicted storage levels are sent to all roleplayers, including the CCT. IT commented that all the dams are full and therefore it is unlikely that any restrictions will be required in 2015.</p>		
7.3	Other Municipal Studies		
7.3.1	<p>Drakenstein Municipality</p> <p>André Kowalewski (AK) gave a presentation on the residential and non-residential water meter audit that he was conducting in Wellington and Paarl. The non-residential water meter audit in Wellington and Paarl was completed. They further have completed 100% of the residential properties in Wellington, Hermon and Bainskloof, visiting 7 500 properties, and are currently busy with Paarl. He also described the various water supply systems in the region and the plans to improve the water supply to Saron.</p> <p>The meeting voted him formal acknowledgement for the good WC/WDM work being done.</p>		

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7.3.2	<p>He highlighted that vandalism of equipment is a major problem and results in significant water losses. IT requested that the issue of vandalism be included in the media statement, as it is a universal problem reported by all municipalities.</p> <p>Witzenberg Municipality</p> <p>Nathan Jacobs (NJ) sent his apologies. No report was given.</p>	PSP	Oct-14
7.3.3	<p>Stellenbosch Municipality</p> <p>Dries van Taak (DvT) sent his apologies. No one else was present from the Stellenbosch LM, so no report was given. The latest water balance data was however received from the Municipality.</p> <p>Jaco Human (JH) and Simpiwe Mashicila (SM) stated that it is critical for all municipalities to attend these meetings and provide feedback. All municipalities need to co-operate with the DWS.</p>		
7.3.4	<p>Ms Boniswa Hene (BH) will liaise with Stellenbosch Municipality in order to get better co-operation.</p> <p>West Coast District Municipality</p> <p>Nic Faasen (NF) gave a presentation and discussed the water supply systems for the 22 towns they supply. The water sources are the Voëlvlei Dam, the Berg River and the Langebaan Aquifer. They are currently 5.2 million m³ over their licensed volume and are looking into alternative schemes, such as desalination. They have 5% distribution losses along their bulk supply pipelines and about 6% treatment losses. Maintenance works of all pipelines is underway to try and reduce the losses further. IT advised that the additional water requirements can possibly be met from the WCWSS in the interim. NF replied that they have applied to the DWS for an increased abstraction licence from Misverstand Weir, but this has been in process for more than 3 years already.</p>	BH	
7.4	Other relevant Studies		
7.4.1	<p>All Towns Reconciliation Strategy Continuation</p> <p>IT reported that the continuation of the All Towns Reconciliation Strategy Study commenced in 2012. The contract is currently 2/3 of the way through.</p> <p>Currently 19 strategies have been updated and signed and more are drafted. All strategies are on the DWS website and IT advised all municipalities to use the website for the most up-to-date information.</p>		
7.4.2	<p>WesCape development</p> <p>Paul Rhode (PR) stated that an application to move the urban edge had been approved. For the moment only conceptual planning is taking place but the water requirements could be provided from the planned desalination plant, if it will be situated on the CCT's west coast.</p>		
7.4.3	<p>Economic Development at Saldanha (Green Cape)</p> <p>Nisbert Chimboza (NC) described how economic development depends on water availability in the future. Currently there is no agreed development and the study is still updating the numbers. He stated that any future development would change the water requirements and then they would have to look at Pinch chemical technology to</p>		

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7.4.4	<p>decide how many times a drop of water can be re-used before it needs to be cleaned.</p> <p>Simpiwe Mashicila (SM) stated that he had a meeting with Saldanha LM and West Coast DM and that there is no real water crisis. SM stated that schemes such as the Saldanha Bay desalination plant could be put on hold for the moment, but the current feasibility study, including preliminary design and costing being partially funded from RBIG must be completed, to enable informed decisions to be made.</p> <p>NC stated that there is talk of a phosphate mine in the region of the Elandsfontein Aquifer that would require water, but Rowena Hay (RH) said that it was in the early stages of investigation and might not be given the go ahead, due to the potential environmental impacts.</p> <p>Berg River Water Quality Task Team</p> <p>Wilna Kloppers (WK) stated that the purpose of the BRWQTT is to address water quality issues in the Berg River catchment and the risk to agriculture and the water supply. WK added that the task team is now called the Berg River Partnership.</p> <p>Derril Daniels (DD) explained that they look at pollution incidents and work with disaster management. DD stated that since the Franschoek WWTW was decommissioned, there has been a huge improvement in the water quality in the Berg River. They are currently analysing the results of the last 16 months of work and will present it at the next SSC meeting.</p>	DD	
<p>8</p> <p>8.1</p> <p>8.2</p> <p>8.2.1</p> <p>8.2.2</p>	<p>Communication</p> <p>Interaction on Provincial Level</p> <p>Boniswa Hene stated that the Provincial Liaison Committee (PLC) is meeting four-monthly to discuss water-related aspects between DWS and relevant provincial departments and it is a very useful and active forum.</p> <p>Communication with general public</p> <p>Media Release</p> <p>Tendani Nditwani (TN) stated that the media release should contain that there will be no water restrictions in 2015 because most of the major dams are still full.</p> <p>KR added that the ATSG decided to include the success in WC/WDM measures to reduce water consumption.</p> <p>Vandalism needs to be brought to the general public's attention and if people are selling the parts for money, then more severe punishments need to be imposed on the people that buy these parts. Vandalism is resulting in huge losses of water and money, to the tax payers' disbenefit.</p> <p>Status Report</p> <p>TN reminded everyone that feedback on the Status Report should be sent to KR by the 25th October 2014. Zolile Basholo (ZB) suggested that water quality be added to the report. KR commented that it would be important to distinguish between water quality along the rivers and in the dams. If anyone had relevant useful information they could send it to him. IT supported ZB but added that it was too late to add it to</p>	<p>PSP</p> <p>PSP/All</p>	

ITEM	DETAIL	ACTION	TIME
	this report but it could be an option for the future reports. The necessary reporting mechanism needs to be put in place.		
9	General IT stated that there has to be proof that the meeting was attended for any government officials who needs to claim S&T. She asked the PSP to scan and email the signed attendance register to all.	PSP	Done
10	Next meeting of SSC and Closure The next meeting of the Strategy Steering Committee is scheduled for 25 February 2015. The venue of the meeting will be confirmed closer to the time. TN thanked everybody for their contribution and closed the meeting at 13:30.	PSP	Feb-15


ATTACHMENTS:

- Item 5 – Presentation by Kornelius Riemann on the update of the Reconciliation Strategy
- Item 6.1.1 - WC/WDM report submitted by the CCT
- Item 7.1 - Presentation by Paul Rhode on progress with current studies for the CCT
- Item 7.3.1 - Presentation by Andre Kowalewski for the Drakenstein Municipality
- Item 7.3.4 - Presentation by Nic Faasen for the West Coast District Municipality
- Item 7.4.3 - Presentation by Nisbert Chimboza on Economic Development and Water Resources in Saldanha Bay.

SIGNATURE ORIGINATOR



 Umvoto Africa



 Date

SIGNATURE DEPARTMENT OF WATER AND SANITATION



 CD: IWRP



 Date

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