





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

STRATEGY STEERING COMMITTEE MEETING #11

DATE:

9 APRIL 2014

TIME:

11H30 - 16H00

VENUE:

DWA REGIONAL OFFICE, BELLVILLE - 2ND FLOOR BOARDROOM, SPECTRUM

BUILDING, VOORTREKKER RD

CHAIR:

MR TENDANI NDITWANI, DWA D:NWRP

ATTENDEES:

NAME		AFFILIATION	¥
Isa Thompson	IT	DWA D:NWRP	Study Manager
Tendani Nditwani	TN	DWA D:NWRP	
Dr Beason Mwaka	BM	DWA D: WRPS	
Paul Herbst	PH	DWA D: WUE	
Nosipho Sombane	NS	DWA D: WUE	
Rashid Khan	RK	DWA RO Bellville	Chief Director
Anneke Schreuder	ASch	DWA RO Bellville	Berg WMA
Derril Daniels	DD	DWA RO Bellville	Berg WMA
Neels du Buisson	NdB	DWA RO Bellville	
Nicolette Vermaak	NV	DWA RO Bellville	Groundwater
Mike Smart	MS	DWA RO Bellville	Groundwater
Bertrand Van Zyl	BvZ	DWA D: NWRI	
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
Linda Siyengo	LS	City of Cape Town	WC/WDM
Peter Keuck	PK	Dep. of Agriculture	
Chris Rabie	CR	DEA&DP	
Jim Petrie	JP	DED&T	
Nisbert Chimboza	NC	Green Cape	
Frans Hanekom	FH	DTPW	
Andre Kowalewski	AK	Drakenstein LM	
Nathan Jacobs	NJ	Witzenberg LM	
Willie Enright	WE	Berg WUA	
Rowena Hay	RH	Umvoto Africa	
Dr Kornelius Riemann	KR	Umvoto Africa	Study Leader
Jaco Human	JH	Worley Parsons	Team Leader
Gerrit van Zyl	GvZ	Consultant	*



APOLOGIES:

NAME		AFFILIATION	
Livhuwani Mabuda	LM	DWA CD: IWRP	
Fanus Fourie	FF	DWA D: WRPS	
Jenny Pashkin	JP	DWA D: WRPS	
Dewald Coetzee	DC	DWA D: NWRI	2
Ashia Petersen	AP	DWA RO Bellville	
Boniswa Hene	ВН	DWA RO Bellville	
Wilna Kloppers	WK	DWA RO Bellville	
Simpiwe Mashicila	SM	DWA RO Bellville	Water Sector Support
Paul Rhode	PR	City of Cape Town	Bulk Water
Arne Singels	AS	City of Cape Town	
Kevin Samson	KS	City of Cape Town	Waste Water
Jaco de Bruyn	JdB	City of Cape Town	
Andre Roux	AR	Dep. of Agriculture	
Izak Toerien	IzT	D: Local Government	
Marius Brand	MB	D: Local Government	
Niel Muller	NM	D: Human Settlement	
Catherine Bill	СВ	DEA&DP	
Nic Faasen	NF	West Coast DM	
Andre van Niekerk	AvN	Stellenbosch LM	
Dries van Taak	DvT	Stellenbosch LM	
Jan van Staden	JvS	Breede-Overberg CMA	8)
WD Bourbon-Leftley	B-L	Berg WUA	¥ ,

MINUTES

<u>ITEM</u>	DETAIL	ACTION	TIME
1	Welcome and Introduction		
	Mr Tendani Nditwani (TN) opened the meeting and stated that he will stand in for the chairperson, Mr Livhuwani Mabuda, who is not available.		
	He then asked for a round of introduction.		
2	Attendance and Apologies		
	Attendance and noted apologies were captured on the attendance register.		
3	Acceptance of Agenda		
	The draft agenda was accepted. The minutes of meeting #10 held on the 28 th of August 2013, copies of the presentations and the draft agenda for this meeting were distributed to everybody before the meeting.		



<u>ITEM</u>	DETAIL	ACTION	TIME
4	Approval of Minutes of Meeting No. 10 (28 August 2013)		
4.1	The minutes of the last SSC Meeting No. 10 of 28 August 2013 were approved with the following amendments:		
	Page 1: Peter Flower (PF) stated that the positions of the City's personnel are not correct. He will provide the correct details to the PSP.	PF	Done
	Page 4, 1 st paragraph: PF stated that the 'smart meters' currently only operate as water management devices, but have the capacity to operate as smart meters in future.		
	Page 4, 1 st paragraph: The second sentence should read: <i>PF replied</i> that for people that are not paying for their water use and are in <u>arrears</u> the CCT offers the option to write off their debt if they get new smart meters installed.	,	
	Page 8, item 7.3.2: Nathan Jacobs (NJ) queried the statement of <i>non-revenue water of above 40%</i> . This was previously the case, but it came down substantially. Jaco Human (JH) responded that this was the situation at the time of the SSC meeting #10, based on the water balance data from the municipality. He suggested keeping the figure in the minutes and providing an update during this SSC meeting. This was agreed.		
1.2	Dr Kornelius Riemann (KR) confirmed that all matters arising from the SSC meeting #10 are being dealt with in the agenda.		
5	Aspects that affects the WC WSS		3
5.1	Water Conservation and Water Demand Management (WC/WDM)		
5.1.1	Report on CCT's progress with WC/WDM		
	Collin Mubadiro (CM) reported on the progress of the implementation of the CCT's WC/WDM measures. He stated that he presented an overview of all initiatives at the last meeting and will focus only on new initiatives in this report. The main elements are listed below (a detailed report on these initiatives is attached as an appendix):		2
	Pressure Management		
	Leak Detection		
	Zone Metering		
	Industrial Meter Audits		
0*	Targeting industrial and commercial users to reduce their use	j.	
	Using of springs to offset potable water		- a
	Registration of private boreholes	-	41
	Harvesting of storm water to offset potable water		
	Using of boreholes, springs sources and/or treated effluent for greening of parks and public spaces	9	
	Roll out of water conservation devices in indigent households		
	Repairs and maintenance of assets, e.g. pipe replacement project		
	Roll out of providing treated effluent to suitable users.		
	JH requested that the report be provided in written format for distribution (see attached report).	CM	Done



ITEM	DETAIL	ACTION	TIME
120	Paul Herbst (PH) asked whether the initiatives meet quantitative targets for realising savings; are the targets realised or are they on track to be met. CM replied that 4800 Ml/a treated effluent are used, mainly for irrigation of parks and golf courses and by some industries. He further indicated that the use is constantly increasing and that there is capacity to provide more treated water. There is an increasing market for treated water.		
	PH suggested that the CCT reports on their water balance, including water losses / non-revenue water and whether specific targets for the different initiatives are met. PF responded that the requested report on tracking and meeting targets (available since early 2000) will be submitted to the PSP for distribution. To date, 26% reduction in water use was achieved, which can be ascribed to WC/WDM measures implemented by the CCT.	PF	Jul '14
.1.2	WC/WDM in the agricultural sector		
	Peter Keuck (PK) highlighted aspects relating to WC/WDM in agriculture with specific reference to on-farm water use. It is to be noted that agricultural water use is closely dependent on seasonal climate variability, making sound interpretation of annual water use comparisons difficult. The priority for irrigation farmers is to optimise their water use, more crop per drop, as an input towards maximising crop production outputs and profit, and not necessarily to minimise their water use. Savings effected due to the type of irrigation system used or when orchards need to be replaced for example, are therefore used towards the optimisation and expansion of production opportunities.		
	The www.fruitlook.co.za remote sensing irrigation scheduling technology developed by the Western Cape Department of Agriculture, in collaboration with ELeaf, the Dutch PSP, supports farmers to help optimise their water use and production outputs. To date, April 2014, 507 users, which include specialist commodity advisors, with a total of 2638 irrigation blocks covering an area of 34 795 ha have been registered on the website.		
	On a regional and sub-catchment level the extent of possible water use savings should be established through the validation and verification process.	2	
	PF emphasised the need for agricultural water use metering as all municipal water use have to be measured.	\$) 5) 32	
	Willie Enright (WE) stated that the major water losses occur at the scheme's bulk distribution systems and not on farms as most of the irrigation water needs to be pumped at expensive electricity costs. Validation and verification will address unlawful water use and will lead to control through compliance monitoring.		
	Bertrand van Zyl (BvZ) stated that substantial savings are being effected through the operational optimisation of bulk water distribution systems. Water meters are being installed below Misverstand Dam to address illegal abstraction.		
	PH reported that the DWA is in the process to compile regulations for		



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2	Economic Development in Saldanha Bay		
	Dr Jim Petrie (JP) from the Provincial Department of Economic Development and Tourism (DED&T) gave a presentation on the current Green Cape project "Economic Development and Water Resources in Saldanha Bay". The presentation is attached as an appendix.		
	The project focuses around Saldanha with the primary aim to select the right source of water at the right water quality for the right development at the right price.		
	Green Cape has developed water requirement scenarios based on the potential industrial and economic development. These scenarios indicate a step-wise increase in water requirements which are, in the short-term, higher than the scenarios used by the WC WSS Reconciliation Strategy.		
	Frans Hanekom (FH) of the Provincial Department for Transport and Public Works (DTPW) added to the presentation an overview of the Western Cape Infrastructure Framework, which is aimed at providing a 2040 infrastructure needs perspective for all hard and soft infrastructure. The process for development of the framework is set to ensure integrated development planning. A first workshop with several roleplayers is planned for 16 April 2014.		
	Isa Thompson (IT) raised her concern about the lack of engagement with the DWA, as water is a national function and not a provincial function. FH responded that they had consulted with DWA RO, indicating that they have specifically engaged with local role players, but he admits that the national context is missing.		2
	JP highlighted the fact that Green Cape's is a 2-year project which is separate from the 2040 infrastructure planning processes.		- 25.
	Gerrit van Zyl (GvZ) highlighted the lead times needed for water supply interventions. Hence, it is important to exchange information in order to align time lines of necessary interventions. He requested that JP provides the water requirement scenarios to DWA so that these can be taken into account in updating the water requirement scenarios for the WC WSS.	JP	Jul '14
	Neels du Buisson (NdB) suggested that the WC DM and the relevant WSA(s) must include the future water requirements raised by JP into their WSDPs as well as the IDP to ensure planning towards meeting these requirements is done in good time to ensure timeous implementation of any augmentation schemes.		
	Derril Daniels (DD) suggested that the water requirement scenarios by Green Cape are the same as the DWA reconciliation planning; difference is only in timing and level of detail due to available information. He suggested that the same team that undertakes the DWA reconciliation planning must participate in the Green Cape meetings. JP responded that DED&T will continue to liaise with the DWA reconciliation planning through the SSC meeting.	JP	
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<u>ITEM</u>	DETAIL	ACTION	TIME
6	Update of Reconciliation Strategy		
6.1	Status October 2013		
	KR gave an overview of the WCWSS and the situation as reported in the last Status Report of October 2013 (see attached notes). The developed reconciliation scenarios indicated that the next water augmentation intervention should be in place to provide water by 2022. A decision about the next scheme was required by middle 2015 at the latest.		
	Zolile Basholo (ZB) raised his concern that the agricultural sector relies on the CCT to reduce their water requirements from the WC WSS as if they are the only users of water. It is imperative for the agricultural sector to monitor their water use and implement WC/WDM as is required from all users. He requested that the DWA and the irrigation boards / water user associations present a plan to meter/measure/monitor their water use at the next SSC. Any savings in water use should come back to the pool to become available for reallocation, not for expansion of current irrigation.		
	IT asked PH to respond since there are regulations for agricultural water use to be measured in the pipeline. PH stated that DWA is working on such regulations, which will be released soon.	PH	Aug \14
	BvZ enquired about the statement that there is an over allocation of water. The current yield of the system is 596 million m³/a, while the sum of the different allocations for different users comes to 597 million m³/a. JH suggested that the missing 1.2 million m³/a could be the use from the Langebaan Aquifer Wellfield, but both KR and BvZ agreed that Langebaan is not included in these numbers. BvZ and KR agreed		
ii e	to solve this outside the meeting.	BvZ, KR	Jul '14
7	Monitoring the Progress with the WC WSS	7	S
7.1	Progress with current studies: CCT		
	PF mentioned that the CCT managed to keep the peak water requirements for the last thirteen years below the 2001 peak requirement, which is quite a feat. PF gave an overview of the status of the different studies that the CCT is currently carrying out.		
7.1.1	Water re-use feasibility study		
	The tender for the water re-use/reclamation feasibility study was awarded on 24 th March 2014. It is expected that the study will commence by the end of April 2014 and will have relevant input for the decision making by 2015. Nine (9) very comprehensive tenders were received, which made the tender adjudication process more complicated and lengthy.		
	Desalination feasibility study		
7.1.2	The state of the s		



ITEM	DETAIL	ACTION	TIME
7.1.3	TMG Aquifer feasibility study		
	The Exploratory Phase of the TMG Aquifer Feasibility Study is completed and the CCT intends moving to the Pilot Phase. Since the MFMA legislation has changed during this project, the City needed to address the legal challenge. This has been solved and the City will be moving forward with the study in the next month or two.		
	PK enquired whether the monitoring has or will be able to identify risks of abstraction on existing water users and the ecology. He requested the results of the Exploratory Phase and ongoing monitoring will be presented at the next meeting. PF agreed.	PF	Oct '14
7.1.4	Lourens River Diversion feasibility study		13
	The feasibility study for the Lourens River Scheme will go out to tender later this year.		2
7.1.5	Cape Flats and Newlands aquifers feasibility study		
	KR gave a short presentation on the outcome of the situation assessment, which was carried out by the PSP (see attached notes).		
	ZB asked how much is currently used and how much is still available for further development. KR responded that this is difficult to quantify, as both recharge and water use are estimates. It seems that the previous recharge estimates were too low, compared with the registered water use figures.		
	TN asked about the further actions emanating from the report. KR responded that as per agreement at the ATSG meeting in February 2014, the CCT will initiate a workshop with different role players to discuss the way forward and to prepare ToRs for specific studies. ZB confirmed that he will undertake to co-ordinate the workshop.	ZB	Jul '14
7.2	Progress with current studies: DWA	(9)	
7.2.1	Surface water feasibility studies		
	IT reported that the surface water feasibility study has been completed and that the reports are available. As per outcome of the study, the EIA process for the Voëlvlei Augmentation option must commence soon.		
7.2.2	Langebaan Road Aquifer Artificial Recharge scheme		
	Nicolette Vermaak (NV) stated that a bridging study for Langebaan Road Aquifer will be carried out. DWA is in the process of finalising the appointment.		
	Dr Beason Mwaka (BM) queried the reason for the proposed second feasibility study for the Langebaan Aquifer. NV responded that there were problems encountered during the first feasibility study when water was injected under high pressure. As the injection was done on the abstraction well field, there was no evaluation of the actual storage in aquifer. Hence, the need to assess alternative recharge methods in the natural recharge area.		
7.2.4	WC WSS Annual Operating Analysis and Real-time Project		
	IT reported that the Operating Analysis as carried out in November 2013 did not indicate the need for restrictions.		
	BvZ reported that the objective of the real-time project is to have real-time data available for decision making. The system is using a number of hydrological stations across the WSS to monitor rainfall, water	F	



ITEM	DETAIL	ACTION	TIME
	levels in dams, flow in rivers, and abstractions / releases. This information is then used to decide on changes to operational rules, releases etc. Training on the system is currently taking place. More integration for a quick communication system is however needed. The decision support system enables the DWA to save on the water losses on the lower Berg River System.		
7.3	Other Municipal Studies		
7.3.1	Drakenstein Municipality		
	Andre Kowalewski (AK) gave a presentation on the successes with WC/WDM measures in the Drakenstein LM (see attached notes). In 1999/2000 water losses were 34% and the water requirements were growing annually by about 3.5%. The LM took a decision to reduce their water losses and improve their financial system. The main investments were in pressure management (80% of their savings), metering all un-metered water connections, increasing public awareness, and monitoring bulk water supply. The municipality could maintain their water requirements for the last 10 years at the level of the early 1990's and saved about 158 million m³ since the year 2000.		
	The meeting voted him formal acknowledgement for the good work being done.		
7.3.2	Witzenberg Municipality		
	Nathan Jacobs (NJ) reported on the initiatives by the Witzenberg LM to reduce their water consumption and water losses. The Municipality started with a WDM Study in 2006 and formal implementation of the proposed WDM measures in 2008. The main elements are:		
	Public awareness.		9
	 Monthly internal water audit. Data loggers are used on a rotational basis. Some existing bulk water meters were also replaced. 	¢	
	 Meter replacement programme was started in 2008, which is ongoing. The programme is managed in-house by the Municipality's own personnel. All faulty meters are replaced within 14 days. A meter audit was also completed in 2013 for all the towns. 		
	 Non-potable re-use of water for Ceres, whereby all treated waste water will be used on the golf course and sports fields; none will be discharged into the river. 		- 4
	 Future WDM measures will include leak detection for Wolsely and Tulbagh. 		
	Pipe network replacement programme is ongoing.		
	 Pressure management started in Ceres (focus on fruit juice industry, their meters are replaced annually) 		
	The challenge is the synchronisation of technical and financial data, but departmental cooperation has improved. Water losses have been reduced from 35% in 2008/2009 to 21% in 2012/2013. The target is to reduce non-revenue water to 15% by 2015/2016 and to increase the uptake of treated water.		
	The meeting voted him formal acknowledgement of the good work		



<u>ITEM</u>	DETAIL	ACTION	TIME
	KR requested that the municipality provides a short written report on these measures and results to include with the minutes.	NJ	May '14
7.3.3	Stellenbosch Municipality	To the state of th	
	KR reported that he had received apologies from officials from the Stellenbosch LM. A short feedback was given by the LM in an e-mail from the Director: Engineering Services Mr Andre van Niekerk:		
	"Stellenbosch does not currently have any major projects on the go, or in planning, which would augment water supply as such. Our focus is mostly on Waste Water Treatment (more than 30% of Council's total budget), while we have several local reservoirs which is to be upgraded in the next three to five years. The new reservoir at Franschhoek is under construction."		
	JH requested that Stellenbosch LM presents at the next SSC meeting, as they also do not submit their quarterly water balance data to the DWA.	PSP	Aug \14
7.3.4	West Coast District Municipality		
	JH noted that the West Coast DM is a bulk water supply provider (WSP) and not responsible for reticulation. The water losses in the bulk system are \sim 5%.		
7.4	Other relevant Studies	e e	
7.4.1	All Towns Reconciliation Strategy Continuation		
	IT reported that the continuation of the All Towns Reconciliation Strategy Study commenced in 2012. The study will update the information and the strategies as and when required. Priorities are the towns with water resource problems. A status report of the situation in different municipalities was produced in October 2013.	-	
	Currently drafted strategy updates are available for Bitou LM, George LM and Hessequa LM, which requires input by the DWA RO and then signatures by all parties.		
	IT further highlighted that the quarterly water balance data from the municipalities are key to the strategy update. These are received regularly except for Stellenbosch LM and Prince Albert LM, which need to be chased up by the RO. She stated that various efforts have been made, and she now requested support from the Provincial Chief Director, Mr Rashid Khan (RK). RK advised that he will now move in to support enforcement through a Directive, since this is a compliance monitoring issue.	RK	Jun '14
7.4.2	WesCape development	KK	Juli 11
, . T. 2	PF suggested that the proposed WesCape development will not have a significant impact on water requirement scenarios, but a significant impact on infrastructure requirements. There might be a minor percentage increase in water requirements, but the bigger concern is how the CCT will supply WesCape development with water. He suggested that the next bulk water implementation scheme should consider the extra-over costs associated with the extension outside the urban edge which can then be put onto the developer.		
	IT stated that this must remain on the agenda for follow-up.		



ITEM	DETAIL	ACTION	TIME
7.4.3	WRC Projects	-	
	KR has and maintains a list of WRC projects and asked for support in keeping it updated to ensure that the research efforts are integrated and used for the good of the study.		
	IT mentioned two new studies that just started on re-use.		
	NV mentioned that Kate Robie has just finished her study on in-situ remediation of biofouling at Atlantis and is writing up her report.		
8	Communication		
8.1	Interaction on Provincial Level		
	RK stated that the DWA RO has re-engineered its business process since 1 st April 2014. What used to be intergovernmental liaison (IGL) is now called Sector Collaboration with two subsets, i.e. IGL and Society Collaboration. DWA RO wishes to be highly inclusive and re-start the Provincial Liaison Committee (PLC) so that there is a decision making body and a technical body.		
	The DWA RO now has 5 directorates; i.e. Infrastructure Management, Sector Support, IWRM, Institutional Management and Regulation.		12
8.2	Communication with general public		- 10
	IT stated that the annual status report and media release will be prepared for the next SSC meeting.	PSP	Sep '14
	It was agreed that all role players are requested to report back to the PSP prior to the next SSC meeting for incorporation their updated reports into the draft status report, which will be submitted to the SSC prior to the meeting. This will help to get the Status Report finalised soon after the SSC meeting.	All	Sep '14
8.3	Terms of Reference		
	KR reported that the TOR was discussed at the technical meeting and all comments were taken into account in the version sent to SSC prior to the meeting (see attached). Due to time constraints it was agreed to give the SSC 2 weeks for further comments, after which the TOR will be considered approved.		S ,
	Note: No further comments were received during this period and the ToR are considered approved.		
9	Administrative and Technical Support Group Feedback		
9.1	Report from ATSG Meeting 12 June 2013		
	Nothing else to report as everything was covered in items above.		
9.2	Berg River Water Quality Task Team		10.00
	Melissa Lintnar-Strauss (MLS) gave an overview of the work by the Berg River Water Quality Task Team (see attached notes).		
	She highlighted the need for a dedicated local or regional hot line and a dedicated laboratory for the pollution incident management, to allow for a quick response to reported pollution incidents.	ik i	



ITEM	DETAIL	ACTION	TIME
10	General	- 1	
, a	TN requested that all water use sectors, viz. municipalities and agriculture, present their water balance information at and for the SSC meeting. BvZ agreed to make the agricultural water use data available to the team, as he bills the irrigation boards and water users associations.	BvZ	Jul \14
-	The information from the Municipalities is needed three weeks in advance of the next Strategy Steering Committee meeting. KR will assist with a template for reporting requirements (WC/WDM successes, challenges, etc.)	KR	Jul '14
-	It was mentioned that the WUAs are the responsible authority and not the Department of Agriculture, wrt agricultural water use.		
11	Next meeting of SSC and Closure	*	
£0	The next meeting of the Strategy Steering Committee is scheduled for 15 October 2014. The venue of the meeting will be confirmed closer to the time.	PSP	Aug '14
C	TN thanked everybody for their contribution and closed the meeting at 16:30.		

ATTACHMENTS:

SIGNATURE ORIGINATOR

-	Item 5.1.1:	Report by Collin Mubadiro (City of Cape Town)
-	Item 5.2:	Presentation by Dr Jim Petrie (DED&T)
_	Item 6.1:	Presentation by Dr Kornelius Riemann (Umvoto)
-	Item 7.1.5:	Presentation by Dr Kornelius Riemann (Umvoto)
-	Item 7.3.1:	Presentation by Andre Kowalewski (Drakenstein LM)
-	Item 9.2:	Presentation by Melissa Lintnaar-Strauss (DWA)
-	Item 8.3:	Terms of Reference for Strategy Steering Committee

V. 12:0-22	11 Nove Se 7012
Umvoto Africa	Date

SIGNATURE DEPARTMENT OF WATER AFFAIRS

11 - NOVEMBER - 2014

CD: IWRP

Date



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