Minutes of the Strategy Steering Committee Meeting No. 10

Tuesday, 30 August 2016, 9:00 – 14:00
Durban Jewish Centre, North Beach, Durban

Strategy Objectives:	• To meet legitimate current and future water requirements • To recommend the most suitable interventions to balance water requirements and water resources • To identify responsible institutions and provide target dates for implementation of the strategy
Documentation:	• https://www.dwa.gov.za/Projects/KZN%20Recon/
Purpose of meeting:	• To update Strategy Steering Committee on latest information in the Strategy area • To provide updated reconciliation scenarios/interventions • To receive feedback on actions towards the implementation of the Strategy

MINUTES

ITEM	ACTION
1. **WELCOME**	
1.1. Introductory remarks from the Chairperson	
Mr Tendani Nditwani welcomed all Strategy Steering Committee (SSC) members to the meeting. He apologised on behalf of the regular Chairperson, Mr Livhuwani Mabuda who was unable to attend the meeting due to other engagements. He requested Ms Angela Masefield to welcome SSC members on behalf of the Department of Water & Sanitation (DWS), KwaZulu-Natal (KZN) Regional Office.	
1.2. Welcoming Remarks from the KZN Regional Office	
Ms Masefield welcomed all present on behalf of the DWS, KZN Regional Office. She thanked all SSC members for their continued participation and support of the Reconciliation Strategy of the KZN Coastal Metropolitan Area. She also stated that Mr Ashley Starkey, Chief Director (KwaZulu-Natal Region Office) will be joining the meeting later.	
2. **ATTENDANCE & APOLOGIES**	
Mr Nditwani requested all SSC members to introduce themselves, the organisations they represent and to submit apologies for the record, if any.	
2.1. Attendance The following SSC members were in attendance (listed alphabetically according to surname):	

No.	Name	Organisation
1	Mr Bryan Ashe	GeoSphere
2	Mr Yakeen Atwaru	Department of Water and Sanitation
3	Mr Kobus Bester	Department of Water and Sanitation
4	Mr Rob Dyer	eThekwini Water and Sanitation

ITEM				ACTION
	5	Dr Pearl Gola	South African National Biodiversity Institute	
	6	Ms Kerisha Govender	SAPPI	
	7	Mr Wade Holland	Mdloti Catchment Forum and Coastwatch	
	8	Mrs Di Jones	Coastwatch KZN	
	9	Ms Hope Joseph	eThekwini Metropolitan Municipality	
	10	Ms Noluthando Magewu	COGTA	
	11	Ms Khuthalile Mahlaba	COGTA	
	12	Mr Kennedy Mandaza	Department of Water and Sanitation	
	13	Mr Justice Matarutse	Durban Chamber of Commerce and Industry	
	14	Ms Angela Masefield	Department of Water and Sanitation	
	15	Ms Naledi May	Dept. of Economic Development, Tourism and Environmental Affairs	
	16	Mr Kevin Meier	Umgeni Water	
	17	Ms Nozipho Mkhwanazi	South African Sugar Association	
	18	Mr Speedy Moodliar	eThekwini Metropolitan Municipality	
	19	Ms Khumbuzile Moyo	Department of Water and Sanitation	
	20	Ms Nokwanda Mpofana	eThekwini Water and Sanitation	
	21	Ms Thuli Mwelase	Ugu District Municipality	
	22	Mr Tendani Nditwani	Department of Water and Sanitation	
	23	Mr Paddy Norman	Wildlife and Environment Society of Southern Africa	
	24	Ms Celiwe Ntuli	Department of Water & Sanitation	
	25	Mr Bill Pfaff	Retired SSC member, ex-eThekwini Water & Sanitation official	
	26	Ms Hermien Pieterse	AECOM Study Leader	
	27	Mr Jonathan Schroder	AECOM Technical specialist	
	28	Mr Simon Scruton	eThekwini Metropolitan Municipality	
	29	Ms Bongi Shinga	Wakhiwe Stakeholder Engagement Specialists on behalf of AECOM	
	30	Ms Bhavna Soni	eThekwini Metropolitan Municipality	
	31	Mr Ashley Starkey	Department of Water and Sanitation	
	32	Mr Niel van Wyk	Department of Water and Sanitation	
	33	Ms Bathandwa Vazi	SALGA	
	34	Mr Norman Ward	Department of Water and Sanitation	
	35	Mrs Siphiwe Zama	eThekwini Water and Sanitation	

2.2. Apologies

The following apologies were received:

No.	Name	Organisation
1	Mr Steven Arumugam	Department of Water and Sanitation

ITEM				ACTION
	2	Prof Chris Buckley	University of KwaZulu-Natal	
	3	Mr Rod Bulman	Coastwatch – KZN	
	4	Ms Margaret Burger	Umgeni Estuary Conservancy	
	5	Mr Rob Crankshaw	Conservation KZN	
	6	Mr Gerald de Jager	AECOM	
	7	Mr Steve Gillham	Umgeni Water	
	8	Dr Marilyn Govender	South African Sugar Association	
	9	Mr Mike Greatwood	Msunduzi Local Municipality	
	10	Mr Geert Grobler	Department of Water and Sanitation	
	11	Mr Paul Herbst	Department of Water and Sanitation	
	12	Mr Livhuwani Mabuda	Department of Water and Sanitation	
	13	Mrs Manisha Maharaj	Department of Water and Sanitation	
	14	Ms Zanele Mvusi	Department of Water and Sanitation	
	15	Dr Beason Mwaka	Department of Water and Sanitation	
	16	Mr Bright Nkontwana	SALGA	
	17	Mr Ednick Msweli	eThekwini Metropolitan Municipality	
	18	Mr Bright Nkontwana	SALGA	
	19	Mr Nathaniel Padayachee	COGTA	
	20	Ms Renelle Pillay	Department of Water and Sanitation	
	21	Mr Percy Sithole	Umgeni Water	
	22	Mr Pieter Viljoen	Department of Water and Sanitation	
	23	Ms Sue Viljoen	WWF-SA	
3.	**APPROVAL OF THE AGENDA**			
	The following changes were made on the Agenda: • Mr Jonathan Schroder requested that a discussion on Rain Water Harvesting be added to the agenda. Rain Water Harvesting was added as **Item 7.3**. • It was noted that **Items 5.1** to **5.3** will be jointly discussed for each system, the Mgeni, North Coast and South Coast systems.			
4.	**MINUTES OF PREVIOUS MEETING**			
4.1.	**Approval of minutes of Previous Meeting**			
	Mr van Wyk indicated that items that require attention are included as an Action List attached to the Agenda. SSC members were requested to inform Ms Shinga should there be additional items which require attention. Mr Nditwani supported Mr van Wyk's proposal. The minutes were then accepted.			

ITEM	ACTION
4.2. Matters arising (not covered in the Agenda)	
Actions arising from the minutes of SSC Meeting No. 9 (03 March 2016) and the applicable status were presented as page 3 of the Agenda (distributed to all SSC members).	

Item	Response	Action
5.4 (c) Initiate collaboration with UEIP to include information in Updated Strategy.	Ms Pieterse stated that this matter is being addressed and will be included in the new Strategy. Further collaboration with UEIP will continue to be supported. She further stated that this item will be covered as Item 10.1. Ecological infrastructure initiatives, removal of alien plants and improving water quality will also be included in the Strategy.	In progress
5.4 (d) Distribute document pertaining to WC/WDM in Southern California.	Ms Shinga indicated that Mr Singh has not yet provided this information. Information will be circulated to SSC members upon receipt.	To follow up
6.1 (a) Mr Pfaff stated that re-use should not be indicated as a realistic intervention on water balance. Mr Jonathan Schroder to create water balance showing uMWP only.	This was undertaken.	
8.2 (d) Ms Masefield to advice on suitable contact person for fracking related communication.	Ms Masefield mentioned that Mr Michael Maluleka is the contact person from the DWS KZN Regional office.	
10.1 Follow up with Mr Ashe on rainwater harvesting and afforestation issues.	This item was discussed under Item 7.3.	
10.1 Investigate how ecological infrastructure could be incorporated in the strategy scenarios. Interact with UEIP to strategize on how to deal with ecological infrastructure.	This item was discussed under Item 7.3.	

5. **SSC THEME: FEEDBACK AND SUMMARY OF UPDATED STRATEGY**	ACTION
Items 5.1 to 5.3 were jointly discussed. **5.1. Water requirements and balances (including short-term impacts of drought)** **5.2. Management intervention: Management of system operation and drought interventions** **5.3. Physical infrastructure interventions**	

ITEM	ACTION
Mr Schroder provided a brief **background on the Reconciliation Strategy** and highlighted the following key points: a) Why do we have a Reconciliation Strategy? • The implementation of new water resource developments takes time and good planning, and if not done proactively, can result in systems running into a deficit. This can lead to: • Systems being vulnerable to drought; and • Water resources stifling growth and development. b) Why does the Reconciliation Strategy need to be continued with and updated? • To monitor progress of the implementation of Strategy interventions; • To adapt and respond to changes in the volume and location of the requirement for water and various other factors that can influence a systems water balance; • To incorporate new research and information from other external studies. c) How is the Strategy updated and continued with? • Input from Strategy Steering Committee (SSC 6th to 10th) from intermediate updates via Status Reports; and • Input from Technical Support Group (TSG) meetings to direct Technical Team and integrate planning of key stakeholder initiatives. d) Basic process of updating the Strategy is: • Update of water requirements (based on most recent actual supply); • Review Intervention options and status of implementation; ▪ Management interventions - Demand side interventions (e.g. WC/WDM) - Supply side interventions (e.g. Catchment care) ▪ Physical infrastructure interventions (e.g. Dams, transfers etc.) • Review reconciliation scenarios and update action plan.	
Mr Schroder then provided an update covering the Mgeni, North Coast and South Coast systems.	

	ITEM	ACTION
	The following comments were raised and discussed:	
e)	Mrs Di Jones noted that Sembcorp Siza Water (Siza Water) has been utilising 100% of the re-used water from their plant in the North Coast. She noted that during the presentation, there was no mention of any communication with Siza Water regarding the uMngeni Supply system. The North Coast is currently on 20% restrictions for domestic and 10% for both commercial and industrial. Therefore, these figures skew water requirements because they are not using water from the Hazelmere Dam. Siza Water has indicated that they are using less than 20% from Hazelmere Dam. The supply area which is restricted is between Tongaat and Umhlali. As a result, a low percentage of water is being drawn from Hazelmere Dam, which is probably the main reason for the increase in Hazelmere Dam levels during the rainfall (there has been reduced off-take). She also stated that she hopes that the mixing plant which is using overseas technology is emulated by other water service providers. **Response:** Mr Schroder stated that water from the Hazelmere Dam is being used at a restricted rate currently due to the drought, but it is being supplemented from a new source. Sembcorp Siza Water is not supplying the entire North Coast supply area. The North Coast supply area is from where the Mgeni WSS stops supplying within eThekwini up to the Thukela mouth, and includes Stanger. It should also be noted that there is large growth anticipated for the North Coast area. Re-use is an intervention that is part of this scheme and is being considered in all catchments.	
f)	Mr van Wyk remarked that eThekwini Metro has undertaken extensive work on re-use. The achievements by Siza Water have contributed to a changed public's opinion regarding re-use of water. Given water shortages in the KZN region, the Department will be considering the re-use of water and seek to find best methods of implementing similar technologies. **Response:** Mr van Wyk's point was noted with thanks.	
g)	Ms Masefield clarified that Sembcorp Siza Water re-use is producing 2 Mℓ/d, the total of Hazelmere Water Treatment Works production is running at about 35 Mℓ, and it is still a small portion of the overall demand.	
h)	Mr van Wyk stated that the capacity of the proposed Upper Thukela Water Project is approximately 415 million m^3/a to be developed for transfer to the Vaal System. This future volume of water is equivalent to the current use in the Mgeni system. This project could be developed in conjunction with the requirements in the Vaal system. Although the development of this resource is available, it will be complex and expensive and is viewed as a long term solution.	
i)	Mr Norman Ward said one of the concerns raised at the previous SSC meeting was the long lead	HSP/JS

	ITEM	ACTION
	times for the development of projects, such as the effluent re-use initiative by eThekwini. His question was should the SSC be lengthening the time horizons on the planning in order to see into the future to ensure that planning is more holistic, e.g. for Mielietuin and Jana Dams. **Response**: Mr Ward's valuable point is acknowledged. Mr Schroder explained that in some cases the confidence or availability of data of the water requirements projections diminishes beyond a certain date, and that trends then need to be extrapolate further into the future. This information could be valuable for the Reconciliation Strategy report, where the potential timelines for those longer projects can be shown. Ms Pieterse added that long-term planning is difficult because of unknown future factors / trends, especially over 30 or 50 years. The reliability of the data becomes low in the far future. However, planning (especially at a forum such as the SSC) should be dynamic to take changing trends into account.	
j)	Ms Hope Joseph commented on the re-use to Hazelmere Dam. She observed that the proposed date of 2022/2023 is dependent on the growth of the catchment and eThekwini building the regional uMdloti Water Treatment Works where a certain volume should be allowed into the uMdloti estuary which will assist with keeping the mouth open for longer periods of time in order to get more oxygen into that estuary. **Response**: Mr Schroder stated that the volume that is allowed back into the estuary could actually reduce the impact of the ecological water requirements on the yield of Hazelmere Dam, as less water would need to be released to compensate. The indicated volume was only anticipated to grow beyond the allowable amount around 2022/2023. This information is based on a projection which was received from eThekwini and also checked against the growing return flows as a percentage of water requirements in the area.	
k)	Mr Kevin Meier commented on the North Coast Water Supply Scheme. He noted that currently there is a projected reduction in yield of Hazelmere Dam. Water has to be released from Hazelmere Dam for the estuary (as contained in the EIA report) and is going to happen around 2020 according to the graph presented. The re-use to Hazelmere Dam occurs almost at the same time because of that reduction (although that water could be put into the river just below that Dam as an offset). **Response**: Mr Schroder said that 9 million m^3reduction in yield is linked to satisfying the Reserve with releases from the dam. However, the return flows of treated effluent could be used to off-set this. As the return flows grow, less water needs to be released to the point that return flows are sufficient to make up the volume that is required in the estuary. The timing of implementing these Reserve releases was typically linked to the date when the uMdloti could be augmented on a sustainable basis. Due to the rapid growth in water requirements projected a date of around 2020 is anticipated. If there is any excess before then, partial releases could be made until such time that the volume of the treated effluent grows up to the receiving capacity.	

	ITEM	ACTION
l)	**Follow up from Mr Meier**: He indicated that it is clear that the re-use to Hazelmere Dam is coming in before the demand requires it in 2029. As a result, the environmental requirement of the estuary is pushing the re-use project forward to supply the estuary by approximately 9 years. He then suggested that some engineering solutions be considered to support the estuary. To bring forward approximately R 1 bn capex for re-use project to support the estuary requires serious consideration. **Response**: Mr Schroder clarified the volume to offset or supply the river. The effluent is treated and put back into the river so it is not the re-use *per se* back to Hazelmere Dam. There is no real additional capital other than what eThekwini would normally have done to treat the water to an acceptable standard and put it back into the river. eThekwini can undertake this for another 50 Mℓ in the uMdloti River. Once the capacity of the uMdloti estuary has been reached, eThekwini will be forced to either put it into a sea outfall or re-use back to Hazelmere Dam. This is the component that requires more capital to either re-use directly or indirectly. In this instance, it then becomes a potable resource which is potentially available sooner and even has a possibility of delaying Lower Thukela Phase 2. Once you reach the receiving capacity constraint of the uMdloti estuary and can no longer accept any more effluent, you either have to re-use it or put it into the sea outfall. The difference in cost between having to deal with it in the sea outfall and sending it back to Hazelmere is the actual cost of the re-use.	
m)	Mrs Jones stated that the costs for re-use do not take into account that the uMdloti lagoon delivers environmental services that have a value as well and protecting the mangroves. She then suggested that the capital includes these environmental services. **Response**: Referring to *Slide 36 "North Coast WSS: Intervention Options"* Mr Meier emphasised the importance of considering the financial aspects of re-use and ensuring that all parties fully understood the implications. If re-use is the best solution for all parties concerned taking into consideration all environmental and financial implications, the option can be considered. It is important from a technical perspective to quantify the environmental benefits *vs* the financial implications. Mr Wade Holland supported Mrs Jones' views on environmental concerns in the catchment. He appreciated that there is a growing focus to deal with the uMdloti estuary as it has been a concern for a number of years in the catchment.	HSP/JS
n)	Mr Wade Holland then asked how far advanced is the design for a Wastewater Treatment Works in the uMdloti catchment. He was unaware of it being accepted by the local community and/or if there has been any community involvement. He requested feedback on where the Regional Wastewater Treatment Works is going to be located. One of the concerns raised in the past has always been that locating a waste water treatment plant in a lagoon system or saline environment would be totally unacceptable. It will be important to deal with the humanitarian side of this particular input. The main concerns relate to the area being highly sensitive in terms of the tourism market and particular uses of the land (terrestrial) which include the complication around massive developments in the area. They would like to know where is rainwater harvesting, why re-use is not being done at a bigger scale for these communities, who is responsible, etc. **Response**: Mr Schroder stated that under Item 5.4.3 eThekwini Metropolitan Municipality will be giving feedback on the feasibility study on the regional wastewater treatment works which is in progress.	

ITEM	ACTION
o) Mr Paddy Norman commented about the re-use highlighting that in some areas the population doubles for one month of the year and thought needs to be taken about whether that volume is an economically viable target. It is easy to look at re-use but need to ensure that there is no misjudging of cyclical and/or seasonal opportunity. **Response:** Mr Norman's comment was noted, with thanks.	
5.4. Feedback on Implementation of Strategy Intervention Options	
5.4.1. DWS: NWRI	
a) Mr Kobus Bester provided following feedback on the implementation of Strategy Intervention Options: • The **Spring Grove Dam** is in its operation phase. The pipeline is being tested and water is being transferred at 4.5 m^3/s. The dam levels have dropped since transfer started in February from 80% to 54%. • **Hazelmere Dam Raising** will be raised to its full capacity by November 2017. The completion date after the fast-tracking effort will be August 2017. The Hazelmere Dam will be allowed to be filled up to 65% of the original capacity, as they build the dam wall up they will allow it to fill up a bit more. The Hazelmere Dam is currently at 62%. Although there were grouting related issues which contributed to delays experienced in the project, they have subsequently been resolved and the pre-stress anchoring is progressing. • **uMkhomazi Water Project** was originally planned to be completed by 2022. Two (2) years have been added for water delivery, making the completion date to be 2024. The Public Participation Process has been completed. The Environmental Impact Report (EIR) will be finalised by September 2016 which will allow for the fast tracking of the process. A directive will be given to the TCTA to start implementation of the project because they need to do acquisitions, appoint PSP's and undertake additional drilling. • Authorisations for uMkhomazi Water Project are required from the Departments of Environmental Affairs (expected in March 2017) and Mineral Resources (expected in July 2017). DWS hopes that construction will begin in 2019 and water delivery will be achieved by 2024.	
The following comments were raised and discussed:	
b) Ms Khuthalile Mahlaba asked what kind of support is required from the provincial leadership to support the motivation for fast tracking and getting approval from the Minister. **Response**: Mr Bester mentioned that by law the public participation process has been completed. The deadline for submission of comments on the draft EIR was 15 August 2016. The Infrastructure Branch does not like to take projects which have outstanding issues because it results in problems. The Department also requires bridging funding, which is sourced at risk. If there is a fatal flaw, it could result in significant amounts of money being spent during the final design phase. There are a number of things that the Minister must take into consideration before she gives a green light on the project.	

ITEM	ACTION
5.4.2. Umgeni Water	
a) Mr Meier gave an update of the main projects that Umgeni Water is implementing: • The first being the **uMkhomazi Water Project**, which Mr Bester has covered. DWS is responsible for the raw water component (Dam and the tunnel). Umgeni Water has done a feasibility study on the potable water component (water treatment plant), which has been completed. The EIA for the potable component has been combined with the EIA for the raw water component. Therefore, the project and authorisations will be completed at the same time. Umgeni Water is waiting for the Minister to approve the project and appoint an implementing agent. • **Phase 1** of the **Lower Thukela Bulk Water Supply Scheme** - the official commissioning date is October 2016. There is potential for some delays for approximately 1 month, however the official date remains as October 2016. • The North Coast is going into the rainfall season. The Hazelmere Dam is currently at 62.4% capacity. They will only start releasing water down the river once it reaches 70%. There is a slight buffer between 62.4 % and 70% and therefore restrictions will be lifted. Umgeni Water has agreed to shut the emergency scheme and will be decommissioned on 31 August 2016. Water restrictions in the entire North Coast will be lifted. • **Phase 2** of the **Lower Thukela Bulk Water Supply Scheme**–Umgeni Water will prepare a design brief (which is an intention to undertake the design of the project). The design will commence early 2017. It will take a considerable amount of time to get the tender documents together and prepare for that design. Umgeni Water will prepare the design brief so they can implement as soon as it is required. • Umgeni Water is planning two Desalination Plants; one located in the North Coast and the other one in the South Coast. • The **North Coast Desalination Plant**: this project has experienced a few challenges; one of the power lines is going through an area which has now been declared a conservation area. When eThekwini planned the power line, the area was not declared as a conservation area. As a result, the EIA will be delayed by 6 months to allow an assessment to be conducted in the new area for the power line as well as undertake Public Participation Process. • The North Coast desalination plant is not one of the short or medium term proposed schemes, Umgeni Water will follow the environmental process so that it can be implemented if there is a fatal flaw on the uMkhomazi Water Project. If the uMkhomazi Water Project does go ahead, the North Coast Desalination Plant will certainly not be considered in the short to medium term. • The **South Coast Desalination Plant**: the final EIR has been submitted to the competent authority. There were no fatal flaws identified during the environmental assessment process. Umgeni Water is expecting environmental authorisation within the next few months. The plant has a capacity of 150Mℓ/d. • The **Lower uMkhomazi Bulk Water Supply Scheme**, the feasibility study is complete. The EIA is being conducted. The scheme is cheaper to operate, has some environmental concerns has a capacity of 100 Mℓ/d. • The South Coast options (desalination or Lower uMkhomazi) will be compared, presented to Umgeni Water's Executive Council and a final decision made.	

	ITEM	ACTION
The following comments were raised and discussed:		
b)	Mrs Jones asked whether the desalination plant on the South Coast is located in the Illovo estuary. If yes, does that not go against the National Environmental Management Act (NEMA) rules, which states that there should not be disturbance on an estuary? Where would the concentrated brine be discharged? Will it not be going into the estuary at all? **Response**: Mr Meier stated that the proposed desalination plant is on the banks of the Illovo estuary and will not be disturbing the estuary. Before commencing with the project, Umgeni Water confirmed the footprint and also consulted Ezemvelo KZN Wildlife as well eThekwini specialists dealing with estuaries. Umgeni Water defined boundaries of the estuary and ensured that the desalination plants are placed outside of the estuaries. The brine will be discharged at about 600 metres out at sea. It will not go into the estuary. There might be temporary impacts on an estuary because they have to build a bridge over the river (upstream of the estuary) and also need to build a pipe bridge to the plant. These impacts will be managed through the Environmental Management Programme, e.g. storm water drainage, etc.	
c)	Mr Holland asked if they were certain that saline will not go into the estuary. He is aware that some estuaries e.g. uMdloti, when in breach, the sea tends to brings in saline (depending on the movement of the currents) right up into the estuary. He then requested assurance from Umgeni Water that the concentrate is not going to affect the estuary. **Response**: Mr Meier confirmed that they are quite certain as they have done current testing for a full year and they know exactly what the currents are doing. Umgeni Water have utilised 3D and 2D models that can work out exactly how quickly the brine dissipates. The brine concentration is reduced significantly to 1 part per thousand within 30 metres, which is the normal salinity range which one gets at the sea between seasons.	
d)	Ms Bhavna Soni enquired about the 4-5 years shortfall on the South Coast, as was presented by Mr Schroder. She questioned if Umgeni Water is not looking at addressing that shortfall by utilising Amanzimtoti to its maximum capacity because it is available. She is aware that there is an issue with regard to raw water pipeline but hoped that Umgeni Water consider upsizing or put an emergency scheme. Also, the Craigieburn scheme can be revived as a short-term measure. **Response**: Mr Meier mentioned that Umgeni Water has looked at those schemes, the practical one at the moment is to develop the Mpampanyoni emergency scheme. The scheme was developed as part of the South Coast drought mitigation. Umgeni Water is applying for a license to make Mpampanyoni a permanent scheme (it is only 8 Mℓ/d). The total amount of yield that is available at Nungwane (10 Mℓ/d sustainable) is the restricting factor. The condition of the pipeline is also currently limiting supply to the Toti WTP, but the yield is the bigger limitation. If there are good years of rainfall, Umgeni Water can get more out of Amanzimtoti, however the biggest problem is that most of the water in the South Coast comes through the South Coast Augmentation (SCA) pipeline, which is of a limited capacity. The challenge is where the demand is needed *vs* the location of the resource - these are the two limiting factors. Umgeni Water has not yet looked at the Craigieburn scheme. It is a relatively small scale scheme but will consider recommendations from the SSC meeting.	

	ITEM	ACTION
e)	Ms Pieterse noted that the Mgeni system is also going into a deficit, she questioned if Umgeni Water is going to put pressure on the South Coast augmentation scheme. **Response:** The last 100 years' rainfall record does not show a drought occurring within 10 years of another drought. They are hoping that by the time uMkhomazi Water Project comes in they do not have another drought. Historically, this scenario does not occur often. The South Coast is slightly different because most water from the South Coast comes from the SCA which is limited by infrastructure capacity and not by yield. On the South Coast, there is a bigger chance of requirement for restrictions going forward if the demand increases because of the capacity of the infrastructure rather than the capacity of the dams.	
f)	Mr Schroder wanted to verify that the question of double counting in the SCA's full volume is imposed in the water requirements on the Mgeni System and Umgeni Water is taking it that into account on the water balance of the uMngeni. **Response:** Mr Meier reminded members that the SCA is supplied from Inanda Dam and even through this drought it is still sitting at 65% of its capacity. The Mgeni can be split into two areas, the Upper Mgeni, which is under a huge threat during drought years and Lower Mgeni which is generally not under threat. Inanda Dam has enough water to supply the SCA at the moment.	
5.4.3.	<u>eThekwini Metropolitan Municipality</u>	
	Ms Joseph provided a verbal update which covered the following projects:	
a)	Update on the re-use project • **Description**: It is a Remix Project with a capacity of 6.25 Mℓ/d demonstration plant consisting of a blend mixture of 50% sea water and 50 % waste water effluent which will be treated back to potable water. This will be the first plant in the world of this kind. If the plant is proven successful, eThekwini will expand it to 100 Mℓ/d. • **Status**: The feasibility study that is needed has been completed by Aurecon and submitted to the Japanese Agency for funding. They have approved the grant funding for implementing agent to be appointed. The city is currently discussing the memorandum of the agreement which is anticipated to be signed by October 2016 where the project will be launched. A period of two years is expected for the implementation which is to be completed at the end of 2018 with the demonstration year that is the testing of the plant to be done in 2019. Negotiations are currently undergoing with Transnet to construct a 15 Mℓ reservoir of storage to accommodate the product water.	
b)	Update on direct re-use project • **Description**: This project entails treating 50 Mℓ of wastewater effluent from KwaMashu and another 50 Mℓ from the Northern Wastewater Treatment Works back to potable standards and injecting it into the existing northern aqueduct. • Status: The report was submitted to Council. Members of the council will be visiting other plants internationally in order to gain confidence that the technology and the system works. This project will only gain momentum after the council has undertaken the site visits and received the necessary approvals.	

ITEM	ACTION
c) Update on the north coast re-use project • **Description**: This will be a Private Public Partnership (PPP) project which incorporates the expansion of the Tongaat Wastewater Treatment Works (10 Mℓ), the new regional uMkhomazi Water Works which is a 10 Mℓ plant and the regional uMdloti Waste Water Plant at 25 Mℓ plant. This is a package project in terms of the PPP. Re-use will be incorporated into this project which means that the PPP partner has to institute the re-use as part of his obligation for operating and maintaining the plant as a long-term contract. • **Status**: eThekwini is preparing documentation in order to prepare for the appointment of the Transaction Advisor. The document will be submitted to the BID specification committee by end of September 2016. It is anticipated that the Transaction Advisor will be appointed by end of 2016. • Re-use is being pursued as an alternative due to the limitations of discharge into the estuaries that have been imposed on eThekwini as a result of the water classification study that was undertaken. eThekwini has appointed a Professional Service Provider to undertake the EIA. There are three sites which are being considered (1) Close to the Hazelmere Treatment Works, (2) Waterloo site and (3) near the Redcliff region. All three these alternatives are being explored. eThekwini is expecting to have a site selected by end of October 2016 and then commence with the stakeholder engagement process.	
d) Desalination Plants • eThekwini is investigating this as a mitigation measure in the event that they do not receive adequate rainfall in summer. There are however concerns that it is very costly and unsustainable as a long-term project. eThekwini supports the proposed Illovo Desalination Plant, which is being investigated by Umgeni Water. eThekwini will be sending an official letter of support and a request to fast-track the process.	
The following comments were raised and discussed:	
e) Mr Schroder stated that eThekwini has previously raised that they are considering a Water Treatment Plant below Inanda Dam. He requested an update on the status of this project. **Response**: Ms Nokwanda Mpofana stated that both eThekwini and Umgeni Water are looking at that option. Once the feasibility is complete and is deemed to be economically viable, a decision will be made.	
f) Mr Bryan Ashe stated that at the last meeting eThekwini discussed a water re-use project for the inner city and the Bluff and asked whether that came up in the report and has the EIA process started for that? **Response**: This project is “the remix project”, refer Section 5.4.2 (a).	

ITEM	ACTION
5.5. WC/WDM	
5.5.1. eThekwini Metropolitan Municipality	
a) Mr Simon Scruton presented a summary on WC/WDM, with the following key points being made: • Non-revenue water is difficult to track. It is virtually impossible to reduce non-revenue water percentage during drought because it results in sales being pushed down. The net effect of eThekwini pushing the sales down has actually increased the non-revenue water by 4%. • eThekwini needs to look at more intelligent measures other than using the KPM system.	
The following comments were raised and discussed:	
b) Mr Justice Matarutse clarified that business has not ignored the call for reductions, the Chamber of Commerce& Industry (COCI) holds workshops throughout the industrial areas around Durban. DWS is well aware of these initiatives because COCI have partnered with them on several occasions. It must however be appreciated that the inability to reduce the water consumption does not necessarily infer inefficiency in industrial processes. Some industries have reached their limit and cannot find the extra 15% reduction. There is indeed a consideration in terms of using efficient processes. However, businesses are predominately focussing on their production and are not water practitioners. It might be beneficial if DWS can organise sessions where they can share best practise to different industrial processes in order to inform new water saving techniques that have not yet been considered by local businesses. The Durban COCI is opposed to the issuing of fines to businesses that cannot reduce their water consumption. These should be dealt with on a case by case basis with a view to assist. Durban COCI would like to see more being done in reducing non-revenue water. The World Bank and Durban COCI have been in talks and they are looking to invest in projects of similar nature as they have being doing so around the World. **Response**: Ms Soni stated that eThekwini is aware of the awareness campaigns and hopefully they can collaborate with the Durban COCI. eThekwini is also working with ABI as they have achieved a lot on their water conservation and in reducing their demand. Joint partnerships will be valuable in achieving water savings.	

	ITEM	ACTION
c)	Mrs Jones appreciated the presence of Durban COCI at the SSC meeting, suggested them to be represented at all meetings as they play a vital role. She stated that industries should take more care about what goes into the rivers as much as what comes out of our water resources, etc. She believes that fines should be imposed on businesses. Lately, there has been a lot of attention shown by the media to what is floating on top of our rivers and spoiling the entire city, but that is limited to what is visible. The main concern from the environmental groups is about what cannot be seen, e.g. heavy metals, oils and the pollution that is being caused by industries. She then questioned, what is being done to been to curtail the pollution being caused to our watercourses throughout eThekwini. **Response**: Mr Scruton noted that Mrs Jones question is outside of the scope of this meeting. However, eThekwini has an active pollution monitoring branch which engages with the various users through a consultative process which has been designed to assist them to reduce their pollution and minimise impact on water resources. **Response**: Mr Matarutse indicated that COCI is unaware of reports that have been validated that there is dumping of waste by industries into rivers. The Durban COCI strongly supports ethical business practices and if there are any such issues, they would appreciate being made aware of them. If there is factual information, COCI would like to be informed.	BS
d)	Mr Bester enquired if eThekwini is setting up norms and standards from a water use perspective for all the RDP houses that eThekwini is currently planning. Will they use pressure reduced showers and are they involved from a WC/WDM perspective? **Response:** Mr Scruton clarified that their material has to be SABS compliant and signed off by a registered plumber. Every new RDP house that is built gets installed with a flow limiter which limits their consumption to 300 litres per day.	
e)	Mr Ashe requested a percentage estimate of infrastructure losses in terms of non-revenue water as opposed to the domestic non-revenue water loss. He mentioned that civil society made a note that eThekwini is not doing enough to fix leaks. **Response:** Mr Scruton explained that it is approximately 70/30. With 70% being on the real loss side. It is still difficult to determine whether the losses are on the mains or inside the house.	

ITEM	ACTION
f) Mr Matarutse clarified his comparisons with the load shedding scenario and whether a non-reduction in consumption meant inefficiencies. Using a hypothetical example, ABI is using 1.6 litres of water to make 1 litre of cooldrink. If ABI can be efficient and use 1.4 litres of water to make 1 litre of cool drink, it does not necessarily mean that ABI is consuming less water, it means ABI will be improving its production so as to make more bottles of cool drink with the same amount of water. Therefore, the water service provider will not see the 15% reduction because ABI has improved production and has higher profits. This can then enable the business to expand and employ more people. During electricity load shedding, COCI discovered that companies were investing a lot in generators and energy saving machines but the consumption was not reduced because they were more productive. **Response:** Mr Matarutse's insights from an industrial operations point of view were appreciated.	
g) Mr Norman commented that although non-revenue water is an issue for the revenue department, it should be borne in mind that water does not just disappear, it actually goes back into the environment and that can be viewed as positive benefit and part of the water cycle.	
h) Ms Moyo stated that the Department reports on behalf of the sector to the politicians. She made a plea to Mr Simon Scruton to share his information on water balances until June 2016. This is not only for eThekwini but she further requested all the Municipalities within the Mgeni WSS to provide the regional office with their water balances so they can be able to report accordingly. **Response:** Mr Scruton confirmed that eThekwini Metro publishes this information on a monthly basis and also submits to the DWS Regional Office.	
5.5.2. uMgungundlovu District Municipality	
uMgungundlovu District Municipality was not represented at this meeting. Therefore, no feedback and/update was provided.	
5.5.3. Msunduzi Local Municipality	
Msunduzi Local Municipality was not represented at this meeting. Therefore, no feedback and/update was provided.	
5.5.4. iLembe District Municipality	
iLembe District Municipality was not represented at this meeting. Therefore, no feedback and/update was provided.	
5.5.5. Ugu District Municipality	
Ms Thuli Mwelase, Manager: WC/WDM, presented on behalf of Ugu DM. Her presentation covered the Strategy, Implementation Plan and achievements in implementing WC/WDM.	

ITEM	ACTION
The following comments were raised and discussed:	
a) Mr Schroder stated that the challenge when producing the water balance is that the water supply system does not typically match municipal boundaries. The whole of eThekwini is within the supply area but sometimes they have challenges with getting information at a sub-municipal level for Ugu and iLembe District Municipalities which only have a portion in the Recon Strategy area. He requested Ms Mwelase to provide information for the portion of Ugu that pertains to the supply area that is relevant in this strategy, i.e. middle South Coast area of Ugu. This information will ensure that more specific information is used as opposed to disaggregate and/or scaling down the municipal area. **Response:** It was confirmed that Ms Mwelase will liaise with Mr Schroder and provide required data.	TM
6. **DROUGHT SITUATION AND SYSTEM OPERATION FORUMS**	
6.1. Drought feedback from DWS	
a) Ms Masefield provided feedback on the status of the drought in KZN. Her presentation highlighted the following key points: • Data showing the Standard Precipitation Index (SPI) over the three-month period, KZN has received good rainfall being moderately wet in most of the area and severe heavy rainfall in some of the South Coast areas. • Amanzimtoti had more than 400mm in three days, which is more than a half of their rainfall in three days. This was an unusual scenario considering that it is winter. The South Coast dams are full and unfortunately a lot of damage has been experienced which has resulted in loss of water pipes. • It is important to note that the KZN Province is still classified as under extreme drought condition. There is a need to continue managing the drought situation and ensuring that impacts are mitigated as much as possible. • Overall, the drought is not over. DWS is managing it through area or system specific Joint Operating Committees (JOCs) led by the DWS and COGTA KZN. It is very important that all the stakeholders actively participate in these committees as they meet frequently. JOC is a platform where the decisions are being made to ensure that the necessary mitigation measures are put in place and that those measures are achieving the results that are needed.	
6.2. The following comments were raised and discussed:	
a) Mr Ashe said on the JOC for Msunduzi and/or the Mgeni catchment, business and ratepayers are not represented. He stated that it is really important to have those groupings represented to ensure that decisions are not only taken by politicians but also factor the viewpoints of consumers. **Response**: Ms Masefield clarified that the uMngeni JOC it is a technical committee and the businesses in that area are not the huge consumers (unlike in the Richards Bay area). Stakeholders on the uMngeni JOC are represented by their municipalities and by Umgeni Water. There is regular consultation with COCI and other stakeholders, as such there is no exclusion of particular groups. Stakeholders can participate in the JOC should they wish to be involved. As an example, agriculture as a key user group in the area are attending the JOC regularly.	

	ITEM	ACTION
b)	Ms Ntuli encouraged the participation of stakeholders in the JOC and the importance of including businesses as their role in saving water is crucial. The role of business in water sector has been proven in other systems like the Algoa in Port Elizabeth as well as in Richards Bay. They can be involved through their Corporate Social Investment Programmes or through their own operations.	
c)	Dr Gola commented on the involvement of business in the uMngeni Ecological Infrastructure Partnership (UEIP). She stated that they do liaise with businesses, although not a partner but they are well informed about what is happening at the top of the catchment. The Pietermaritzburg Chamber of Business is actively involved. **Response**: Ms Angela Masefield (DWS) clarified that the focus has been on the upper uMngeni system and Msunduzi has been liaising with business. DWS will ensure that business is involved.	
d)	Mrs Jones stated that the borehole supply is being used in areas like Greytown. She then questioned how many months will it be before the subterranean water supply starts being replenished because even in areas closer to the coast the boreholes are running dry. **Response**: Ms Masefield clarified that once a borehole has been developed and the yield tested properly and you only pump within the sustainable yield of that borehole, there should not be a significant drop on the resource. If there is a drop, it is going to be very slow relative to a surface water resource. Typically, a number of boreholes are failing because they are being over-utilised and they are not being managed and monitored properly. It is therefore not only an impact of the drought.	
6.3.	**Mgeni and Hazelmere Monitoring**	
a)	Mr Meier presented an update on the monitoring of Mgeni and Hazelmere, with the following key points: • The Hazelmere Dam has now risen to 62.4%. Previously, there were no restrictions on the Hazelmere Dam when it has been above 60%. It has been motivated now that restrictions be lifted from a legal point of view. The lifting of restrictions will be gazetted by DWS. • The North Coast is moving out of a stage of restrictions so the drought is over on the North Coast but the concern is specifically the Mgeni catchment. • The dams in the smaller catchments can go up and down very quickly. With the demand and the rainfall coming in, EJ Smith and Amanzimtoti as an example on the South Coast, can go up to a 100% and down to 20% in a single year. • The big dams like the Midmar and Inanda take a lot longer to go down but they also take a lot longer to increase in capacity once they get rainfall. • Spring Grove Dam which has recently been constructed is at 54% and Midmar Dam is at 46%. • Albert Falls which is downstream of Midmar and which supplies Durban is at 26.4%. It supplies water treatment plant called Durban Heights and supplies about two thirds of eThekwini.	
The following comments were raised and discussed:		
b)	Ms Soni questioned if the drought restrictions will be lifted in the Northern area completely or are they still going to keep the 15%. **Response:** Mr Meier clarified that Hazelmere will not be curtailed anymore as it is currently at 62%. If it gets to 70%, they will have to start releasing water down the river.	

	ITEM	ACTION
c)	Ms Soni said that restrictions must be lifted slowly in order to avoid giving mixed messages. **Response**: Mr Meier clarified that the message at the beginning of restrictions was that when the Hazelmere Dam reaches capacity of 60%, restrictions would be lifted.	
d)	Mr Scruton supported Ms Soni's sentiments, i.e. consumer education is still a challenge. He suggested that they say Hazelmere Dam is relieved and impose a 15% blanket for everybody. **Response**: Mr Meier noted Mr Scruton's point and mentioned that they have to recognise that the North Coast has been under restriction for two (2) years. As such, tourism and industries have been affected for two years, which is one year longer than the Mgeni catchment. North Coast has water and should be relieved.	
e)	Mr Scruton requested clarity on who sits on the JOC and who is responsible for the implementing them and issuing communication. **Response**: All municipalities, Sembcorp Siza Water, Umgeni Water, DWS and COGTA have an influence in the decision making. Communication is done by COGTA, Umgeni Water and by municipalities.	
f)	Mr Scruton suggested there should be a full communication plan before reaching out to the customer, whichever platforms are utilised, it should be sent to the committee for approval and eThekwini can sign it off knowing that they have done their best effort to prevent any confusion in the market. **Response:** Mr Scruton's comment was noted.	
g)	Mrs Masefield clarified that regarding the lifting of restrictions, there is no technical basis in which DWS can defend keeping a restriction, i.e. if they are going to be releasing water from the dam. The Minister needs to defend a restriction that could potentially have economic impacts. North Coast has been restricted since September 2014 and cannot continue with restrictions when the situation has improved. **Response**: Ms Masefield response was noted with thanks. Mr Scruton requested that eThekwini is engaged before announcements are made in order to prevent mixed messages amongst consumers.	
h)	Mr Norman mentioned that in the Ugu DM there are posters that encourage consumers to conserve water. He asked about the situation at Ugu because they are further south of the South Coast and they are still under water restrictions. **Response**: Ms Masefield clarified that the systems that were supplied by dams were restricted and the dams are currently over flowing. The production has also been increased in the Umzinto system. The self-curtailing systems are the ones that have restrictions due to a lack of water in the river, those have been operating depending on the level of the river. With the recent rains, most of the systems have normalised both in the South Coast and North Coast. Ixopo is still under review, most of the others will go into a revised recommendation for the lifting of restrictions where DWS think it is likely to be safe to do so.	

ITEM	ACTION
7. **OTHER STUDIES AND INITIATIVES**	
7.1. uMngeni Ecological Infrastructure Partnership (UEIP)	
Dr Pearl Gola gave an update on the UIEP's activities:	
7.2. Thukela River low flow operation	
a) Mr Ward mentioned the following: • The field trip on the Thukela River was to ascertain possible unlawful abstraction and anything that could cause a sudden drop in the river level. • There was something happening just below Spioenkop Dam but the sudden drop would not have been caused by people at the top. • Further down the Spioenkop River there was a structure whether it was a permanent weir in the little Thukela although it would not have caused the sudden drop. • DWS needs to establish whether these irrigation fields are authorised and whether the weir is authorised. • Generally, most of the diversions appear to be unlawful and quite a number of irrigation appears to be unregistered hence DWS is unaware of the abstraction volumes and this could account for some of the losses.	
The following comments were raised and discussed:	
b) Mr Meier asked how DWS will police illegal abstraction in future. **Response**: Mr Ward clarified that there is a stronger requirement now with new licences to insist on meters but many of the existing users do not have meters and they also bill them on their registered volume not on their measured volume, which does not give them an incentive to save. **Response:** Mr Bester stated that often they can also see what the water consumption is by just looking at the energy consumption.	
c) Mr Norman stated that this is an issue not only for the Thukela but also for the uMzimkhulu in the Ugu District where a number of towns are totally dependent on the river and illegal abstraction is a huge problem. He encouraged DWS to also make a plan to go and investigate uMzimkhulu. **Response**: Mr Ward mentioned that all the towns that are reliant on rivers should actually increase their storage reservoirs.	
d) Mrs Jones highlighted that SAPPI took the initiative because they are downstream of the weir and were adversely affected by the low flows as well as the Lower Thukela Extraction Plant. Umgeni Water was unable to test their reservoirs because the flows were too low, they also could not pump enough water up into their reservoir to test the stability. Mrs Jones expressed her disappointment on the fact that DWS has not made an effort to track the GPS points and check the weirs which were identified by SAPPI. She stated that these weirs are stopping the water flow on the little Thukela and she fails to understand that after two months of the SAPPI flight no one has checked those water use licences and to check whether those abstractions are legal or not.	

	ITEM	ACTION
e)	Mr Ashe stated that it is a long outstanding issue with the department, there is a need to have regular updates on water use licence applications, i.e. how many have been processed, etc. **Response:** Mr Ward mentioned that they had a delay in getting the photographs but DWS is getting to grips with the information. Some of the delays are due to lack of human resources within the department.	
f)	Mr Dyer raised a concern about SAPPI's water use licence in the uMkhomazi River. SAPPI has a diversion across the uMkhomazi River. He requested DWS to provide clarity on the authorisation which refers to a different location compared to the weir that SAPPI has built. SAPPI is one of the largest water users, using 150 Mℓ/day. **Response**: Mr Ward clarified that SAPPI had permission to build a large structure called "Goodenough Weir" a number of times in the past. Both DWS and DEA specified the number of times in which the structure could be built. Both these permits have now expired. The only place where they have a weir is at the extraction point and their license forces them to release from that extraction point. When SAPPI has had extremely low flows they have communicated with DWS and requested if they can reduce those releases. The RDM office has been involved in making decisions. According to his understanding, SAPPI has always complied with the releases.	
7.3.	**Rain Water Harvesting**	
a)	Mr Schroder gave a brief update on rain water harvesting: • It is difficult to quantify rain water harvesting in the water balances which are high level macro-scale big volumes, however it is appreciated as an initiative much like ecological infrastructure protection where there is a need for maintaining catchments, a need for supplementing water requirements on the ground and it seems very much a management intervention as opposed to an infrastructure intervention. • One of the biggest contributing benefits of rain water harvesting is water use awareness. The benefits are local free production whether irrigating crops or a garden, flushing toilets or laundry. It's like a big useful rain gauge. • One of the challenges identified is the fact that there is no SABS specific standard for manufacturing the tanks. In terms of regulations for the use of rainwater in municipalities, it is always a challenge to show the balance as a volume. This, however, does not take away from its benefit and importance as part of a Reconciliation Strategy intervention.	
8.	**COMMUNICATION**	
8.1.	**Confirmation of SSC members**	
	This is a standard item on the Agenda. Members were encouraged to continually review the list and provide feedback to Ms Shinga and/or project team.	ALL

ITEM		ACTION
8.2.	**Key messages and focus of Status Report and Media Releases**	**8.3.**
	Ms Pieterse and Mr van Wyk confirmed that the following key messages should feature in the Status Report and Media Release: • Re-use of Water; • Long-term planning has a direct link to reducing the impacts of drought; • In the graphs presented throughout the meeting, it was evident that in the Mgeni, North and South Coast systems there was a deficit and decisions need to be taken to deal with that as well as understanding that the development of interventions do take a while; • Mr van Wyk noted that the previous Press Releases (subsequent to SSC Meeting No. 09) was not successful. He then proposed that the Status Report be circulated which is expected to achieve better results in terms of spreading the message from the SSC meetings. • He also urged committee members to take the content of the Status Report and draw from it as they see fit to spread the message.	
9.	**IMPLEMENTATION OF STRATEGY AND WAY FORWARD**	
9.1.	**Actions for SSC members**	
	• All SSC members to provide input for the final report which will be reported at the next SSC meeting. • All SSC members were encouraged to report back to their constituencies. • They were reminded about the importance of providing feedback on matters that are discussed at these SSC meetings.	ALL
9.2.	**Key actions for TSG**	
	• Completion of the updated Strategy for discussing at the next TSG meeting. • Implementation of the key priority projects, the uMkhomazi Water Project and the next phase of the Lower Thukela or desalination. • Updating of the intervention options list. • The drought lessons and impacts that need to be included in the updated strategy for future references.	HSP/JS
10.	**DATE FOR NEXT SSC MEETING**	
	The proposed date for the SSC Meeting No. 11 was proposed as Thursday, 2 February 2017 at Durban Jewish Centre. Notifications will be circulated to all SSC members.	BS
11.	**CLOSURE**	
	The Chairperson thanked the SSC members and study team for their attendance and participation in the discussions and closed the meeting	

Annexure A: Attendance Register

Section 2.1 of the minutes provides a list of attendees. A copy of the signed attendance register can be provided upon request.