



## MINUTES OF MEETING

### Algoa WSS Reconciliation Strategy Continuation: Study Steering Committee Meeting 4 held on 18 April 2018 @ 09h00 at the offices of Aurecon, Port Elizabeth

Item		Action																																																																																										
1.	<b>WELCOME</b>  The Chair, Dr Beason Mwaka welcomed everybody to the meeting on behalf of Mr Patrick Mlilo and Mr Livhuwani Mabuda, who could not attend.																																																																																											
2.	<b>ATTENDANCE AND APOLOGIES</b>  <b>Attendance</b> <table> <tr> <td>Dr Beason Mwaka</td><td>DWS: P</td><td>BMw</td></tr> <tr> <td>Mr Tendayi Makombe</td><td>DWS: NWRP</td><td>TMa</td></tr> <tr> <td>Mr Paul Chilton</td><td>DWS EC: Proto CMA CE</td><td>PC</td></tr> <tr> <td>Mr Andrew Lucas</td><td>DWS EC: Water Regulation and Use</td><td>AL</td></tr> <tr> <td>Mr Martin Labuschagne</td><td>DWS EC: WR&amp;U-WUE</td><td>ML</td></tr> <tr> <td>Mr Eben Bosman</td><td>DWS: NRU</td><td>EB</td></tr> <tr> <td>Mr Andreas Engelbrecht</td><td>GRFWUA</td><td>AE</td></tr> <tr> <td>Mr Mike Primmer</td><td>Lower Sundays IB</td><td>MP</td></tr> <tr> <td>Mr Barry Martin</td><td>NMBM</td><td>BM</td></tr> <tr> <td>Mr Paul du Plessis</td><td>NMBM</td><td>SG</td></tr> <tr> <td>Mr Kowie Joubert</td><td>DRDAR</td><td>KJ</td></tr> <tr> <td>Mr Pierre Joubert</td><td>Gamtoos IB</td><td>PJ</td></tr> <tr> <td>Ms Rienette Colesky</td><td>Gamtoos IB</td><td>RC</td></tr> <tr> <td>Mr Nick Chapman</td><td>Nelson Mandela Bay Business Chamber</td><td>NC</td></tr> <tr> <td>Mr Nico Lombard</td><td>Cacadu District Development Agency</td><td>NL</td></tr> <tr> <td>Mr Jeff Govender</td><td>DEDEA</td><td>JG</td></tr> <tr> <td>Mr Sizani Msweyane</td><td>AfriCoast</td><td>KmR</td></tr> <tr> <td>Mr Erik van der Berg</td><td>Aurecon</td><td>EvdB</td></tr> <tr> <td>Ms Reina Zastron</td><td>Aurecon</td><td>RZ</td></tr> </table> <b>Apologies</b> <table> <tr> <td>Mr Luvhuwani Mabuda</td><td>DWS: IWRP</td><td>LM</td></tr> <tr> <td>Mr Menard Mugumo</td><td>DWS: OA (S)</td><td>MM</td></tr> <tr> <td>Mr Bolekwa Kama</td><td>DWS EC: Proto CMA</td><td>BK</td></tr> <tr> <td>Mr Patrick Mlilo</td><td>DWS: NWRP</td><td>PM</td></tr> <tr> <td>Ms Jenny Pashkin</td><td>DWS: WRPS-SO</td><td>JP</td></tr> <tr> <td>Mr Lukhanyo Mbambo</td><td>DWS EC: Proto CMA</td><td>LM</td></tr> <tr> <td>Mr Pieter Viljoen</td><td>DWS: WRPS</td><td>PV</td></tr> <tr> <td>Mr Bheki Kunene</td><td>DWS EC: Proto CMA</td><td>BK</td></tr> <tr> <td>Ms Ilse Chilton</td><td>DWS EC: Proto CMA</td><td>IV</td></tr> <tr> <td>Mr Graham Taylor</td><td>Coega IDZ</td><td>GT</td></tr> </table> <table> <tr> <td>Mr Sieg Rossouw</td><td>Amatola Water</td><td>SR</td></tr> </table>	Dr Beason Mwaka	DWS: P	BMw	Mr Tendayi Makombe	DWS: NWRP	TMa	Mr Paul Chilton	DWS EC: Proto CMA CE	PC	Mr Andrew Lucas	DWS EC: Water Regulation and Use	AL	Mr Martin Labuschagne	DWS EC: WR&U-WUE	ML	Mr Eben Bosman	DWS: NRU	EB	Mr Andreas Engelbrecht	GRFWUA	AE	Mr Mike Primmer	Lower Sundays IB	MP	Mr Barry Martin	NMBM	BM	Mr Paul du Plessis	NMBM	SG	Mr Kowie Joubert	DRDAR	KJ	Mr Pierre Joubert	Gamtoos IB	PJ	Ms Rienette Colesky	Gamtoos IB	RC	Mr Nick Chapman	Nelson Mandela Bay Business Chamber	NC	Mr Nico Lombard	Cacadu District Development Agency	NL	Mr Jeff Govender	DEDEA	JG	Mr Sizani Msweyane	AfriCoast	KmR	Mr Erik van der Berg	Aurecon	EvdB	Ms Reina Zastron	Aurecon	RZ	Mr Luvhuwani Mabuda	DWS: IWRP	LM	Mr Menard Mugumo	DWS: OA (S)	MM	Mr Bolekwa Kama	DWS EC: Proto CMA	BK	Mr Patrick Mlilo	DWS: NWRP	PM	Ms Jenny Pashkin	DWS: WRPS-SO	JP	Mr Lukhanyo Mbambo	DWS EC: Proto CMA	LM	Mr Pieter Viljoen	DWS: WRPS	PV	Mr Bheki Kunene	DWS EC: Proto CMA	BK	Ms Ilse Chilton	DWS EC: Proto CMA	IV	Mr Graham Taylor	Coega IDZ	GT	Mr Sieg Rossouw	Amatola Water	SR	
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3.	<b>APPROVAL OF AGENDA</b> The agenda was adopted with no changes.													
4.	<b>APPROVAL OF PREVIOUS MINUTES</b>  4.1 The minutes of the meeting held on 27 September 2017 were accepted with the following changes (changes shown in <b>bold</b> ):  Page 1, item 2 Attendance. <b>Mr Lukhanyo Mbambo</b> to be added to the attendance list.  Page 3, item 6.5 “Thus far, in the Kouga catchment R2.25 million was spent on the initial clearing of 260 ha as well as on 1 760 ha of follow-up <b>clearing</b> . R400 000 was spent on 7 600 ha high altitude follow-up work. In the Kromme catchment R1.6 million was spend on 1 540 ha of follow-up <b>clearing</b> .”  Table on page 7: <table><tr><th>Recommended intervention</th><th>Potential water savings (million m³/a)</th></tr><tr><td>Reduced operational losses at the Elandsdrift and De Mistkraal weirs</td><td>Maximum of <del>66</del> <b>33</b>. Will be less in practice.</td></tr><tr><td>Clearing of vegetation along GFRWUA earth canals</td><td>4</td></tr><tr><td>Lining of ‘hot spot’ priority canal sections in the GFRWUA</td><td>Not quantified – needs further investigation.</td></tr><tr><td>Rehabilitation of Darlington Dam</td><td><ul style="list-style-type: none"><li>• Could save up to 18 by reducing spills at Korhaansdrift Weir</li><li>• Raising of dam could lead to additional HFY to potentially allocate to NMBM of maximum 10</li></ul></td></tr><tr><td><b>Estimated total potential savings</b></td><td><b>15—30 million m³/a</b></td></tr></table> The following explanation was added “ <b>Although the table above indicates that the maximum total potential savings is 55 million m³, due to practical constraints, a more realistic estimate of potential savings may be about 30 million m³. This quantification of potential water savings will be investigated further to refine this estimate.</b> ”  Approval of minutes proposed by PC and seconded by PdP.	Recommended intervention	Potential water savings (million m³/a)	Reduced operational losses at the Elandsdrift and De Mistkraal weirs	Maximum of <del>66</del> <b>33</b> . Will be less in practice.	Clearing of vegetation along GFRWUA earth canals	4	Lining of ‘hot spot’ priority canal sections in the GFRWUA	Not quantified – needs further investigation.	Rehabilitation of Darlington Dam	<ul style="list-style-type: none"><li>• Could save up to 18 by reducing spills at Korhaansdrift Weir</li><li>• Raising of dam could lead to additional HFY to potentially allocate to NMBM of maximum 10</li></ul>	<b>Estimated total potential savings</b>	<b>15—30 million m³/a</b>	
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5.	<b>MATTERS ARISING FROM PREVIOUS MINUTES</b> No matters arising not on the agenda.													
6.	<b>RELEVANT PROJECTS &amp; INITIATIVES UNDERTAKEN BY OTHER RESPONSIBLE ENTITIES</b>  6.1 <b>AWSS Annual Operating Rules – System Monitoring Report</b> PC reported back on behalf of JP who did not attend the meeting:  PC reported that the drought monitoring report was distributed prior to the SSC meeting. He announced that the situation is worse than what was anticipated, and that the situation can even worsen before the end of June. The situation is serious and the DWS is looking for mitigation from NMBM. There is now pressure to cut back on use and TO search for alternative sources. PJ added that the situation is bad and although not yet critical, it can become critical soon. He said that the farmers are aware of the situation. He mentioned that illegal water abstraction is of													

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	concern and that the catchment must be monitored where possible. BM added that illegal abstraction is worse during droughts and proposed that DWS monitoring teams be sent out in the field.	
6.2	<p><b>Orange River Annual Operating Rules</b></p> <p>BMa reported that the Gariep Dam is spilling due to good rainfall. It is projected that the Vanderkloof Dam will be spilling within the next 7 days, after which – as per the operating rules – the system will be flushed. AL cautioned that the canal is hampering the amount of water that will flow through. BMa indicated that 40m<sup>3</sup>/s could be released.</p>	
6.3	<p><b>Verification and validation of water use</b></p> <p>PC reported on behalf of IC:</p> <p>The PSP appointment for the Validation and Verification of Water use in the Eastern Cape has come to an end. There is still a lot of work outstanding on the verification part of the project. DWS EC officials have taken this over and will finalise the project.</p> <p>PC indicated that the existing legal use has been determined, but the current use is still outstanding. He recommended appointing a contractor to fly over the area to determine the current use, but funding is needed. He asked whether the Algoa study could possibly sponsor this activity. AL asked PC to get a quote for the work.</p> <p>EvdB indicated that there are some saved funds from lump sums allowances, but that there are several initiatives on which the money could be spent, e.g. a pre-feasibility design for the desalination of Sundays River irrigation return flows. The DWS project manager can decide on which relevant activity saved funds can be spent.</p> <p>PJ said that, if money is nowhere to be found, DWS could approach the Gamtoos Irrigation board and the NMBM to ask for financial assistance.</p> <p>PC will ask the DWS V&amp;V Project Manager, Sipho Skosana, whether some money is possibly available for such a flight. BMa also requested a report on what has been done and what has been concluded on the V&amp;V project.</p> <p>KJ wanted to know what the long-term strategy will be with the results from the V&amp;V. AL indicated that DWS is aware that the process is complex. The current water use must also be measured and DWS must have the capacity to process the measured information. According to PJ, measurement won't work if the farmer is responsible for metering and measurement. TMa suggested that an official from Regulation do a presentation on the process. AL undertook to set this up.</p>	<p>PC</p> <p>TMa</p> <p>PC</p> <p>AL</p>
6.4	<p><b>Working for Water and Working for Wetlands</b></p> <p>PJ reported on progress and expenditure during the financial year that has ended on 31 March 2018. In the Kouga catchment, initial clearing of 2 465 ha and follow up of 3 645 ha were completed at a cost of R8.76 million. In the Kromme catchment R3.2 million was spent on 99 513 ha of high altitude follow-up. R2.6 million was spent in the Kromme wetlands.</p> <p>BM wanted to know if this work will result in more water becoming available. EvdB explained that updated geographical information on the extent of invasive alien plants is made available from time to time, as the information is updated. When the system model for the water supply system is updated, the extent of invasive alien plant infestation, as a land use, will influence runoff. This study is however not updating the system model of the AWSS, and hence it is unknown to what extent the clearing of alien plants is making additional water available. Additional runoff also does not necessarily translate to additional dam yields though, as such additional flows could potentially be intercepted before it reaches dams. He further</p>	

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	explained that, when clearing of alien plant activities are limited, the use of water by alien plants may increase.	
<p><b>6.5</b></p> <p><b>WRC study by Living Lands</b></p> <p>No representative from Living Lands attended the meeting. Evdb presented the information on the minutes of the ATSG held on 7 March 2018:</p> <p>‘Rehabilitation is continuing in the Baviaanskloof, and lavender and rosemary are being harvested. Honeybush trials are well underway in the Langkloof and stakeholder engagements are continuing. Composting trials are also underway. Living Lands is also collaborating with the Gamtoos IB for the planting of palmiet and dry land rehabilitation courses. Progress has also been made with the setting up of the Water Fund, and a Steering Committee is currently being formed. In the Baviaanskloof and the Langkloof, the participatory hydrological model building project is still moving forward, with various workshops being held and large amounts of data being gathered, both in the field as well as from discussions with local stakeholders.’</p> <p>PC indicated that he was nominated to attend the Steering Committee meetings of the Water Fund. The Algoa Steering Committee gave their support to his nomination.</p> <p><b>6.6</b></p> <p><b>Water Quality Management Strategy and Policy Review</b></p> <p>BMA indicated that the project has been concluded. This point will be removed from the agenda.</p> <p><b>6.7</b></p> <p><b>Ongoing Coega IDZ Initiatives</b></p> <p>GT apologised for not being able to attend the meeting. EvdB reported what was minuted at the ATSG meeting on 7 March 2018:</p> <p>“Environmental authorisation was granted for the marine pipeline on 7 February 2018. The 60 Ml/d desalination plant and the aquaculture project was also approved, and the aquaculture project will include marine and freshwater fish species. The project will only commence once funds become available from a potential investor. The abstraction point for the marine water source has not yet been finalised.”</p>		
<p><b>7.</b></p> <p><b>7.1</b></p> <p><b>Darlington Dam operating capacity and Dam Safety Rehabilitation Programme</b></p> <p>Evdb showed two interesting slides on the change in water quality inflow to Darlington Dam over time. It shows that both the electrical conductivity and quality of the water have improved over time, and is now within acceptable standards, according to the SA water quality guidelines. The reason for the improvement could be the result of the larger inflow of quality water from the Orange River.</p> <p>BMA asked the project leader and PS to determine whether the investigation of the raising could be done under the current Algoa appointment.</p> <p><b>7.2</b></p> <p><b>Additional balancing storage in the LSRGWS</b></p> <p>Evdb presented the options to add balancing storage in the LRRGWS. After several bulk water infrastructure and conveyance options have been considered, a site at Lower Coerney is recommended as 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 NWTW via the existing Nootgedagt pipeline. It can also be filled by gravity flow via</p>		<p>TMa / Evdb</p>

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	a proposed pipeline from the canal. It is recommended that the topographical survey and geotechnical evaluations commence for the Lower Coerney Dam and Upper Scheepersvlakte Dam sites, to ensure that detailed information for the evaluation of these options is readily available. KJ remarked that a dam at the Lower Coerney site will be the preferred option for agriculture.	EvdB
7.3	<p><b>OFS Real-time model</b></p> <p>BMa reported that the model was established, but is not always working. JP reported at the ATSG meeting that the transfer from the Orange River to the Fish and Sundays rivers catchments is being monitored and that the results of the model will be reported at the end of the hydrological year, to assess the effectiveness of the model's performance.</p> <p>It was previously recommended that a low level of ongoing support to the DWS operational staff will be needed for this model. It was re-iterated that a budget is to be made available for continued support in the following reconciliation strategy study.</p> <p>EvdB reported that a budget and the appointment of DHI was approved, to make small changes to the model to report on distribution efficiency of the Orange-Fish-Sundays water transfer scheme. Training of DWS staff in Pretoria for extraction of template reports is included.</p>	DHI
8.  8.1	<p><b>WATER REQUIREMENTS AND USE</b></p> <p><b>NMBM Water Requirements</b></p> <p>BM reported the following:</p> <ul style="list-style-type: none"> <li>• The 2005 WMP anticipated a water requirement of 390 Mℓ/d by 2030.</li> <li>• Projects to support increased demand are the following:               <ul style="list-style-type: none"> <li>○ NCLLS Phase 3: 70 Mℓ/d,</li> <li>○ Groundwater Coega: 15-20 Mℓ/d,</li> <li>○ Non-revenue water reduction: ±20 Mℓ/d.</li> </ul> </li> </ul>	
8.2	<p><b>Coega IDZ water requirements</b></p> <p>No discussion as no representative of the Coega IDZ attended the meeting.</p>	
8.3	<p><b>Kouga water requirements</b></p> <p>No representative of the Kouga LM attended the meeting. The following was minuted at the ATSG meeting on 7 March 2018:</p> <p>“VF reported that the Kouga LM is currently investigating the use of boreholes to supplement their water supply. Three boreholes have been drilled at Oyster Bay, with a capacity of about 1 to 1.5 l/s. Two springs have also been revitalised, with a combined capacity of about 2 l/s. Two new boreholes have been drilled at Jeffrey's Bay, with a combined capacity of about 5 to 5.5 l/s. Preliminary investigations suggest that this is good quality water. Drilling has also started in Hankey, and there are indications of good potential yields in the area. The LM has also applied to the DWS for permission to drill at the foot of the Kouga Dam.</p> <p>Gamtoos IB is supporting Kouga LM with a public participation process to save water in the communities and to get feedback on potential water saving opportunities.</p> <p>There have been interactions with schools across the LM. The LM purchased water tanks to be installed at schools as well as at clinics in the Gamtoos area. Billboards</p>	

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	<p>have been sponsored by businesses for advertising purposes. Pamphlets were handed out in November and December 2017, and posters put up in public bathrooms, to communicate the need for water savings to the public.</p> <p>TMa enquired whether the development of groundwater resources is for a temporary supply or whether the supply will be integrated into the system for long-term use. VF confirmed that the aim is to ensure sustainable use of the boreholes for long-term supply.</p> <p>JP raised a concern that the lawful allocation indicated in the All Towns study for Hankey and Patensie is higher than the current lawful allocation, and requested clarity on the lawful allocation to these towns for monitoring purpose. VF confirmed that the ALL Towns report is showing the anticipated increased allocation that was not approved by DWS.</p> <p>EvdB enquired whether the Kouga LM's reliance on the Churchill Dam supply could potentially be reduced in the future due to the supply from the boreholes currently being investigated. VF noted that Ricky Murray (from Groundwater Africa) indicates that there is a good chance that the LM could be mostly self-sufficient in the future, however it is too early to confirm this.</p> <p>AL queried whether more could be done in the small towns, such as Hankey and Patensie, during times of drought to manage the water demand. VF responded that the LM shuts down the water supply to Patensie overnight, to limit water wasted due to potential pipe bursts and leakages. There are also plans to install water restrictors.</p> <p>PMA expressed concern that the Kouga LM is not achieving its restriction targets, and that the demand issues need to be addressed, to rectify the situation. More practical means are required to reduce the water demands."</p>	
8.4	<p><b>WUE Fish and Sundays catchments</b></p> <p>EvdB did a presentation on the topic. He reported that this component of the study aims to evaluate the efficiency of the Eastern Cape Province component of the Orange River Project.</p> <p>The following WUE Interventions, aimed at reducing water wastage, have been shortlisted:</p> <ul style="list-style-type: none"> <li>• Reduce allowance for canal losses in GFRWUA,</li> <li>• Reduce operational releases in the Lower Fish,</li> <li>• Reduce spills at the Korhaansdrift Weir,</li> <li>• Improve measuring and monitoring,</li> <li>• Refurbishing of Darlington Dam,</li> <li>• Other general recommendations.</li> </ul> <p>Preliminary Recommendations on each intervention is as follows:</p> <p><b>Reduce allowance for canal losses in GFRWUA:</b></p> <p>Allowance for an additional 25% compensation (instead of 15%) for canal losses was intended to be a <b>temporary measure</b> for the GFRWUA, to be <b>reduced to a more suitable allowance</b> in the future. In 1977/78, when this temporary allowance for losses was made, there was still a significant surplus of water in the Orange River Basin. As the Orange River basin is now in deficit, it is essential this be revisited.</p> <p>This intervention could potentially be implemented by:</p> <ul style="list-style-type: none"> <li>• Incrementally reducing the allowance for canal losses from the current 25% to 15%, over a reasonable period, to allow the irrigators to effectively implement appropriate WUE measures.</li> </ul>	

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	<ul style="list-style-type: none"><li>Providing for the irrigators to pay an additional amount for the requested loss component above 15% canal losses, to be applied to WUE measures.</li></ul>																									
	<p>AE from GFRWUA indicated that their Board is against reducing the provision for losses. He said that only 15% losses were allowed in the most recent Orange River monitoring report. He will forward the report to EvdB. He indicated that farmers are paying for their allocation and not for their use. Reducing the allocation will reduce DWS income from the WUA. AL proposed that DWS consider changing to payment for use. BM alerted DWS that it will have to be a balancing act as the farmers won't use their full allocation when water is readily available. He suggested that this could be fixed by a tariff structure.</p> <p><b>Reduce operational releases in the Lower Fish River:</b></p> <ul style="list-style-type: none"><li>Incrementally reduce the operational releases made at the Elandsdrift and De Mistkraal weirs over a suitable timeframe. After each incremental reduction, any practical operational constraints will be exposed, and can be addressed accordingly.</li></ul> <p><b>Reduce spills at the Korhaansdrift Weir:</b></p> <ul style="list-style-type: none"><li>Reduce spills at Korhaansdrift Weir.</li><li>The LSRWUA has already improved the operation of the Darlington Dam further to keep the spills at the Korhaansdrift Weir to a minimum, especially over weekend periods.</li><li>It is noted that the optimal solution to the leakage at the Darlington Dam is to fix the leaking gates.</li></ul> <p><b>Improve measuring and monitoring:</b></p> <ul style="list-style-type: none"><li>Improvements to the GFRWUA,</li><li>Improvements to the LSRWUA,</li><li>Effective use of the OFS Operational Model.</li></ul> <p><b>Rehabilitation of the Darlington Dam:</b></p> <ul style="list-style-type: none"><li>The DWS is currently planning to undertake the rehabilitation of the Darlington Dam, however the project is not underway yet.</li></ul> <p>EvdB reported that the timeframes and initial savings targets of recommended WUE interventions are the following:</p> <table><tr><th>No</th><th>Intervention</th><th>Timeframe</th><th>2040 Target</th></tr><tr><td>1</td><td>Reduce the allowance for canal losses in the GFRWUA</td><td>Reduce allowance by 1% every year</td><td>40</td></tr><tr><td>2</td><td>Reduce operational releases at the Elandsdrift and De Mistkraal weirs</td><td>Target 10% of potential savings every year</td><td>31</td></tr><tr><td>3</td><td>Reduce spills at the Korhaansdrift Weir</td><td>Target 10% of potential savings every year</td><td>18</td></tr><tr><td>4</td><td>Improve measuring and monitoring systems</td><td>Continuous</td><td>Not quantified</td></tr><tr><td colspan="3">Total</td><td>89</td></tr></table> <p>Of the initial planned WUE savings of 89 million m<sup>3</sup>/a, the recommended intended use of the saved water is as follows:</p>	No	Intervention	Timeframe	2040 Target	1	Reduce the allowance for canal losses in the GFRWUA	Reduce allowance by 1% every year	40	2	Reduce operational releases at the Elandsdrift and De Mistkraal weirs	Target 10% of potential savings every year	31	3	Reduce spills at the Korhaansdrift Weir	Target 10% of potential savings every year	18	4	Improve measuring and monitoring systems	Continuous	Not quantified	Total			89	
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	<table><thead><tr><th>Water user</th><th>2040 Target</th></tr></thead><tbody><tr><td>Reduced Orange River transfer volume to Eastern Cape</td><td>64</td></tr><tr><td>Small towns to apply for further allocations</td><td>7</td></tr><tr><td>NMBM to apply for further allocations</td><td>18</td></tr><tr><td>Total to consider for further allocations</td><td>25</td></tr></tbody></table> <p>AE reported that the GFRWUA has advertised a post for an operating officer to manage operations at the association. Tasks included in the post are (but not limited to) water orders, water extraction, quota management, effective water use, scheme and fine rules, water reports and metering.</p> <p>BM indicated that the conclusions of the Algoa efficiency evaluation will be taken into consideration in the NMBM WMP. EvdB stressed that the recommendations will have to be taken further, which BM fully supported.</p>	Water user	2040 Target	Reduced Orange River transfer volume to Eastern Cape	64	Small towns to apply for further allocations	7	NMBM to apply for further allocations	18	Total to consider for further allocations	25	JP/KV
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9.	<b>IMPROVING THE CONFIDENCE OF WATER AVAILABILITY</b>											
9.1	<b>Proposed Kromme and Kouga rivers water availability assessment study</b> <p>TMa reported that the study is still in the procurement phase, and that the procurement should be concluded before the next SSC meeting.</p>											
10.	<b>WC/WDM Report on Progress of other municipalities</b> <p>No Discussion.</p>											
11	<b>REPORT BACK BY NMBM</b>											
	<b>BM presented all NMBM-related topics under point 11</b>											
11.1	<b>Drought measures and progress with implementation</b> <ul style="list-style-type: none"><li>A national drought declaration was made on 13 February 2018.</li><li>R97 million funding was allocated on 28 March 2018.</li><li>Approval were received for the following groundwater projects:<ul style="list-style-type: none"><li>Coega Kop Wellfields, drilled - 10%, equipped 10%</li><li>Moregrove fault line boreholes, drilled - 50%, equipped - 0%</li><li>Uitenhage boreholes, drilled - 10%, equipped - 0%</li><li>Churchill boreholes, drilled 10%, equipped - 0%</li><li>Health facilities, drilled 20%, equipped - 5%.</li></ul></li><li>Maximising of Nooitgedagt 210 Ml water and temporary treatment.</li></ul>											
11.2	<b>WC/WDM at NMBM</b> <p>BM reported that the real losses for the current year thus far (Jul '17 – Feb '18) is 33.5%, with the February value down to 22.3%. The current WC/WDM Focus Areas are the following:</p> <ul style="list-style-type: none"><li>Zoning,</li><li>Pressure reduction,</li><li>Meter replacement,</li></ul>											



Item		Action
	<ul style="list-style-type: none"> <li>• Pipe replacement.</li> <li>• Leak repairs:               <ul style="list-style-type: none"> <li>○ Contractor support,</li> <li>○ Recruitment of additional plumbers (13 recruited in the last 12 months).</li> </ul> </li> </ul>	
11.3	<p><b>Nooitgedagt Low-Level Scheme (NLLS) Implementation and Financing</b></p> <p>The Nooitgedagt Water Treatment Works Phase 2 was funded by NMBM and was completed in July 2017. Phase 2 added 50 Ml/d to the system, increasing the average scheme supply from 90 Ml/d to 140 Ml/d. The four contracts of Phase 3, to augment and complete the Nooitgedagt Low-Level Scheme to a treatment and transfer capacity of 160 Ml/d is 30% complete. There are currently 2 major delays, these being health and safety and an issue regarding non-payment. Phase 3 is being funded by National Treasury and DWS through Amatola Water as per DORA. The anticipated completion date is February 2020.</p>	
11.4	<p><b>Desalination of Sundays River irrigation return flows</b></p> <p>EvdB reported that a desktop study has been conducted as part of the original reconciliation strategy, but it showed that the volume of water is not enough for a long-term solution. If implemented, water will need to be transferred to western side of Metro where problem/shortage during droughts exists. There are significant additional financial costs associated with this additional bulk reticulation (±R500 million). It was concluded that the long-time planned evaluation of this intervention at a higher confidence, should include this reticulation aspect.</p> <p>BM indicated that the NMBM is awaiting outcomes of a pre-feasibility study by DWS as agreed previously, before NMBM can proceed with this intervention. The evaluation can potentially be done from saved lump sum allowances under this study.</p> <p>EvdB noted that the potential raising of Darlington Dam and stopping of the leak from the dam may also influence this intervention, and should be considered in any evaluation.</p>	
11.5	<p><b>Re-use of water treated to industrial standards and potable standards</b></p> <p>There is currently limited industrial re-use from the Fishwater Flats WWTW, especially in the Deal Party industrial area. There is however a 110MI/day Re-use scheme for Coega IDZ planned - 60MI/day from FWF WWTW and 50MI/day from Coega WWTW.</p> <p>The Coega IDZ EIA approval stipulates the re-use of treated water for Coega industrial use, at an estimated cost of R600million. NMBM does not have these funds available to implement the re-use scheme.</p> <p>The feasibility study for the Coega WWTW have been completed. The potential plant size is 110MI/day, for the ultimate full development of the Coega IDZ. The treatment plant will have separate industrial and domestic lines, due to variances in the quality effluent. The Motherwell North development and sewer line will support the commissioning of the plant. The estimated cost of the WWTW is R3 billion. NMBM does not have these funds available.</p>	
11.6	<p><b>Groundwater - Coega Kop Scheme implementation</b></p> <p>BM reported that the Coega Kop aquifer has the best possible groundwater potential. NMBM has applied for an EIA approval for 25MI/day of groundwater abstraction.</p> <p>The status of the implementation of this intervention is as follows:</p>	

Item		Action
	<ul style="list-style-type: none"> <li>Phase1 - feasibility study complete.</li> <li>Phase2 - Exploration boreholes drilled.</li> <li>Phase3 - Production borehole contract and relevant pipelines commenced (R55M).</li> <li>Phase4 - Construction of 20M/day water treatment plant to commence within 2019 (R160M).</li> </ul>	
11.7	<p><b>Other groundwater schemes and drought initiatives</b></p> <p>BM reported that the NMBM is targeting groundwater augmentation at Churchill Dam, Kamesh Reservoir and Moregrove Fault.</p> <p>Other drought augmentation measures that are in place and will be implemented if needed are:</p> <ul style="list-style-type: none"> <li>Borehole drilling to support the filling of swimming pools,</li> <li>Provision of non-potable water points throughout the NMBM,</li> <li>30 Wards at 3 boreholes each, when required.</li> </ul>	
11.8	<p><b>NMBM 60 Mℓ/d Desalination Scheme Feasibility Study</b></p> <p>Desalination was identified by DWS, during the Algoa Reconciliation Study, as one of the next major potable water augmentation schemes for the NMBM. A feasibility study was advanced but not completed. The preferred desalination site was determined through a multi-disciplinary decision-making approach. The study has planned for construction in phases, up to 60Mℓ/day, at an estimated cost of R3 billion. NMBM does not have the funding available and will need assistance for a funding and procurement model.</p>	
11.9	<p><b>Marina Sea Salt desalination</b></p> <p>BM reported that Marina Sea 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 Sea Salt and NMBM. It appears that National Treasury / Ministerial approval is required to proceed. No further development.</p>	
12.	<p><b>DESKTOP STUDY: RAISING OF THE KOUGA DAM and NEW DAM AT GUERNAKOP</b></p> <p>EvdB indicated that he could later in the study draft and distribute a short scope of work, depending on the availability of remaining study provisional sums. Comparative costs are needed to determine whether this intervention is still feasible. The yields of these potential dams are also dependent on the results from the proposed WAAS study.</p>	EvdB
13.	<p><b>IMPACTS ON YIELDS OF EXISTING DAMS: ECOLOGICAL RESERVE &amp; CLIMATE CHANGE</b></p>	
13.1	<p><b>Implementing the Reserve for Existing Dams</b></p> <p>No discussion. Will only be considered when a new dam is constructed.</p>	
13.2	<p><b>Climate Change</b></p> <p>No discussion. Included for scenario planning purposes.</p>	

Item		Action
14.	<b>COMMUNICATION</b>	
14.1	<b>Status Report</b> The draft Status Report was distributed before the meeting. All comments should be mailed to RZ by 28 April 2018.	All
14.2	<b>Media Release</b> The media release will be drafted after the SSC meeting on 26 September 2018.	
15.	<b>GENERAL</b> No discussion.	
16.	<b>NEXT MEETING</b> The date for the next Strategy Steering Committee meeting is Wednesday, 26 September 2018 at 09h00 in Port Elizabeth.	
17.	<b>CLOSURE</b> The meeting was closed at 15:00.	

Chairperson: Dr B Mwaka (DWS)      Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Study Leader: Mr E vd Berg (Aurecon)      Signed: \_\_\_\_\_ Date: \_\_\_\_\_