



# **MINUTES OF MEETING**

# Algoa WSS Reconciliation Strategy Continuation: ATSG Meeting 10 held on 9 May 2018 at 09h00 at the offices of Aurecon, Port Elizabeth

Item			Action
1.	WELCOME		
	Mr Paul Chilton, welcomed everybody to the meeting of the Administrative and Technical Support Group (ATSG) of the Algoa Water Supply System Reconciliation Strategy Continuation, on behalf of Mr Tendayi Makombe who was unable to attend the meeting.		
2.	ATTENDANCE AND APOLOGIES		
	Attendance		
	Andreas Engelbrecht	GFRWUA	AE
	Andrew Lucas	DWS ECape: Water Regulation and Use	AL
	Bheki Kunene	DWS ECape: Proto-CMA	BK
	Chandré Barnard	NMBM	СВ
	Erik van der Berg	Aurecon	EvdB
	Graham Taylor	Coega SEZ	GT
	Jeff Govender	DEDEAT	JG
	Koos Viljoen	DWS: NWRI (SO)	KV
	Martin Labuschagne	DWS ECape: WR&U-Manager Sarah Baartman DM	ML
	Mike Primmer	LSRWUA	MP
	Nick Chapman	VWSA – Business Chamber	NC
	Nico Lombard	Cacadu District Development Agency	NL
	Paul Chilton	DWS: CE: Proto CMA CM	PC
	Paul du Plessis	NMBM	PdP
	Pieter Barry	DWS: RD: SO (acting)	PB
	Pierre Joubert	Gamtoos IB	PJ
	Rienette Colesky	Gamtoos IB	RC
	Reina Zastron	Aurecon	RZ
	Apologies		
	Barry Martin	NMBM	ВМ
	Dup van Reenen	AfriCoast Engineers SA	DvR
	Jacques van der Merwe	DWS EC	
	Jenny Pashkin	DWS: D: WRPS Systems Operation	JP
	Liz Metcalfe	Living Lands	LM

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	Menard Mugumo	DWS: D: OA CE: South	MM	
	Patrick Mlilo	DWS: NWRP	PMI	
	Pieter Viljoen	DWS: WRPS		
	Sieg Rousseau	Amatola Water		
	Tendayi Makombe	DWS: NWRP	TMa	
	Thelani Grant	Living Lands	TG	
	Tony Moore	DWS: D: OA CE	TMo	
	Victor Felton	Kouga LM		
3.	ADOPTION OF AGENDA	A		
	The agenda was adopted	with one addition:		
	16.1 (under General) Ad	Hoc Studies		
4	APPROVAL OF PREVIO	US MINUTES		
		ting held on 7 March 2018 were accepted as is. Proposed before the meeting have already been considered and		
5	MATTERS ARISING FRO	OM PREVIOUS MINUTES		
	No matters arising that are not on the agenda.			
	EvdB stated that there is some concern over the fact that the attendees of the ATSG meeting and the SSC meeting have over time largely become the same people. The initial thought was for senior people to attend the SSC meeting to make decisions, and recommendation in this regard would be appreciated. ML noted that the attending members have become more senior representative over time. This is also now a mature reconciliation process.			
	•	osed that the drought monitoring meeting and ASTG meeting to be combined. to liaise with JP on the matter.		
6.	RELEVANT PROJECTS RESPONSIBLE ENTITIE	AND INITIATIVES UNDERTAKEN BY OTHER S		
6.1	AWSS Annual Operating	g Rules		
	No discussion as no repre	esentative attended the meeting.		
6.2	Orange River Annual O	perating Rules		
	No discussion as no representative attended the meeting.			
6.3	OFS Real-time Model			
	KV did a presentation decision-support system.	on the Orange-Fish-Sundays Water Transfer Scheme and		
		is large and consists of: n of tunnels, rivers and canals, rs and 4 diversion weirs,		

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	<ul> <li>&gt; 150 water users (agriculture being largest user),</li> <li>Approximately 48 000 ha of irrigation (Fish: 31 000 ha and Sundays 17 000 ha),</li> <li>A volume of ±700 million m³ is annually transferred.</li> </ul>	
	The requested and actual transfers are monitored and the model identifies problems. DHI is assisting DWS with the model. Monitoring takes place where physical monitoring equipment is in place. KV congratulated AE with the strict monitoring rules that they have in place at the Great Fish River. Due to the operating rules introduced, wastage has been reduced.	
	The Lower Sundays monitoring was also discussed. A graph was presented which shows the projected (allocated) use vs. the actual use. In previous years, LSRWUA has not used their full allocation. Unfortunately, proper balancing cannot be done as not all measuring weirs are in place. Weirs not yet in place have been identified and the report will be submitted to Dr Piet Wessels. AL to follow up on measuring weir requirements. EvdB indicated that quality and quantity measuring should continue. AL will find out what the status is and will attempt activating it again.	AL AL
	KV indicated that Darlington Dam is currently operated at 30-35% of its capacity. The water leak at the dam is better managed than in the past. LSRWUA is operating Darlington Dam.	
	He noted that the Little Fish River shuts down on a Friday. The model dictates volumes to release and when to shut down on a Friday.	
	PJ mentioned that income for a WUA is from water, whether there is a drought or ample water available. KV replied that payment is per allocation and not per use. AL mentioned that the Gamtoos payment structure is working very well. The users pay for 80% of their allocation, and for their use of the last 20%.	
	KV announced that to his knowledge, the document that was presented to the Minister of Water and Sanitation: 'Klipfontein Kranz Section Canal: 5 Stoney Gates not working in Eastern Cape' was signed by the Minister. This is an in-principal agreement for <i>interalia</i> the repairs of the Darlington Dam.	
	JP was unable to attend the meeting, but provided EvdB with a presentation on the Orange-Fish-Sundays monitoring of Water Use and Transfer Effectiveness	
	The presentation will be distributed with the minutes. The following is covered in the presentation:	
	<ul> <li>Flow report for critical stations, which is map based,</li> <li>GFRWUA Abstraction Compliance,</li> <li>LSRWUA Abstraction Compliance,</li> <li>Fish River spills,</li> <li>Sundays River spills.</li> </ul>	
	ML mentioned that the James Kleynhans WTW is being upgraded and when fully functional, the water quality should improve.	
	KV asked NMBM to send him the new projected estimated volumes from the Nooitgedagt WTW. PdP responded that the current volume is 130-140 Ml/day, and should go increase 200Ml/day within the next 3 months. PdP undertook to contact MP	PdP

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	at LSRWUA, as well as DWS, as soon as they have more certainty about the dates of the increased volumes. The LSRWUA will appoint more people to operate the weir during weekends, as soon as the volumes increase.	
	AE asked to that a line be added, showing 25% allowance for losses in the graphs. The issue of the 15% vs. 25% losses still needs to be clarified and resolved.	JP
6.4	Verification and Validation (V&V)	
	BK gave general information on the status of the V&V. He noted that the PSP's contract was concluded on 31 March 2018. Only 53% of the work is complete and there is still an influx of new applications.	
	The work will be completed internally by DWS. Approximately 3000 applications have not yet been received.	
	PJ mentioned that he is very worried about the situation in the catchment, as abstraction is not monitored. He noted that it is very important to complete the V&V. He asked to prioritise the completion of the V&V for the Kouga and Kromme catchments. BK undertook to prioritise the area. PJ also stressed that monitoring and measurement should not be the responsibility of the farmers. EvdB asked BK to provide him with the number of properties in these catchments where the verification is outstanding.	ВК
	BK will ensure that the estimated current use volume become available. It was agreed that the flying of the area to determine current use will be added to the add-hoc tack list, which will be discussed under point 16.1.	ВК
	JG indicated that the river system is being changed, which poses a huge problem. AL said that he has 3 officials in regulation for urban areas who could possibly assist JG with the regulation of the river. JG to liaise with AL on the matter.	JG
6.5	Working for Water and Working for Wetlands	
	PJ reported that no work has been done since 1 April, as they are awaiting contract signoff by the Department of Environmental Affairs.	
6.6	Projects undertaken by Living Lands	
	TG could not attend the meeting but sent an update for the period March 2018 to 9 May 2018, as follows:	
	"In the Baviaanskloof, the team continues with innovative rehabilitation efforts, with students assisting in the capturing of lessons learnt.	
	The most exciting news in the Langkloof is about the water fund. A steering committee as well as a working group has been established for the water fund, and the first working group meeting held.	
	Honeybush Sensing Journey was held, where Honeybush farmers, seedling producers, and harvesters went to the Overberg. Here they explored the sustainable wild harvesting of fynbos and investigated honeybush trials and alternative production strategies. This lead to great enthusiasm amongst the stakeholders and highlighted the importance of growing together in the honeybush industry. On request from the honeybush Harvesters in Haarlem, a workshop was held in Haarlem that included a "Save a Life" course, a short summary of honeybush ecology and a snake	

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	demonstration, with the highlight being live specimen that were shown to attendees.	
6.7	Ongoing Coega Initiatives	
	No discussion.	
7	STATUS REPORT	
7.1	Progress Report (Status Report 7)	
	Status Report 7 has been finalised after the SCC meeting in April. The annual update of the Strategy, that includes scenario evaluation will be done before the September SSC meeting. PC proposed that forward-osmoses as well as other possible innovative options be considered.	
8	OPERATIONAL EFFICIENCY	
	Darlington Dam operating capacity and dam safety rehabilitation programme	
8.1	KV indicated that the rehabilitation of the dam is being fast tracked. The estimated cost of the rehabilitation is R150 million. The planned project start date is 1 July 2018 and the estimated construction start date is December 2018. KV will send the list of what will be included in the rehabilitation to RZ.	KV
	KV agreed to look at the rehabilitation of the Kouga Dam as well. KV to liaise with Mr Paradzai Muneka on the scope of the work as to avoid the overlapping of projects.	KV
8.2	Additional balancing storage in the LSRGWS	
	EvdB provided a short summary of the presentation made at the previous meeting. The following five sites were identified as options for providing 21 days of additional balancing storage for the NMBM:  • Upper Scheepersvlakte Dam,  • Lower Coerney Dam,  • Upper Coerney Dam,  • Nooitgedagt North Dam  • Nooitgedagt South Dam.	
	He noted that the Lower Coerney site is the preferred site, followed by the Upper Scheepersvlakte site. The additional advantage of the Lower Coerney site, besides having the lowest comparative cost, is that water can be supplied by gravity to the Nooitgedagt WTW. These two sites are being investigated further. The investigations are progressing and should be finished within a couple of months. Details of the findings of the investigations will be presented at the next meeting.	EvdB
	MP enquired whether the state and quality of the Lower Sundays canals are being considered. He mentioned that the canals need refurbishing and that some panels are collapsing. EvdB said that this can be considered as an ad-hoc task. MP to send the preliminary survey to EvdB and KV. ML indicated that he thinks that KV has a budget for the refurbishing of canals.	MP KV
	EvdB reported that operating rules has been developed for the new proposed balancing dam options.	

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9	WATER REQUIREMENTS AND USE				
9.1	NMBM water requirements and use				
	PdP reported that the average use for April was 266Ml/day.				
9.2	Coega SEZ water requirements				
	GT indicated that there is no change in the water requirements of the Coega SEZ (previously IDZ). There are no new investors. The largest water user to come on board will need only 0.3 Ml/day.				
	The possible move of the manganese stockpile to the Coega SEZ is scheduled for 2023 at the earliest.				
	Construction of the re-use reservoir at Coega Kop has started, with planned completion in Dec 2018. Until treated wastewater becomes available, the reservoir will be used for potable water.				
	An EIA for a 16Mℓ desalination scheme h	nas been approved.			
	JG mentioned that they have received an	n EIA application for fresh	nwater aquaculture.		
	GT reported that that Coega SEZ is investigating the possibility of utilising the water in the Transnet quarry for construction. PC asked BK to check the V&V results of the Transnet quarry.				
	GT responded to a question from EvdB, that the water service agreement between NMBM and the SEZ indicates that NMBM will be their water service provider. Desalination for the SEZ could be a future possibility, but not in the short-term.				
9.3	Kouga LM water requirements				
	No report as no representative attended the meeting. PJ mentioned that the other municipalities should be on rationing but that they are ignoring the fact. PC said that licencing could be used to ensure that they comply.				
9.4	WUE Fish and Sundays catchments				
	EvdB noted that the WUE Component of this study was completed at the end of 2017 and that the final report, with detailed recommendations, was completed and circulated to relevant stakeholders. He reported that the timeframes and targets for the recommended WUE interventions were the following:				
	No Intervention	Timeframe	20140 targets		
	1 Reduce the allowance for canal losses in the GFRWUA	Reduce allowance by 1% each year	40		
	2 Reduce operational releases at the Elandsdrift and de Mistkraal weirs	Target 10% of potential savings each year	31		
	3 Reduce spills at Korhaansdrift Weir	Target 10% of potential savings each year	18		
	4 Improve measuring and monitoring systems Continuous Not quantified				
		Total	89		

Т	he recommended use of the targeted saving	ngs are as foll	ows, indicated in million m <sup>3</sup> /a:	
	Water user	2040 Target		
	Reduced Orange River transfer volume to Eastern Cape	64		
5	Small towns to apply for further allocations	7		
1	NMBM to apply for further allocations	18		
7	Total to consider for further allocations	25		
a q m th R	C asked when the savings will become average of the DWS should tall ready been realised. BK responded that the uick wins and work from there. PC properties of the NMBM apply for a licence for an additiver water supply, as indicated in the table of the congratulated EvdB on the results of the nancial benefit and the information could trategy. EvdB said that the findings significance of the properties of the congratulated and the information could trategy.	tke this further hey would need to loom mall towns' backlitional 18 milling.  the study. Talso be used	, although some savings have ed to understand which will be ok at the priority areas. AL lancing storage. PC proposed on m³/a (50 Mℓ/d) of Orange his could result in significant for a catchment management	Ni
	mplementation.  MPROVING THE CONFIDENCE OF WAT	ER AVAILABI	LITY	
Р	roposed water availability assessment	study – Krom	me and Kouga rivers	
th	ivdB reported on behalf of TMa. He stresse ne Kromme and Kouga rivers, as the resul erm yields.	•	. •	
W	VC/WDM Report on progress of other m	unicipalities		
N	lo discussion as no representative attende	d the meeting.		
R	EPORT BACK BY NMBM			
V	IMBM Drought measures and progress water use in the Metro reduced from 340N arther discussion.	-		
W	VC/WDM			
	<ul> <li>Real losses for the current year (Jul '17 – Foown to 22.3%. The current WC/WDM focu</li> <li>Zoning,</li> <li>Pressure reduction,</li> <li>Meter replacement,</li> <li>Pipe replacement,</li> </ul>	•	%, with the February value	
	<ul> <li>Leak repairs,</li> <li>Contractor support.</li> <li>Recruitment of additional plumbers (</li> </ul>	13 recruited in	the last 12 months)	

Recruitment of additional plumbers (13 recruited in the last 12 months).

10

10.1

11

12

12.1

12.2

#### 12.3 Report on progress with WUE in schools

No discussion.

### 12.4 Nooitgedagt Low-Level Scheme: Implementation and Financing

ML reported that the contractor has not been paid in February and March and has left the site. They were off-site for a month, but has now commenced with the work. The budget poses an issue as the construction programme is over 2 years, but the budget is spread over 3 years. It means that penalties will be incurred. An excellent contractor and good PSP were appointed, but funding is an issue at this stage. ML will write a letter to Amatola water to raise this concern.

ML

## 12.5 Desalination of Sundays River irrigation return flows

EvdB indicated that there has been a request for the PSP to conduct a high-level prefeasibility evaluation of this potential scheme as part of this study. He mentioned that this task was added to the list of ad-hoc tasks, from which a selection will be made of the ad-hoc tasks to take further. Additional water quality data in the lower Sundays River is however urgently needed.

ΑL

# 12.6 Re-use of water treated to industrial standards – Fishwater Flats and Coega WWTWs

The scheme will not be developed further until there is sufficient demand from the Coega SEZ. No further discussion.

#### 12.7 NMBM Coega Kop implementation

Dr Ricky Murray (RM) from Groundwater Africa attended this part of the meeting to give an update on the groundwater situation. He reported that DWS approvals for some infrastructure work is still outstanding. The approvals are needed by the beginning of July to start the drilling of production boreholes as per the programme. The target yield is difficult to determine, but RM expects a yield of ~10-14Ml/day. This could potentially be adequate water for the Coega area. A treatment works to remove iron and manganese will be constructed in parallel.

RM stated that, to know more about the yield, quality etc. of the Coega Kop groundwater scheme, he would like to test-pump the water for a significant time. He wanted to route the water through the storm water canals into the Swartkops River. The legality and approvals needed to do this need to be determined by DWS, CDC, NMBM and DEDEAT, who agreed to address this.

PC/GT /BM/ JG

### 12.8 Other groundwater studies

RM reported that groundwater, that has been sited during the 2010 drought, is now being drilled, e.g. at St Georges Park. RM is busy looking at all possible sites at the western part of the city.

Water has been found in the Churchill area. Exploration boreholes are currently being drilled. The Bushy Park area is now being revisited.

He mentioned that the Metro also sponsored groundwater sitings in other areas during the 2010 drought. In Oyster Bay, enough groundwater was found (drilled) to make the town self-sufficient. In Jeffreys Bay, 1.5 Ml/day was found. More boreholes are currently being sited in Jeffreys Bay. In Hankie, 1.1Ml/day was found, 10km from the

		- 1
	town. The water is currently being tested.	
	In Humansdorp, 0.9 Mt/day was found and more boreholes have been sited.	
	The water quality in Patensie is not good. Boreholes were drilled at the Kouga Dam and water was found. The yield not high, but the water could possibly be used for Patensie. A pipeline will however be needed. In an emergency, the canal could possibly be utilised. PJ responded that, while there is water in the dam, the use of the canal will be possible, but if the dam is empty, the water will not reach Patensie. AL mentioned that there is a balancing dam to use if there is no water in the Kouga Dam.	
12.9	NMBM 60MI/day Desalination Scheme	
	No Progress. EvdB will investigate what information is still needed to complete the study.	EvdB
12.10	Marina Sea Salt desalination	
	Marina Salt approached NMBM with possible potable water provision through their construction of a sea water desalination plant. 26Ml/day will potentially become available for usage. NMBM is currently investigating the contractual and legal implications of an agreement between the two parties, Marina Salt and NMBM. It appears that approval from the National Treasury / Minister is required. No further development yet.	
13	LOCAL SURFACE WATER DEVELOPMENT	
13.1	Kouga Dam 'raising' and Guernakop Dam	
	There has been a request for the PSP to re-evaluate this potential scheme at more detailed desktop level as part of this study as an ad-hoc task. There is uncertainty regarding the yield and more investigation is needed. This will be done as an ad-hoc task if there are sufficient funds available. A decision will be made shortly	EvdB,
14	IMPACT ON YIELDS OF EXISTING DAMS: ECOLOGICAL RESERVE & CLIMATE CHANGE	
14.1	Implementing the Reserve for existing dams	
	No discussion. EvdB noted that a small climate change study is possibly needed.	
15	COMMUNICATION	
15.1	News Release	
	EvdB noted that the News Release will be released after the next Status Report in September.	
15.2	Webpage Update	
	As there is no webmaster at DWS, the data will be given to the DWS Project Manager, who will need to update the data	RZ
16	GENERAL	
16.1	Ad-hoc studies	
	It was reported that there is expected to be between R2 million and R2.5 million saving on the lump sums provided for the study. The money could potentially be utilised for	

	relevant, important smaller tasks relevant to the AWSS. The following ad-hoc tasks can be considered:	
	<ul> <li>Preparation of informative posters for capacity building (proposal provided),</li> <li>Annual operating analysis for 2018/19,</li> <li>Raising of the Darlington Dam,</li> <li>Update of current land-use in prioritised catchments,</li> <li>Pre-feasibility of the Desalination of Sundays River irrigation return flows,</li> <li>Kouga Dam 'raising' and Guernakop Dam,</li> <li>Assistance for development of scope of works for the Kromme/Kouga WAAS study,</li> <li>Update of the long-term yield of the AWSS,</li> <li>Sundays River canal refurbishment,</li> <li>Climate change evaluation in support of the 2018 Status Report.</li> </ul>	
	<ul> <li>Ad-hoc Tasks already concluded or in progress:</li> <li>DHI: Reporting templates for water distribution efficiency,</li> <li>Annual operating analysis for 2017/18.</li> <li>EvdB will distribute the developed list to all members in due course. The approval of the activities need to be urgently screened and approved, once provided.</li> </ul>	EvdB
17.	NEXT MEETINGS	
	The dates of the next meetings are given below.  SSC Meeting: Wednesday, 26 September 2018 @ 09h00  SMM (Feasibility) Meeting: Tuesday, 14 August 2018 @ 14h00  ATSG Meeting: Wednesday, 15 August 2018 @ 09h00	
18.	CLOSURE	
	PC closed the meeting at 14h30, and thanked the members for their attendance and informed inputs.	
ΛDD	ROVAL OF MINUTES:	

Project Manager: Mr T Makombe (DWS)	Signed:	Date:
Study Leader: Mr E vd Berg (Aurecon)	Signed:	Date: