



## water affairs

Department:  
Water Affairs  
REPUBLIC OF SOUTH AFRICA

Directorate: National Water Resource Planning

### CROCODILE WEST WATER SUPPLY SYSTEM

#### Minutes of the third Strategy Steering Committee (SSC) for the Implementation and Maintenance of the Reconciliation Strategy for the Crocodile West Water Supply System

Date: Thursday, 29 September 2011

Venue: Lonmin Mine, Stone Conference Room, Mooinooi

	Notes / Actions
<p><b>1 WELCOME AND INTRODUCTION OF MEMBERS</b></p> <p>The Chairperson, Mr Peter van Niekerk from the Department of Water Affairs (DWA) welcomed everyone at the third Strategy Steering Committee Meeting. All attendants introduced themselves.</p> <p><b>2 ATTENDANCE AND APOLOGIES</b></p> <p>a) <b>Appendix 1</b> to the minutes is an attendance register of all who have attended.</p> <p>b) Apologies received:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mr Andries Meyer and Mr Farai Chamisa, Sasol.</li> <li><input type="checkbox"/> Mr George Fritz, Makoppa Irrigation Board.</li> <li><input type="checkbox"/> Mr Roland van Tonder, Crocodile West Irrigation Board.</li> <li><input type="checkbox"/> Dr Beason Mwaka, DWA Water Resource Planning Systems.</li> <li><input type="checkbox"/> Mr Gustav de Villiers and Mr Derek Hazelton, Madibeng Local Municipality.</li> <li><input type="checkbox"/> Mr Alson Matukane, DWA Limpopo Regional Office</li> <li><input type="checkbox"/> Mr Puleng Mofokeng and Ms Mary-Jean Gabriel, Department of Agriculture, Forestry and Fisheries</li> <li><input type="checkbox"/> Ms Wendy Ralekoa, DWA North West Regional Office: Institutional Establishment</li> <li><input type="checkbox"/> Mr Lebeau Labushacgne, DMR</li> <li><input type="checkbox"/> Mr Seef Rademeyer, National Water Resource Planning (Central), DWA</li> <li><input type="checkbox"/> Mr Izak Joubert, Makoppa Irrigation Board</li> <li><input type="checkbox"/> Ms Nomazizi Mdi, Department of Tourism and Economic Affairs</li> <li><input type="checkbox"/> Ms Palesa Kadi, Department of Tourism</li> <li><input type="checkbox"/> Mr Ockie van den Berg, Chief Engineer: Options Analysis North, DWA</li> <li><input type="checkbox"/> Mr Jan Viljoen, Transvaalse Landbou Unie</li> </ul>	<p><b>Appendix 1 – attendance register</b></p>

### 3 ACCEPTANCE OF AGENDA

The draft agenda, which was tabled at the meeting and circulated to all invitees prior to the meeting was accepted.

### 4 MINUTES OF THE PREVIOUS MEETING

#### 4.1 Approval of the Minutes

The minutes of the previous meeting held on 24 February 2011 at the conference facility of BKS, Hatfield in Pretoria was accepted as a true reflection of the meeting. One addition was made on page 3 under item 5.3 where the word "of" was replaced with the word "or". The corrected sentence now reads: "For the rest of the country there is not clear indication if the available water will increase **or** decrease."

### 5 MATTERS ARISING FROM SSC NO 2 (24 February 2010)

All the items listed under matters arising were dealt with under allocated items in the agenda, except for the following items below:

#### 5.1 Validation and verification of existing lawful water use - Item 5 of previous minutes, 8f:

*National Water Resource Planning (NWRP) to liaise internally in DWA to motivate for the validation and verification of existing lawful water use in the Crocodile West River catchment* – Mr Rens Botha, DWA responded that the North West region has received funds for the process, the Terms of Reference has been compiled and the professional service providers will be appointed soon.

#### 5.2 Integrated Resource Development Plan (IRDP) - Item 5 of previous minutes, 8g:

*Study Team to obtain the Integrated Resources Plan (IRP) from the Department of Energy and incorporate into scenario and strategy formulation.* Mr Pieter van Rooyen, WRP reported that the plan was considered and incorporated into the scenarios that will be discussed later at the meeting.

#### 5.3 Urban water requirements - Item 5 of previous minutes, 9.3e:

*The Study Team should contact Madibeng Local Municipality and Magalies Water to ensure that the numbers with regards to urban water requirements are indeed correct.* Mr Johan Rossouw reported that information was received from Magalies Water. Madibeng Municipality has sent some information, however more information will be forthcoming soon. He highlighted that unaccounted water in Madibeng is a concern.

#### 5.4 Members of the SSC - Item 5 of previous minutes, 9.4c:

*The Department of Mineral Resources to be invited to become a member of the SSC.* Ms Anelle Lötter responded that Mr Lebeau Labuschagne was invited; however he was not able to attend the meeting.

## 6 STATUS AND RECAP SINCE THE PREVIOUS MEETING

a) Mr Tendani Nditwani from the DWA presented an overview of the activities that were conducted since the previous meeting held on 24 February 2011. His presentation highlighted the following activities which were undertaken:

- ❑ Calibration of salinity water quality model;
- ❑ Verification of water resource simulation models;
- ❑ Scenario formulation based on information from:
  - Magalies Water
  - Water Conservation and Water Demand Management Strategy of D:WUE
  - Tshwane Potable Water Augmentation Program
  - Integrated Resources Plan from the Department of Energy
  - Other sources
- ❑ Updated water balance and reconciliation scenarios;
- ❑ Communication to Strategy Steering Committee;

Progress will be reported on in detail during the meeting.

### Discussion:

b) Mr Ian Midgley from Eskom suggested that the Department of Energy be invited as a member of the SSC. All agreed and a representative from the department will be invited to the next meeting.

## 7 FEEDBACK ON THE IMPLEMENTATION OF THE MAIN RECOMMENDATIONS OF THE STRATEGY

Presentations were made to provide feedback on the main recommendations of the Reconciliation Strategy. A summary of each presentation and the associated discussion follows:

### 7.1 WATER QUALITY MODEL PROGRESS

- a) Mr Trevor Coleman from the Study Team gave a presentation on the progress made with the development of the salinity (Total Dissolved Solids - TDS) water quality model for. In his presentation he highlighted the following:
- ❑ TDS concentrations in the Apies-Pienaars and Upper Crocodile sub-catchments are defined by return flow volumes and qualities – availability of effluent data on volumes and qualities is poor;
  - ❑ Despite data shortcomings a reasonable calibration of the model was achieved;
  - ❑ The next steps are to calibrate the Lower Crocodile sub-catchment and to finalise the report on water quality modelling for salinity.

**Appendix 2 -  
presentation**

Study Team will  
invite a  
representative from  
the Department of  
Energy

**Appendix 3 -  
presentation**

## 7.2 REVISED WATER BALANCE

- a) Mr Jonathan Schroder from BKS presented the revised water balance for the Crocodile West River System. In his presentation he highlighted the following:
- ❑ An overview of the previous results as presented at the previous SSC which showed water surpluses at Hartbeespoort and Roodeplaat dams;
  - ❑ Water requirements – detailing requirements from an urban perspective, projections received from Magalies Water, Madibeng LM and information from Tshwane Metro on their water re-use plan have been considered and modelled;
  - ❑ Several scenarios were presented based on previous and new information;
  - ❑ Water balances based on the scenarios were provided and it became clear that the available projected surplus cannot support both the Tshwane Potable Water Augmentation Programme and the water requirement scenario provided by Magalies Water.

### Discussion:

- b) Mr Ian Midgley from Eskom said that his understanding from the presentation is that less water is available than was presented at the previous meeting. He asked whether transfers out of the Crocodile River system (e.g. for proposed development in Lephalale) goes hand in hand with required or expected imports from the Vaal River system. Mr Johan van Rooyen from DWA responded that proposed projects in Lephalale are only indications at this stage and that later during this meeting members will realise that certain choices with regards to water resources will have to be made to meet future requirements.
- c) Mr Ian Midgley from Eskom further asked whether the differences in the previous and updated water balance observed are mainly because of a shift of supply due to re-use from Rand Water, or whether the demand for water is actually higher? Mr Johan van Rooyen from DWA responded that it is a combination of both – higher demand and an exchange of resources. He requested the study team to ensure that in their calculations they do not duplicate water supplied by both Magalies Water and Tshwane Metro in the areas where there may be overlap. This also highlighted a need for joint planning on bulk water needs and supply.
- d) Mr Dirk Hanekom from Gauteng Agri-SA asked whether the information presented at the meeting will be available to all members? Ms Anelle Lötter from Zitholele Consulting confirmed that all presentations made at the meeting will be uploaded on the DWA web site (the specific address (<http://www.dwa.gov.za/Projects/crocodilemaintanance/default.aspx>)) was printed on the agenda) and that it will be followed by the minutes of the meeting, a progress report and a press release. All information presented is available to all stakeholders on the website.
- e) Mr Dirk Hanekom from Gauteng Agri-SA noted that the presentation does not reflect that the DWA and its study team are aware of increased irrigation needs from the emerging farming sector. Mr Johan van Rooyen from DWA responded that no additional provision was made for irrigation. Should there be a need for increased provisions; the agricultural sector will have to make that known to DWA. He also said that needs from emerging farmers will have to be serviced from the allocations already made to the irrigation sector or from groundwater resources. Mr Peter van Niekerk asked that all members should treat the presented results as provisional – work in progress.

## Appendix 4 - presentation

Study team to ensure that calculations of water supplied by Magalies Water and Tshwane Metro

### 7.3 RECONCILIATION STRATEGY REVISION

- a) Mr Tendani Nditwani from DWA presented the current status and proposed steps in the revision of the Crocodile West River System Reconciliation Strategy. In his presentation he highlighted the following:
- ❑ Status of the current Reconciliation Strategy;
  - ❑ The specific steps to follow to update the water balance and the Strategy;
  - ❑ The current perspective of the scenarios and factors to consider in updating the Strategy;
  - ❑ A proposed framework for the revised Strategy and the next steps to follow towards the finalisation of the document;

As an important next step, a technical workshop has to be held to coordinate the planning between the bulk service providers in the area.

#### Discussion:

- b) Mr Johan van Rooyen from DWA said he would like to provide an overview of the progress which has been made with the development of various scenarios since the first SSC meeting and emphasized how the planning perspectives have changed as follows:
- At the first SSC meeting discussions focussed on the huge prospective future demand for water in the Lephalale area;
  - The Integrated Resource Development Plan of the Department of Energy was released and it changed the prospective immediate water demands. At the second SSC the challenge was discussed on what are the best management options with the expected water surplus;
  - At this meeting, the third SSC, members discussed the new plans for re-use from the Tshwane Metro and this changes the projected available surplus of water from the Hartbeespoort and Roodeplaat dams.
- c) Mr Tendani Nditwani from DWA added that the demand for water in the Lephalale area still exists as the DWA has already been informed of future mining developments. He added that the way forward is for the DWA and all existing and future water users to discuss their water requirements to ensure proper planning as many challenges are to be met. He invited water users to discuss their proposed demands with the DWA so that proposed plans can be considered in the strategic analysis.

### 7.4 CROCODILE WEST ANNUAL OPERATING ANALYSIS

- a) Ms Lerato Bapela from DWA presented information on the Crocodile West River Annual Operating Analyses Study, being conducted for the development of annual operating rules for the Crocodile West River system. In her presentation she highlighted the following:
- ❑ The purpose of the study is to develop an annual Decision Support System for the Crocodile West River system to operate and regulate the system water availability so that its distribution can be reconciled with the water demand patterns on the system. Monthly water release schedules for the different reservoirs will also be determined;
  - ❑ Good progress is being made and report back will be provided at the System Operating Forum which will be held at the end of November or the beginning of December 2011.

#### Discussion:

- a) Mr Tendani Nditwani from DWA said at the beginning of the Mokolo and Crocodile Augmentation Project the DWA has planned this study to look at operating rules for the Crocodile West River system. The approach is to manage the Crocodile West River system as an integrated system, ensuring the success of the implementation of the Strategy.

**Appendix 5 -  
presentation**

Study Team

**Appendix 6 -  
presentation**

## 7.5 STATUS OF WATER RESOURCE QUALITY - with focus on the Harties Metsi a Me project

Mr Petrus Venter from the DWA gave a presentation on the Harties Metsi a Me Project. The project also known as the Hartbeespoort Dam Integrated Biological Remediation Programme has as main objective to restore the dam from its hypertrophic state whilst enhancing growth, development, work creation and information sharing in the catchment. Several projects are underway that determine, optimise and manage the physical and biological conditions in the dam to ensure reduction in algae (blue-green), hyacinth and undesired fish biomass.

Members received DVDs at the previous meeting. Mr Venter said that the DVD has been updated and that anyone can contact him for an updated copy. The presentation that he delivered is available on the DVD.

### Discussion:

- a) Mr Pieter Viljoen from the DWA congratulated Mr Venter on the good work done on the Hartbeespoort Dam.

## 7.6 WATER QUALITY ASSESSMENT OF CROCODILE WEST WATER SUPPLY SYSTEM

- a) Mr Pieter Viljoen from the DWA gave a presentation on the surface water quality status of the Crocodile catchment. In his presentation he highlighted the following:

- What are Resource Water Quality Objectives (RWQO's) and how are they determined;
- The location of the 19 monitoring points assessed;
- Compliance to RWQOs (chemical) assessed for every monitoring point;
- Summary of water quality trends per monitoring point;
- Water quality issues and concerns;

That water quality downstream of the Hartbeespoort Dam is a concern and the sources of pollution will have to be identified. As a way forward he recommended that:

- A DWA Crocodile West River water quality technical task team be established.
- That a phased approached action plan be developed which will include:
  - A catchment situation assessment.
  - The determination of RWQOs and a compliance analysis which should include a water quality reconciliation and oversight, water quality options analysis and scenario development as well as a Water Quality Management Plan.

### Discussion:

- b) Mr Ian Midgley from Eskom asked how the guideline for Water Quality Objectives was set? Mr Pieter Viljoen from the DWA responded that it was a scientific process informed by literature reviews, international criteria, inputs from all relevant sectors and best practise.

(Presentation made is available on the updated DVD and is not provided due to its size)

Appendix 7 - presentation

Mr Pieter Viljoen will provide feedback on the establishing of the WQM Task Team

## 8 STATUS OF THE MOKOLO-CROCODILE WATER AUGMENTATION PROJECT

**Appendix 8 -  
presentation**

- a) Mr Johan van Rooyen from the DWA presented, on behalf of Mr Ockie van den Berg, progress made with the Mokolo-Crocodile Water Augmentation Project (MCWAP). His presentation highlighted the following:
- ❑ That the emphasis shifted from securing water for several proposed future developments such as Sasol's Mafuta Coal to Liquid Plant and four new power stations to the current situation where the project is only to secure water supply to meet the Medupi power station's water requirements – hence the current focus of MCWAP is on upgrading of water supply from Mokolo Dam (proposed 1st phase of augmentation);
  - ❑ Sources of water to supply the developments are Mokolo Dam, return flows in the Crocodile West River System, augmentation from the Vaal River system as well as limited groundwater, re-use of Lephalale town's return flows and through Water Conservation and Water Demand Management.
  - ❑ It is, however, not possible at this stage to proceed with the transfer scheme (return flows in the Crocodile West River (future supply - indirectly imported via the Vaal River system)) due to insufficient commitment and uncertainty of the future water needs of users;
  - ❑ Even with a high level of water supply assurance secured from Mokolo Dam there remains a 26% risk of supply failure over the long term lifetime of the two power stations (Matimba and Medupi) due to the single source of supply. Phase 2 of the MCWAP is therefore required irrespective of immediate future developments, and although on hold, it will be necessary to supply strategic industries from multiple sources in future.

## 9 MAGALIES WATER – BULK WATER EXPANSION PLANS

**Appendix 9 -  
presentation**

- a) Mr Roelf le Roux from Magalies Water presented information on the implementation of the bulk water supply infrastructure augmentation scheme of Magalies Water. His presentation provided detailed descriptions of backlogs experienced, current situations with water demands, infrastructure as well as new demands and planned infrastructure to provide in those demands. He concluded his presentation with the following:
- ❑ Prompt approval of water use licences is crucial, in order to supply in the growing demand of the area;
  - ❑ Capital funding requirements have to be resourced timeously to implement supporting infrastructure in time;
  - ❑ Water Boards should be encouraged to apply for Grant Funding (e.g. RBIG) on behalf of Water Service Authorities (WSAs) to implement bulk water infrastructure projects;
  - ❑ EIA processes should be accelerated and not allowed to unnecessarily delay infrastructure project implementation;
  - ❑ Joint macro planning between Magalies Water and WSA's must continue;
  - ❑ Magalies Water will continue to partake in DWA's water resources planning and water resource management activities.

### Discussion:

- b) Mr Rens Botha from the DWA asked Mr Le Roux when the DWA will receive the Water Use Licence applications for the proposed extensions of water treatment facilities? Mr Le Roux responded that only one application (Pilansberg scheme from Vaalkop Dam) has been submitted, the other applications will follow.

## 10 WATER CONSERVATION / WATER DEMAND MANAGEMENT (WC/WDM) INITIATIVES OF MUNICIPALITIES IN THE AREA

Appendix 10 -  
presentation

### 10.1 City of Tshwane Metro

- a) Mr Lourens Lötter from the City of Tshwane presented a report on progress made with reducing water demands and improving non-revenue water. In his presentation he highlighted the following actions which have been successfully implemented over the past five years:
- ❑ Preparation of detailed monthly water balances (very few municipalities in RSA prepare regular water balances);
  - ❑ Meter audits in 15 industrial areas (2 427 connections audited) 126 unmetered connections located, 240 existing meters required replacement. Results were determined for 4 of the 15 areas to date. Increase in revenue for the Metro for 4 areas = R3 million per year;
  - ❑ Meter audits for all irrigated road islands (293 connections):  
7 unmetered connections located, 66 meters require replacement. Impact to be determined by mid 2011;
  - ❑ 2 179 domestic meters installed for unmetered houses in Mamelodi and Soshanguve in 2009. If a low consumption of 15 kℓ per property per month assumed, then additional metered consumption of 292 220 kℓ per year @ R6.71 = additional income of R2.6 million per year;
  - ❑ 32 760 bursts/leaks repaired per year;
  - ❑ 50 927 water meters replaced per year;
  - ❑ 282,2 km length of mains replaced from 2005 to August 2011;
  - ❑ 582 illegal connections found and removed/legalised in 2009/10 (this excludes unmetered connections located in industrial areas);
  - ❑ 30 school's workshops held in 2010/11 to promote water conservation;
  - ❑ 90 community workshops held in 2010/11 to promote water conservation reaching 2881 community members;
  - ❑ These actions have resulted in the reduction of non-revenue water to 24.4% at the end of June 2011.

#### Discussion:

- b) Mr Johan van Rooyen from the DWA said that the activities resulted in very positive news and congratulated the City of Tshwane with their efforts. He asked whether Mr Lötter will be willing to share his knowledge on best practice with other municipalities in the study area. Mr Lötter responded that it can indeed be done, however he said that the buy-in of politicians on municipal level is critical for successful implementation. He added that the successful implementation of WC/WDM is a process that involves many steps, including proper planning, town planning design, proper billing systems and most importantly a motivated team.
- c) Mr Lötter was asked whether informal areas are monitored. He said certain areas are metered and the results from meters are used to extrapolate information for adjacent areas without meters.



## 10.2 DWA North West Region initiatives

- a) Mr Neo Thulo gave a brief overview on activities being undertaken by the DWA North West Region with regards to WC/WDM. He said that with the assistance of the DWA Head Office several pilot projects through Masibambane funds were established. Several challenges were faced and most of the initiatives were not successful. The Region has compiled a reporting template for municipalities to report on their WC/WDM initiatives, however, challenges are experienced with follow-ups with municipalities.

He said the Region is planning to develop a WC/WDM plan for the Crocodile West and Marico Water Management Area. The Terms of Reference for the proposed project is being developed and progress on this will be reported at the next SSC meeting.

## 11 COMMUNICATION

Mr Johan van Rooyen from DWA provided the information under point a) to e):

- a) He said that according to the Terms of Reference for the SSC, the SSC has three tasks, to:
- Ensure the successful implementation of the recommendations of the Crocodile West Water Supply System's Reconciliation Strategy.
  - Update the Strategy to ensure that it remains relevant.
  - Ensure that the Strategy and its recommendations are appropriately communicated.

Members of the SSC (those attending the meeting) have to report back to the organisations that they represent at the meeting. He emphasised that the discussions at the meeting need to be communicated, otherwise the purpose of the meeting will not be met.

- b) He asked all members to prepare a short feedback report on how they communicate what is achieved at the SSC to the organisations that they represent. He has asked all to send that to Anelle Lötter before the next meeting. The Study Team was requested by DWA to initiate creative solutions to ensure that members will provide their feedback.
- c) He said that the Department of Energy will be invited to join the SSC and invited participants to name any other organisations that should be invited. He said that he is concerned to take the Strategy forward if there is not sufficient buy-in from relevant roleplayers. He confirmed that the large roleplayers are involved and mentioned that it remains a challenge to ensure participation from municipalities. He has asked the Regional offices of the DWA at the meeting to assist in communicating with municipalities in their areas about the work being done by the SSC. He also invited all parties to request the DWA and Study Team to make presentations on the work done by the SSC at relevant meetings.
- d) He discussed proposed actions to ensure the flow of communication from this meeting:
- Presentations will be published on the DWA web site within a week;
  - A progress report, the minutes of the meeting and a news release will be distributed to all members for their comments within two weeks. Members will have one week to provide their comments on the documents. Once comments have been received, the documents will be finalised and distributed to all again. The DWA will release the media release for publication;
  - A newsletter will be compiled to provide an overview on the revised Strategy. This newsletter will be distributed to a wider audience.

### Discussion:

- e) Mr Dirk Hanekom from Gauteng Agri-SA said that he will work together with the Transvaalse Landbou Unie to ensure that DWA has inputs from the agricultural sector.

All members of the SSC to provide feedback before the next SSC meeting on how they communicate to their organisations

All members to comment on the documentation to be distributed to them.

- f) Ms Marie Brisley-Clarvis from DWA North West said that communication should take place through a multi-pronged approach and that DWA in the regions should also communicate the messages of the SSC in their interactions with municipalities and at the councillor education programmes.

## 12 WAY FORWARD

- a) The technical workshop with the bulk water suppliers will be scheduled as a priority
- b) All members should communicate the role and importance of the Strategy to their organisations and provide feedback on that before the next meeting.

Study Team

All

## 13 DATE OF NEXT MEETING AND CLOSURE

- a) All members were thanked for their participation and were reminded that water is a scarce commodity and that planning for its optimal use is the responsibility of the SSC.
- b) The next meeting is scheduled for 28 February 2012.
- c) The meeting was adjourned at 12:45.

All

**CROCODILE WEST WATER SUPPLY SYSTEM**  
**THIRD STRATEGY STEERING COMMITTEE (SSC) FOR THE IMPLEMENTATION AND MAINTENANCE OF THE**  
**RECONCILIATION STRATEGY FOR THE CROCODILE WEST WATER SUPPLY SYSTEM**  
**29 SEPTEMBER 2011, STONE ROOM CONFERENCE FACILITIES, LONMIN MOOINOOI MINE, RUSTENBURG**  
**ATTENDANCE LIST**

ORGANISATION	MEMBER	DEPARTMENT/DIVISION/DIRECTORATE	Telephone no	Email address	Attended	Apology	Absent
Department of Water Affairs (DWA)	Tendani Nditwani	National Water Resource Planning	(012) 336 8189 082 888 5113	NditwaniT@dwa.gov.za	Yes		
Department of Water Affairs	Bernie Badenhorst	Chief Engineer: Planning and Development Regional Office	(015) 290 1218 083 627 5912	BadenhorstB@dwa.gov.za	Yes		
Department of Water Affairs	Lerato Bapela		(012) 336 8189 082 902 8161	bapelal@dwa.gov.za	Yes		
Department of Water Affairs	Rens Botha	Chief Engineer	(012) 392 1308 082 808 9560	BothaR@dwa.gov.za	Yes		
Department of Water Affairs	Allison Hernandez-Maldonado	Personal Assistant to Chief Director	(015) 290-1215 082 809 5604	hernandezmaldonada@dwa.gov.za	Yes		
Department of Water Affairs	Martha Komape	Director: Water Regulation and Use	(015) 295 1463 082 941 7965	komapem@dwa.gov.za	Yes		
Department of Water Affairs	Given Maebela		(012) 336 8174 082 653 9216	moabelok@dwa.gov.za			Yes
Department of Water Affairs	Smangele Mgquba	Director: Climate Change	(012) 336-7183/7500 082 654 0315	mgqubas@dwa.gov.za			Yes
Department of Water Affairs	Thapelo Machaba	Assistant Director	(013) 932 2061 082 884 1858	MachabaT@dwa.gov.za		Yes	
Department of Water Affairs	Lebo Mosoa	Assistant Director: Integrated Water Resource Planning North	(012) 336 7564 082 885 1965	mosoal@dwa.gov.za			Yes
Department of Water Affairs	Paul Herbst	Directorate: Waste Discharge and Disposal	(012) 336 7043 082 804 3002	herbstp@dwa.gov.za	Yes		
Department of Water Affairs (DWA)	Seef Rademeyer	Chief Engineer: National Water Resource Planning	(012) 336 8358 082 809 2338	RademeyerS@dwa.gov.za		Yes	
Department of Water Affairs	Hennie Smit	Chief Director: Gauteng	(012) 392 1303 082 802 5715	smith@dwa.gov.za	Yes		
Department of Water	Ockie van den Berg	Chief Engineer:	(012) 336 8613	VandenBergO@dwa.gov.za		Yes	

ORGANISATION	MEMBER	DEPARTMENT/DIVISION/DIRECTORATE	Telephone no	Email address	Attended	Apology	Absent
Affairs		Options Analysis (North)	082 809 2011				
Department of Water Affairs	Francois van der Merwe	Acting Director: Water Abstraction and In-stream Use Directorate	(012) 336 8245 082 809 2226	Francois@dwa.gov.za	Yes		
Department of Water Affairs (DWA)	Sanet van Jaarsveld	Engineer: Options Analysis	(012) 336 7284 079 510 8523	vanjaarsvelds@dwa.gov.za	Yes		
Department of Water Affairs	Peter van Niekerk	Water Resource Engineering Expert	(012) 336 8762 082 807 4981	niekerk@dwa.gov.za	Yes		
Department of Water Affairs (DWA)	Johan van Rooyen	Director: National Water Resource Planning	(012) 336 8814 082 808 5652	VanRooyenJ@dwa.gov.za	Yes		
Department of Water Affairs	Celiwe Ntuli	Directorate: Water Resource Planning Systems	(012) 336 7618	ntulic@dwa.gov.za		Yes	
Department of Water Affairs	Wendy Ralekoa		(018) 387 9500			Yes	
Department of Water Affairs	Fred van Zyl	Director: Water Services Planning and Information	(012) 336 8812 082 806 5307	VanZylF@dwa.gov.za			Yes
Department of Water Affairs	Petrus Venter	Deputy Director: Water RM-Hartebeespoort Dam	(012) 253 1026 082 807 6098	Venterp@dwa.gov.za	Yes		
Department of Water Affairs	Witold Jezewski	NWRP (N)	(012) 336 8160 082 809 5609	jezewskiw@dwa.co.za	Yes		
Department of Water Affairs	Tsholofelo Mbotho		(012) 336 8923	mbothot@dwa.gov.za	Yes		
Department of Water Affairs	Pieter Viljoen	WRPS	(012) 336 7514 082 808 0697	viljoenp@dwa.co.za	Yes		
Department of Water Affairs	Regina Kganyago		(015) 290 1200 082 809 3904	kganyagor@dwa.gov.za	Yes		
Department of Water Affairs	Beason Mwaka	WRPS	(012) 336 8188 082 807 6621	mwakab@dwa.gov.za		Yes	
Department of Water Affairs	Marie Brisley	Chief Director	(018) 387-9500 082 884 9516	BrisleyM@dwa.gov.za	Yes		
Department of Water Affairs	Alson Matukane	Chief Director: Northern Cluster	(015) 290 1215 08/2 807 5643	matukanea@dwa.gov.za		Yes	

ORGANISATION	MEMBER	DEPARTMENT/DIVISION/DIRECTORATE	Telephone no	Email address	Attended	Apology	Absent
Department of Water Affairs	Rodney Mathebe		(015) 290 1200 082 601 3950	matheber@dwa.gov.za	Yes		
Department of Water Affairs	Barbara Weston	Deputy Director: Resource Directed Measures	(012) 336 8221 082 631 0801	WestonB@dwa.gov.za			Yes
Department of Water Affairs	Rexson Mtileni		(015) 290 1334	mtilenir@dwa.gov.za	Yes		
Department of Water Affairs	Dragana Ristic	NWRP (C)	(012) 336 8302 082 904 5636	risticd@dwa.gov.za	Yes		
Department of Water Affairs	Neo Thulo		(018) 387 9543 082 600 8392	thulon@dwa.gov.za	Yes		
Department of Water Affairs	Peter Pyke	Chief Engineer: Options Analysis	(012) 336 8192 082 809 5290	PykeP@dwa.gov.za	Yes		
City of Tshwane Metropolitan Municipality	Philip van der Walt	Consulting Engineer & Project Manager: Water and Sanitation Planning	(012) 358 0753 083 384 2315	philipvdwa@tshwane.gov.za	Yes		
City of Tshwane Metropolitan Municipality	Lourens Lotter	Manager: Water Distribution	(012) 358 7834 083 657 3035	lotterl@tshwane.gov.za	Yes		
City of Tshwane Metropolitan Municipality	Victor Chewe	Deputy Director: Public Works & Infrastructure-Water and Sanitation Division	(012) 358 7672 072 947 8097	Victorc@tshwane.gov.za	Yes		
Sasol	Farai Chamisa		(011) 344 2822 082 450 4951	farai.chamisa@sasol.com			Yes
Golder Associates Africa (Pty) Ltd	Trevor Coleman		(011) 254 4882 083 447 2003	tcoleman@golder.co.za	Yes		
Bojanala Platinum District Municipality	Geetesh Daya		(014) 590 4603 082 412 0955	greeteshd@bojanala.gov.za			Yes
Madibeng Local Municipality	Gustav de Villiers		(012) 318 9386 083 661 8997	gustavdevilliers@madibeng.gov.za			Yes

ORGANISATION	MEMBER	DEPARTMENT/DIVISION/DIRECTORATE	Telephone no	Email address	Attended	Apology	Absent
Limpopo Department of Agriculture	Pieter de Witt		(015) 294-3367	dewittp@agric.limpopo.gov.za	Yes		
Agri SA North West	Boeta du Toit	Chief Executive Officer	(018) 632 2987 082 388 1722	agrinw@lantic.net		Yes	
Makoppa Irrigation Board	George Fritz	Chairperson	083 469 3777	gfritz@lantic.net		Yes	
Agri-SA Gauteng	Dirk Hanekom	Manager	(012) 643 3436 082 313 0042	dirk@agrisa.co.za	Yes		
JV Masibambani Support	Derek Hazelton	Manager	(011) 640 6543	tsewater@icon.co.za		Yes	
Makoppa Irrigation Board	Izak Joubert					Yes	
Department of Economic Development, Environment and Tourism	Greg Knill	General Manager: Environmental Trade and Protection	(015) 298 7086 083 626 8609	knillg@finptb.norprov.gov.za		Yes	
Magalies Water Board	Roelf le Roux	General Manager: Projects	(014 5974636 083 289 9214	roelfl@magalieswater.co.za	Yes		
Johannesburg Water	Mbali Matiwane	Physical Losses (Unaccounted For Water) Operations Department	(011) 688 1422 079 494 3020	Mbalie.matiwane@jwater.co.za	Yes		
Department of Tourism and Economic Affairs	Nomazizi Mdi	General Manager: Environmental	(051) 400 4812	mdin@dteea.fs.gov.za		Yes	
Sasol Synfuels	Andries Meyer	Senior Manager:Sustainable Water Sasol new Energy	(017) 610 4750 082 414 5196	andries.meyer@sasol.com		Yes	
Eskom	Ian Midgley		(011) 800 2051 082 574 4834	ian.midgley@eskom.co.za	Yes		
Department of Agriculture, Forestry and Fisheries	Puleng Mofokeng	Deputy Director General: Water Use and Irrigation Development	(012) 846 8564 083 391 3338	Pa.dwuid@daff.gov.za			Yes
Department of Agriculture, Forestry and Fisheries	Mary-Jean Gabriel	Water Use & Irrigation Development	(012) 846-8567/03 082 555 8064	dwuid@daff.gov.za		Yes	
Department of Tourism	Palesa Kadi		(012) 310 3235 079 490 0683	pkadi@tourism.co.za		Yes	

ORGANISATION	MEMBER	DEPARTMENT/DIVISION/DIRECTORATE	Telephone no	Email address	Attended	Apology	Absent
Water Research Commission	Wandile Nomqophu	Research Manager	(012) 330-0340 083 290 7243	wandilen@wrc.org.za	Yes		
BKS (Pty) Ltd	Johan Rossouw		(012) 421 3594 082 337 0670	johanr@bks.co.za	Yes		
BKS (Pty) Ltd	Hermien Pieterse		(012) 430-2980/3500 082 564 3638	hermienp@bks.co.za		Yes	
BKS (Pty) Ltd	Jonathan Schroder		(012) 421 3533 074 882 4305	jonathansc@bks.co.za	Yes		
WRP Consulting Engineers (Pty) Ltd	Pieter van Rooyen		012) 346 3496 082 321 3446	pieterv@wrp.co.za	Yes		
Transvaalse Landbou Unie	Jan Viljoen		(014) 779 0706 083 325 6057	jcviljoen@worldonline.co.za		Yes	
Crocodile West Irrigation Board	Roland van Tonder	Chairperson	(014) 785 0600 083 310 8300	roland@alliedgroup.co.za		Yes	
Agri NW/SA	Daan van der Merwe		083 453 9706	maswela@absamail.co.za	Yes		
Lonmin Platinum Mines	Karen Chetty		(014) 571 2139 083 950 1638	Karen.chetty@lonmin.com	Yes		
Lonmin Platinum Mines	Fanie Botha		082 903 4214	stelpos@mweb.co.za	Yes		
Lephalale Municipality	Simon Nkoe		(014) 762 1464 082 578 8445	Simon.nkoe@lephalale.gov.za	Yes		
Chamber of Mines	Matome Makwela		(011) 498 7425 082 922 9333	mmakwela@bullion.org.za	Yes		
Chamber of Mines	Stephinah Mudau	Environmental Advisor	(011) 498 7274 072 949 0407	smudau@bullion.org.za		Yes	
Department of Mineral Resources	Lebeau Labushacgne					Yes	
Zitholele Consulting	Anelle Lötter		(011) 207-2076 082 804 5890	alotter@zitholele.co.za			