

Support to the Continuation of the Reconciliation Strategy of the KwaZulu-Natal Coastal Metropolitan Area: Phase 2

Minutes of the Strategy Steering Committee Meeting No. 11

Thursday, 02 February 2017, 9:00 – 13:30 Durban Jewish Centre, North Beach, Durban

Strategy	To meet legitimate current and future water requirements
Objectives:	To recommend the most suitable interventions to balance water requirements and water resources To identify propagable institutions and provide target dates for implementation of the Strategy.
	I o identify responsible institutions and provide target dates for implementation of the Strategy
Documentation:	<u>https://www.dwa.gov.za/Projects/KZN%20Recon/</u>
Purpose of	Final Strategy Steering Committee meeting of Phase 2
meeting:	To update the Strategy Steering Committee on latest information in the Strategy Area
0	To present the Updated Strategy for comments and input for finalisation

MINUTES

			ITEM	ACTION
1. W	ELCO	ME		
1.1	Introd	uctory remarks from the Ch	nairperson	
	Mr Liv remarl KwaZu	huwani Mabuda welcomed al ked that this meeting conclude ulu-Natal Coastal Metropolitar	Strategy Steering Committee (SSC) members to the meeting. He es the second phase of the Reconciliation Strategy of the Area.	
	He rec Sanita	uested Mr Ashley Starkey to tion (DWS), KwaZulu-Natal (ł	welcome SSC members on behalf of the Department of Water & (ZN) Regional Office.	
1.2	Welco	oming Remarks from the KZ	N Regional Office	
	Mr Sta memb Coasta	rkey welcomed all present or ers for their continued particip al Metropolitan Area.	behalf of the DWS, KZN Regional Office. He thanked all SSC bation and support of the Reconciliation Strategy of the KZN	
2	ATTENDANCE & APOLOGIES			
	Mr Mabuda requested all SSC members to introduce themselves, the organisations they represent and to submit apologies for the record, if any.			
2.1	Atten	dance		
	The following SSC members were in attendance (listed alphabetically according to surname):			
	No.	Name	Organisation	
	1	Mr Niren Appalsamy	eThekwini Water and Sanitation	
	2	Ms Lungile Cele	Ugu District Municipality	
	3	Mr Steve Gillham	Umgeni Water	
	4	Dr Pearl Gola	South African National Biodiversity Institute	
	5	Dr Marilyn Govender	South African Sugar Association	

			ITEM	ACTION
	6	Mr Mike Greatwood	Msunduzi Local Municipality	
	7	Mr Wade Holland	Mdloti Catchment Forum and Coastwatch	
	8	Mrs Di Jones	Coastwatch KZN	
	9	Ms Hope Joseph	eThekwini Water and Sanitation	
	10	Mr Vaughn Koopman	WWF – SA	
	11	Mr Livhuwani Mabuda	Department of Water and Sanitation	
	12	Mrs Manisha Maharaj	Department of Water and Sanitation	
	13	Mr Kennedy Mandaza	Department of Water and Sanitation	
	14	Mr Justice Matarutse	Durban Chamber of Commerce and Industry	
	15	Ms Angela Masefield	Department of Water and Sanitation	
	16	Mr Zingisa Mavuso	Tongaat Hulett	
	17	Mr Kevin Meier	Umgeni Water	
	18	Mr Patrick Mlilo	Department of Water and Sanitation	
	19	Mr Speedy Moodliar	eThekwini Metropolitan Municipality	
	20	Ms Khumbuzile Moyo	Department of Water and Sanitation	
	21	Ms Nokwanda Mpofana	eThekwini Water and Sanitation	
	22	Mr Buhle Msomi	uMgungundlovu District Municipality	
	23	Mr Bright Nkontwana	SALGA	
	24	Mr Paddy Norman	Wildlife and Environment Society of Southern Africa	
	25	Ms Celiwe Ntuli	Department of Water & Sanitation	
	26	Mr Nathaniel Padayachee	COGTA	
	27	Mr Bill Pfaff	Retired SSC member, ex-eThekwini Water & Sanitation official	
	28	Ms Hermien Pieterse	AECOM	
	29	Mr Jonathan Schroder	AECOM	
	30	Mr Simon Scruton	eThekwini Metropolitan Municipality	
	31	Ms Bongi Shinga	Wakhiwe Stakeholder Engagement Specialists obo AECOM	
	32	Ms Bhavna Soni	eThekwini Metropolitan Municipality	
	33	Mr Ashley Starkey	Department of Water and Sanitation	
	34	Mr Niel van Wyk	Department of Water and Sanitation	
	35	Mr Allen van Zyl	SAPPI	
	36	Mr Norman Ward	Department of Water and Sanitation	
2.2	Apolo	ogies		
	The fo	llowing apologies were receiv	/ed:	

No.	Name	Organisation
1	Mr Steven Arumugam	Department of Water and Sanitation
2	Mr Bryan Ashe	GeoSphere

	ITEM			ACTION	
	3	Mr Yakeen Atwaru	Department of Water and Sanitation		
	4	Mr Kobus Bester	Department of Water and Sanitation		
	5	Prof Chris Buckley	University of KwaZulu-Natal		
	6	Mr Rod Bulman	Coastwatch – KZN		
	7	Ms Margaret Burger	Umgeni Estuary Conservancy		
	8	Mr Rob Crankshaw	Conservation KZN		
	9	Mr Gerald de Jager	AECOM		
	10	Mr Rob Dyer	eThekwini Water and Sanitation		
	11	Mr Johann Enslin	Department of Water and Sanitation		
	12	Mr Geert Grobler	Department of Water and Sanitation		
	13	Mr Dumisani Khoza	iLembe District Municipality		
	14	Ms Naledi May	Dept of Economic Development, Tourism & Environ	mental Affairs	
	15	Mr Ednick Msweli	eThekwini Metropolitan Municipality		
	16	Ms Zanele Mvusi	Department of Water and Sanitation		
	17	Dr Beason Mwaka	Department of Water and Sanitation		
	18	Ms Thuli Mwelase	Ugu District Municipality		
	19	Ms Renelle Pillay	Department of Water and Sanitation		
	20	Mr Michael Singh	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		
	24	Mrs Siphiwe Zama	eThekwini Water and Sanitation		
3	Appr	OVAL OF THE AGENDA			
	The A	genda was approved without a	ny changes and/or additions.		
4	Μινυ	TES OF PREVIOUS MEETING			
4.1	Appro	oval of minutes of Previous N	leeting		
	The m	ninutes were approved without	any changes.		
4.2	Matte	rs arising (not covered in the	e Agenda)		
	Actions arising from the minutes of SSC Meeting No. 10 (30 August 2016) and the applicable status were presented as page 2 of the Agenda (distributed to all SSC members).				
	Item Response Action				
	5.5 (c) COCI	Extend invitation to Durban for all future meetings.	Invitation was extended, and a representative was present at the meeting.		

ITEM				ACTION	
	5.5.5 (a) Ms Thuli Mwelase to provide Study Team with water supply data and 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.	Ms Mwelase was not present at the meeting. Ms Cele committed to ensuring that the required data is sent to Ms Shinga on 03 Feb 2017. Post meeting note: the relevant data was received after the SSC meeting.	LC/BS		
5	FEEDBACK AND SUMMARY OF UPDA	TED STRATEGY		ACTION	
5.1	What is the Strategy?				
	 Ms Pieterse gave an overview of the S Strategy is a high-level strategy which overview included the following key poor The KZN Metropolitan Reconciliation catchment area, North Coast and the The first Strategy commenced in 200 The Strategy operates at high level It is a well-known fact that there is a users and different sources of water The economy is also limited by the systems are vulnerable due to drout The updated Strategy seeks to more the interventions. Some areas are prone to a sudden population growth. The Strategy gathered information systems. Furthermore, input from the SSC, ke that the data available was sound at regularly looking at the update of the timing of the system will be discuss? When taking into account all the type management interventions, althoug Conservation and Water Demand M. Secondly, Infrastructure Intervention requirements for the areas in quest volumes. Thirdly, support interventions such considered. She also touched briefly on the imp WCM/DM is their resources in the imp WCM/DM is their resources in the imp 	trategy and what has been done to date. She indi is developed through involving relevant stakehold ints: on Strategy comprises of three areas, namely uMr ne South Coast. 008. This phase is a continuation of the Strategy. to reconcile water requirements with the water av a strenuous demand on water and there are different r supply. lack of water, lack of necessary resources and av ght conditions. nitor the water requirements as well as the implem growth in population whereas some areas have s from previous background information and the his ey stakeholders and municipalities was valuable i ind acceptable. ating the water supply systems as depicted on the e water requirements and water availability. The p ed later in the meeting. bes of interventions, the study firstly considered th h these are mostly not the big volumes. As an exa Management (WC/WDM) are considered. ns must be considered. Due to the high growth of ion, smaller interventions are not able to provide t as catchment care and rainwater harvesting are a ortance and the need for every municipality to acc	cated that the ers. Her ageni railability. ent water railable nentation of table tory of the n ensuring e map, then prioritising and e ample, Water he required lso		
	system is operated correctly.After the recent drought, people ha systems and the importance of ens	ve realised the importance of everyday operations uring that water resources are managed.	s of the		

ITEM	ACTION
 Lastly, she appreciated representation from uMngeni Ecological Infrastructure Partnership (UEI as they are contributing to maintenance, rehabilitation and protection of ecological infrastructure All of these interventions were discussed in more detail during the meeting. 	P) 3.
Mr Schroder referred to the water balance of each system and how each intervention is prioritised (more details available in the Strategy Report). Recognising that there were new representatives at the meeting, he briefly showed the balances of each system. He also stated the reasons for includi area-wide interventions in the Strategy and how they need to be rolled out going forward.	t ng
He presented the Strategy and shared information on interventions (management, infrastructure ar support) already committed to. He focused on the priority interventions that need to happen over th next 25 years to ensure proper maintenance of a positive water balance.	nd ne
Mr Schroder's presentation provided detailed feedback on the following items:	
 5.2 Strategy Action Plan Area-wide interventions North Coast Water Supply System Mgeni Water Supply System South Coast Water Supply System 5.3 Deliverables of Updated Strategy 	
Items 5.1 to 5.3 were jointly discussed	
The following comments were raised and discussed:	
a) Mrs Jones referred to previous SSC Meeting 10 minutes (Item 5.4.2) which stated that no environmental fatal flaw was found in the EIA for the proposed South Coast Desalination Plant. Sh was of the opinion that the fact that the proposed Desalination Plant in within a floodplain should be major concern.	e e a
She further stated that the Strategy Report is projecting 30 years into the future. It appears that the report does not take into account available technologies which are more advanced, environmentall friendly including solar powered options.	y y
She pointed out that only old technology with massive infrastructure and cost (to both environment and public) has been considered for the South Coast Desalination Plant. She is aware of new technology which has been presented and is being used in Richards Bay.	
Response: Mr Mabuda stated that Mrs Jones comments were noted and will be discussed under I 8.2 under the heading "Alternative Interventions." Advice on various proposals will also be accommodated.	tem

	ITEM	ACTION
b)	Mr Gillham stated that the Strategy Report has listed ecological infrastructure component under support strategies. People that are driving the ecological infrastructure are terming it as yield or as run-off. He asked if an analysis and/or comparison has been done with other options. He questioned it was not factored on the graphs and wondered if its contribution is insignificant such that it can only remain as a support intervention.	
	Response: Mr Schroder stated that there are no hard numbers on every intervention in terms of the various ecological infrastructure components. The water balances assume that there are constant yields into the future. The yields will be potentially reduced if catchments continue to degrade. The Strategy has highlighted the need for sufficient ecological infrastructure and catchment care to maintain the current yields.	
	There are two components which have been identified, one is doing enough to make sure we do not lose further yield and water quality, and the second one is the capacity to increase the yields, which has not yet been quantified. He pointed out that it is however not expected that there will be yield increases which will be comparable with other bigger interventions.	
c)	Mr Gillham stated that when looking at a section of the uMngeni catchment water balance until 2025, the risk has to be managed. The key is to identify interventions that can be used to fill that gap. He noted that there are a lot of numbers coming out from alien vegetation clearing which can be used to quantify costs. This is possibly an area that can be pursued into the future and would be worth following up on.	
	Response: Mr Schroder confirmed that Mr Gillham's suggestion will be included under recommendations for the continuation phase of the Strategy.	
d)	Ms Moyo appreciated the fact that municipalities in the study area have Master Plans for WC/WDM and that information has been pulled into the Strategy. There are some comments and questions on the figures on potential savings taking into consideration some of the water user efficiency KPIs e.g. litres per capita per day (I/c/d), Infrastructure Leakage Index (ILI), and Non-Revenue Water (NRW).	
	She indicated that her department (Water Use Efficiency) will provide comments on their discoveries. They are of the opinion that some potential goals are realistic and some are not.	
	Response: Mr Schroder appreciated Ms Moyo's comments and encouraged her to make a written submission.	
e)	Mr Koopman asked how water requirements are calculated. He asked whether water requirements are based on the water use licences or registrations that are currently in place.	
	Response: Mr Schroder stated that for each of the three systems, the available data, and studies that have been conducted determine the methodology used to project water requirements. As an example, the Mgeni System was a combination of existing projections from Umgeni Water, where historical trends are at a growth of around 1.5%, that were combined with specific studies for parts of the water supply system.	
	For example, in eThekwini, parts of iLembe and Ugu DMs, there was significantly more recent data available to add into water requirements where the planned developments were taken into account both from private developers as well as from the municipality's development projections. These projections take into account population growth and actual service levels per population.	

	ITEM	ACTION
	Although current water use comes from water use licences, water requirements need to be calculated beyond the current water use licences, i.e. over a 30-year period.	
f)	Mr Schroder added that if one takes into account the actual specific developments such as Cornubia, the private sector will provide the information and the different municipalities will provide the final water demand projections.	
	There are also different scenarios that are generated, sometimes those scenarios portray ambitious growth as well as a lower growth scenario. A conservative perspective is often used to avoid taking a scenario with too low growth into account. Water requirements are discussed through the Technical Support Group in order to find a reasonable and balanced perspective. He stated that the Strategy Report has a section which shows history of water requirements from the various catchments.	
g)	Mr Koopman stated that from the work they have been doing in the catchment, it is evident that new technologies which are available in the market do assist with water savings. As an example, there is a factory in Richards Bay that reduced their water usage by 2000 m ³ /day just by replacing the seals on the water pumps and the air cooling mechanisms. Overall, their reductions saved nearly 20 000 m ³ /day.	
	Likewise, with irrigation which is the biggest user of water in catchments, there is a lot of new technology in place which significantly contributes to reducing water consumption.	
	The "use or lose it principle" is not encouraging high water users to adopt new saving technologies. Figures currently used are essentially based on water allocations whereby water users are using a lot of water with same (or old) technology. He stated that factories are using certain technologies and using actual water use is a better indication.	
	Response: Mr Schroder clarified that the green line shown on the graphs does not only depict actual water use but also takes into account wherever existing technologies for water re-use and rainwater harvesting have already been built into the industries and in homesteads. Therefore, the green line represents the actual supply volumes which are used as a basis for the projections.	
	Data is based on actual water use and water use licences are not specifically taken into account. The SSC assumes that correct water use license and water users are licensed in line with the necessary requirements.	
h)	Mr Meier stated that certain irrigation practices have a potential of reducing the amount of water. Some farming practices do not require as much water as they are currently using. There is essentially a lot of water wastage in irrigation.	
	When running a yield model, one is making an assumption of an 'x' amount of water coming out of the system before it gets to the dam for irrigation and other practices. If irrigation practices are using less water, the farmer could plant more fields or there will be greater yield in the dams. Therefore, it is essential to collect data from the current drought then consider reconfiguration and rerunning the yield models after the drought.	
	He further stated that they have picked up some anomalies in the currently used models. The SSC could possibly look at that as well and run some scenarios. If irrigation could drop by 10 % or 20 % or 50 % - one could establish what would be the impact on the system yield.	
	Response: Mr Schroder confirmed that Mr Meier's suggestion will be included under recommendations for the continuation phase of the Strategy.	

	ITEM	ACTION
i)	Mr Norman stated that one of his concerns is on the cliché of sustainability and it revolves around the demand and cost.	
	As an example, the south section of the study area has Ugu DM with a very low income base needing a very big dam. Is that actually financially viable without support from other areas? In response, one might say that the rest of the area is wealthier, they can afford to pay for them, but that is not entirely true. This is getting to a scale when we are questioning if our country can afford this sort of infrastructure. He suggested that WC/WDM needs to be executed on a much more intensive scale. He raised this at the SSC as he realises that the WC/WDM needs to be done immediately.	
	Mr Norman further commented on population control stating that if the amount of water used by the population at large is not controlled immediately, in 30 years' time, it will be too late. He stated these facts emphasising the importance of immediate action from all role players.	
	Response: Mr Schroder stated that the reality is that metropolitan areas have not only internal population growth, but there is also massive urbanisation and a large number of people moving out of rural and semi-rural areas towards the cities which is causing water demand in the cities to grow significantly.	
	It would perhaps be easier to supply a consolidated population but it would still put significant strains on the local infrastructure. He stated that having a long-term perspective and talking about where this is ultimately going is important. A balance has to be sought between short-term and the long-term challenges.	
j)	Mr Mabuda asked Mr van Wyk if he is confident with his projections for population growth, and what aspects should be further taken into consideration.	
	Response: Mr van Wyk acknowledged that the meeting has provided valuable contributions. In responding, he pointed out the following:	
	 They are aware of new technologies and they will be taken into account, although sometimes these technologies have a localised impact where the volume is too small to show on the balances. It is also important to note what benefits can be derived from catchment care. 	
	 A number of relevant studies have been done which will provide useful information and they will definitely draw from them. 	
	 For the next phase, it is important to obtain input so as to adequately develop the Terms of Reference for the next continuation phase. As an example, on ecological infrastructure, they previously did not know how to verbalise certain challenges. It would be useful if the SSC can help point to shortcomings and also bring support. 	
	 He supported Mr Norman's comments and confirmed that these issues are taking the SSC into the realm of water management in South Africa in the future. DWS is looking at broader strategies as well as international water resource strategies. Country wide, the water use average is about 260 litres per person per day, which is more than the world average of 170 litres per person per day. 	
	• There are elements that need to be taken into a wider context because if the current water use scenario is continuing, the country will end up with more challenges within the next 20 years.	
	 There is a need to start preparing for those challenges immediately. The Reconciliation Strategy on its own is rather limited, and it requires a national effort and a broad overall look at what guides water use in this country. 	

	ITEM	ACTION
	In closing Item 5 "The Feedback and Summary of Updated Strategy", Mr Mabuda thanked everyone for their inputs and hoped that the message has been well-received. He stated that the expectation is that Mr van Wyk will continue to assist the team to define the tasks and the scope of the next phase of the Strategy.	
6	FEEDBACK ON PROGRESS WITH IMPLEMENTATION OF ALREADY COMMITTED INTERVENTION OPTIONS	
6.1	Implementation of Water Conservation and Water Demand Management (WC/WDM) Mr Schroder provided some background on the total WC/WDM figures shown in water balances. He presented the 5-year WC/WDM master plan received from each WSAs. He indicated that each master plan will require ongoing rolling effort of WC/WDM. The master plan sometimes has multiple scenarios with regards to WC/WDM and savings. There is typically a more aggressive savings.	
	scenario and a more likely savings scenario. For the purposes of the Strategy, they have chosen a less aggressive, more likely savings scenario.	
6.1.1	eThekwini Metropolitan Municipality	
	 Mr Simon Scruton presented a summary on WC/WDM, with the following key points being made: <u>Massive achievement</u>: sales and purchases are still sitting at 2008 levels in terms of their system input and volume on demand, which is a testimony to work done by eThekwini, largely through pressure management and mains replacement. Water use was going up by 6% but was flattened out due to the results of the drought. <u>Challenge</u>: unmetered connections, need to convey understanding to new customers about their requirements and population needs to reciprocate. <u>New billing system for the city</u>: data could be improved, currently reporting on June 2016 figures. <u>Next three financial years</u>: city takes seriously their contribution to managing the asset as is their mandate of keeping water on 24/7 for 365 days. <i>No comments were raised after Mr Scruton's presentation.</i> 	
6.1.2	uMgungundlovu District Municipality	
	 Mr Buhle Msomi presented a summary on WC/WDM with the following key points being made. As a way of introduction, he alerted the SSC that the figures are not looking great, they are however sharing them as they are using the information to emphasise the need for aggressive improvement and also to receive assistance where possible. The system input volume is 19 742 Mt/year. Non-Revenue Water is extremely high, measured at 12 456 Mt/year, which is 63.1%. The Infrastructure Leakage Index (ILI) is quite high. The bulk of the uMgungundlovu DM total cost (R97 722 836) goes to Non-Revenue Water (R61 654 742). As a result, there is still a lot of work to be done to aggressively improve the situation. 	
	He then shared interventions to facilitate improvements on their system within the next 5 years.	

	ITEM	ACTION
The f	ollowing comments were raised and discussed:	
a)	Mrs Jones appreciated the openness shared by uMgungundlovu DM around their challenges, i.e. approximately 63% of their water is Non- Revenue Water. Such openness enables correct planning and influences change.	
	Response: Mrs Jones' comment was noted, with thanks.	
6.1.3	Msunduzi Local Municipality	
	Mr Mike Greatwood presented an updated summary of WC/WDM with the following key points being made:	
	• He stated that the first 5-year Non-Revenue Water Master Plan has come to an end and they have recently appointed consultants.	
	 They are waiting for the updated master plans for the next 5 years. He then shared how Msunduzi LM have managed with the drought in the past year, which is a success story in itself, and has a lot to do with the integration of the Non-Revenue Water Master Plan. 	
	 DWS requested Msunduzi LM to reduce water demand by 15%. They focussed on Pressure Reducing Valves (PRVs) in the city which helped them save water within their WSA. They were using 190 Ml/day and they are currently using 167 Ml/day. 	
	No comments were raised after Mr Greatwood's presentation.	
6.1.4	iLembe District Municipality	
	iLembe District Municipality was not represented at this meeting. Therefore, no feedback and/update was provided.	
6.1.5	Ugu District Municipality	
	Ms Lungile Cele presented on behalf of Ugu DM. Her presentation covered the Strategy, Implementation Plan and achievements in implementing WC/WDM. She highlighted the following key points:	
	 They are implementing their third Non-Revenue Water Strategy. Before end of Feb 2017, they will be appointing a Professional Service Provider who will be implementing their strategy for the next 3 years, until 2019. 	
	 2014/2016 interventions reduced Non-Revenue Water by volume from 28.1% to 24.9%. The Infrastructure Leakage Index was reduced from 4.69 to 3.75. 	
	 The Inefficiency of Use was also reduced from 22.3 % to 17.6 %. They will continue to monitor Active Leakage Control through specialised leak detection and 	
	repairs and roll out their Community Water Conservation Campaigns.	
The f	ollowing comments were raised and discussed:	
a)	Mr Meier commended Ugu DM on what they have achieved. He stressed that the country cannot afford high water losses and to continue not metering water use. There are some useful lessons to be learnt by other WSAs from what Ugu DM has done. He stated that he is unsure how long the country can survive with unmetered water uses as this has serious implications on the total supply of water.	

	ITEM	ACTION
b)	Mr Norman also congratulated Ugu DM for what they have achieved. He stated that Ugu DM performed remarkably well over the festive season. He also stated that water savings messages, i.e. posters encouraging consumers to save water are visible everywhere within the Ugu DM.	
6.2	Implementation of Water Supply and Drought Operating Rules	
	Ms Angela Masefield requested SSC members, throughout her presentation, not to lose sight of the long-term planning issues. She stated that she will provide an indication of how long-term planning is performing in the field, taking into consideration that drought is an event.	
	She presented on the levels of shortages focussing on the bigger systems. She also spoke about the rainfall received over the past season, the current status of large dams and the weather forecast over the next few months.	
	In closing, she appealed to the planning team (including DWS National Office) to ensure that the implementation of the identified projects is started soon, including the procurement of the teams, to be able to respond to challenges they are likely to encounter. She referred to Ugu DM which is constrained by infrastructure. Should there be delays in implementing Ncwabeni Dam, Ugu DM will soon be faced with a water resource issue.	
The f	following comments were raised and discussed:	
a)	Mr Pfaff commented on the Mgeni System restrictions. He stated that many consumers are unaware if the 15% restriction is still on or has been uplifted. There is little information available to the consumers. He also pointed out that since the implementation of the new billing system, his meter has only been read once in the last 6 or 7 months and this needs to be significantly improved.	
	He indicated that there could be lessons learnt from Siza Water from the methods used in distributing information efficiently to their areas of operation during the drought period. He further stated that a few years ago, in Hermanus (Western Cape), there was a public participation process which was highly effective and informative. Consumers used to receive a water bill which was accompanied by a graph which showed the household's monthly consumption. This is a useful tool for encouraging consumers to save water.	
	Response : Ms Masefield stated that she agrees fully with Mr Pfaff. The relaxation over December 2016 was an operational relaxation, but the 15% reduction still stands and eThekwini owes that water back. She stated that until water has been paid back, there will be more stringent restrictions. They are left with no option but to start rationing the water as they did in Hazelmere Dam, whereby each municipality only gets their quota for the day. She indicated that the 15% reduction is based on a 12-month average consumption, although it is difficult to convince the public to measure what they use when there is no information available to them. eThekwini Municipality was urged to improve their information dissemination methods to the public.	
b)	Ms Soni stated that eThekwini have a challenge with their revenue management systems whereby readings are not uploaded, however, it is still important to reduce the demand. Even if eThekwini does not achieve 15%, there must be a reduction. She requested all SSC members to lead by example. She further stated that eThekwini distributed information <i>via</i> newspaper advertisements and radio announcements informing the public that the 15% saving still stands. Response : Ms Soni's remarks were noted, with thanks.	

	ITEM	ACTION
c)	Mr Ward challenged eThekwini Metro to get ahead of Richards Bay in terms of posters and publicity. Richards Bay has been under restriction a year longer than Durban. He pointed out that one article in the newspaper is not sufficient to notify consumers. He suggested that information needs to be circulated in a manner that is accessible to everyone on the billing system and possibly include tips on how to save water.	
	Response: Mr Ward's suggestion was noted by eThekwini officials.	
d)	Mr Norman stated that Ncwabeni Dam was approved 5 years ago, and is desperately needed. He requested Ms Masefield to provide clarity as to when Ncwabeni Dam will be built.	
	Response : Ms Masefield explained that the project needs funding and is awaiting confirmation. She is aware that the project is a priority according to the information received from the Infrastructure Branch. The project is ready for the design phase.	
	Mr Mabuda added that the Minister has approved the project and was handed over from planning to implementation. It is now going for detailed design and thereafter construction, this is however dependant on the availability of funds. The project has also been highly prioritised due to water scarcity in that part of the country.	
e)	Mr Norman stated that the EIA for Ncwabeni Dam is dated 2012. He requested commentary on the timeframes.	
	Response : Mr Schroder explained that there were challenges as a result of the 2014 EIA regulations by the Department of Mineral Resources (DMR), which require mining permits for the borrow pits and for the work which will be done inside the dam before it is inundated.	
6.3	uMngeni Ecological Infrastructure Partnerships (UEIP)	
	Dr Pearl Gola stated that the focus of UEIP is to invest in ecological infrastructure to supplement built infrastructure in decision making and policy development. She shared details of projects, timeframes for implementation and role players.	
	No questions were raised after this presentation.	
The	following comments were raised and discussed:	
a)	Mr van Wyk indicated that the project should be able to provide the link to water balances with measurable indicators. He stated that this could be achieved with the involvement of Water Resources Planning.	
	Response: Mr van Wyk's comment was noted, with thanks.	
6.4	Raising of Hazelmere Dam	
	Mr van Wyk stated that the raising of Hazelmere Dam is still on track. Hazelmere Dam can now store water up to 2 metres above the previous full supply level. The releases from the Hazelmere Dam were curtailed in November 2016 in order to allow impounding. He shared some of the project technical details as follows:	
	 Increase in gross storage capacity from 23.9 to 43.7 million m³. Augment the water supply to the North Coast WSS. 	

	ITEM	ACTION
	 Increase water availability by 10 million³/a. The anticipated project completion date is November 2017. 	
	Mr Meier confirmed that Umgeni Water have been given permission in February 2017 to raise the dam up to 2 metres above the original full supply level which equates to 127% of the original dam volume. The dam volume at the original full supply level had a yield of 55 Mł/day. Currently, Umgeni Water is treating 55 Mł/day, so they are running at the yield value with that extra 27%. They have not yet calculated what it will take the yield up to, but it will be over 60 Mł/day. So, Umgeni Water will be abstracting less than what the dam can yield (although the yield is assumed). The dam is currently at \pm 73 % of the full supply level.	
	No questions were raised after this update.	
6.5	Implementation of Lower Thukela Bulk Water Supply Scheme (BWSS)	
	Mr Meier provided the following update:	
	 Lower Thukela BWSS is a 55 Mt/day water treatment plant which abstracts water from the Thukela River. The scheme will supply water as far as Ballito (including areas within iLembe DM, Mandeni and KwaDukuza LMs). Although the scheme can supply water to the northern areas, it has only been designed and constructed to supply water to the southern areas of Thukela River. The official commissioning date was December 2016. They are currently supplying 25 Mt/day to North Coast. They are busy filling up the gravity pipeline which goes as far as Stanger. Water is currently being sent down to the north coast using a manual process, i.e. not yet automated. They are planning to send water to Mvoti and Honolulu Reservoirs (near Shaka's Rock). They have the ability to send water further if required. There will be a 3-month period when they will run the plant and build it to a fully automated state of 55 Mt/day. They are expecting the plant to be fully operational at the end of May 2017. Umgeni Water is also currently looking at Phase 2 of the Lower Thukela BWSS. Therefore, Umgeni Water will prepare a design brief, which is an intention to undertake the design of the project which will be implemented when needed. This will enable them to supply northern areas when required. 	
6.6	eThekwini Remix Project – Pilot Plant	
	Ms Joseph presented an update on the eThekwini Remix Project – Pilot Plant. She highlighted the following key points:	
	 Current studies underway by eThekwini Water and Sanitation (EWS) to assess Inner City Water Demands indicate a demand of approximately 65 Ml/day A visit in March 2013 by EWS and Umgeni Water to Japan to see the technology led to a Memorandum of Understanding being signed between Hitachi and EWS. 1st Phase Demonstration plant – 6.25 Ml/day Ultimate capacity potential of the plant – 100 Ml/day 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 	

	ITEM	ACTION
	 will be the first plant in the world of this kind. If the plant is proven successful, EWS will expand to 100 Ml/d. Feasibility study is complete and the council has given approval of the project. The implementing agent has appointed the EIA and marine specialist consultants. They are in a process of appointing a civil consultant. 	
The f	ollowing comments were raised and discussed:	
a)	Mr Ward stated that the target date for the full implementation of the eThekwini Remix Project is the same as the target date for the uMkhomazi Water Project, 2023. He was of the opinion that it does not make sense to have both projects coming online at the same time and spending capital on both projects. It might be worthwhile to operate it for a short time but due to the energy requirements, it may fall out of use. It could also possibly work as insurance but the two projects will definitely overlap.	
	Response : Mr Moodliar explained that inner city demand presented is separate from the demand which has been included in uMkhomazi Water Project. As such, they are two separate projects. Secondly, at the previous SSC meeting, it was stated that the possible date for the commissioning of uMkhomazi Water Project is 2026. Recognising the systems in place, 2026 could only be realised in 2028 or 2030. Apparently, the Minister of Water and Sanitation has not signed-off the project and have been waiting for the past 12 months. Major delays can be expected and eThekwini is unsure of how to react in the interim.	
b)	Mr Mabuda asked Mr Moodliar if the project is bankable and whether funders can still be assured that it is the right thing to do.	
	Response: Mr Moodliar confirmed that eThekwini supports the project and are prepared to pay for it. The major concern are the delays which have serious implications for eThekwini.	
c)	Mrs Jones stated that the eThekwini Remix Project is appreciated. She stated that are a lot of environmental issues with bulk infrastructure projects e.g. positioning, pipes under the harbour and access through the coastal forest from the military site, etc. It is good that eThekwini has accepted the project in principle and eThekwini will need to be supported to make the project a success and be able to satisfy the inner city water demand. She however cautioned that there are issues that will need to be dealt with through conducting environmental studies. She mentioned that given current information, she cannot see the height above sea-level and how climate change component has been factored in. From the drawings, the remix plant does not appear to be high enough to fit in with Dr Debra Roberts overall Climate Change plan.	
	Response : Mr Moodliar stated that an EIA consultant has been appointed. There is also a marine specialist who will assist the EIA consultant. There were two public participation engagements which were undertaken during the pre-feasibility study.	
	He provided clarity on the status of pipes:	
	 Pipelines to the sea, under the harbour - this is an existing pipe. Water pipe under the sea - it is an existing pipe which is within the service tunnel (500m diameter) Sea outfall - this is an existing pipe. An extraction pipe will be the new pipe that will be installed about 2 km out to sea. 	

	ITEM	ACTION
	Regarding sea-level rise; the senior engineer, Mr Rob Dyer is busy with the research document on sea-level rise that should be completed within the next few months and all these reports will be encapsulated in the EIA.	
7	STATUS AND WAY FORWARD WITH PRIORITY INTERVENTIONS	
7.1	uMkhomazi Water Project	
	 Mr van Wyk provided feedback on the status of the uMkhomazi Water project. His presentation highlighted the following key points: uMkhomazi Water Project was originally planned to be completed by 2023. There are issues with blue swallows and biodiversity issues. Other possible delays include mining permits from DMR, extension of the contract and associated variation order. Environmental authorisation is required from DEA - expected in May 2017. This timeframe excludes time which might be required to deal with appeals. Mining permits from DMR - expected in Dec 2017. Compiling a submission for the appointment of TCTA to do preparatory work and implement 	
	 scheme (critical for recovering/fast tracking). Design period: 2019 – 2023 which includes additional geotechnical work. Construction to start by 2023 and water delivery will be achieved by 2028. <i>No comments were raised after Mr van Wyk's presentation.</i> 	
7.2	Re-use of water via Hazelmere Dam	
	 Ms Joseph highlighted the following key points: EWS is looking at Re-use of water via Hazelmere Dam as a result of the DWS Classification Study which was undertaken within Mvoti to Mzimkhulu catchments. The study classified each of the water resources in order to find what is the required level of ecological protection and to regulate the quality and quantity of effluent that could be disposed into the various estuaries. 16 of these estuaries are within eThekwini. The study indicated that Umdloti estuary is not doing well and the ecological state needs to be improved. As a result, eThekwini is only allowed to discharge 50 Mt/day. This limit is low considering that eThekwini needed to discharge 125 Mt/day. For the uTongati Estuary, the study indicated that the recommended ecological class can only be achieved if no wastewater is discharged into the estuary. The ultimate capacity required by EWS is 140 Mt/day eThe kwini then resolved to finding alternatives for their wastewater discharge. The three options considered by EWS include: Option 1 - Releases for Hazelmere Option 2 - Pumping to Hazelmere Option 3 - Sea outfall 	

	ITEM	ACTION
7.3	Lower uMkhomazi BWSS	
	 Mr Meier reported that Umgeni Water EXCO selected the Lower uMkhomazi BWSS for further implementation as opposed to large-scale Desalination Plant. The large-scale Desalination Plant will however be kept as an option for long-term development and long-term augmentation of the south coast. The EIA is continuing on this project, although there is a need to undertake additional environmental work on the weir that will abstract water for the dam. In the interim, a tender for the design of the scheme was issued and is currently being evaluated. Construction should commence before August 2018. No comments were raised after Mr Meier's presentation. 	
8	WAY FORWARD WITH ALTERNATIVES AND FUTURE INTERVENTIONS	
8.1	Alternative interventions	
	By way of introduction, Mr Schroder stated that this item refers to those interventions where more investigation is still needed to understand the potential of quantities of water. He focussed on Rainwater Harvesting as an alternative intervention and made the following key points:	
	 Rainwater harvesting has been an identified intervention since the beginning of the Reconciliation Strategy; There is an unknown number of installations with no existing formal implementation programme; Due to the drought, rainwater harvesting is gaining popularity and momentum. Current levels of ad-hoc implementation of Rainwater Harvesting are already accounted for in actual supply volumes. Reasonable amount of research is available at household level. Impact and volumetric benefit, at a catchment scale, for inclusion in water balances still needs to be better quantified. A summary of information presented is provided as Appendix B, which was also shared separately with all SSC members via a dropbox link. 	
8.2	Possible Future interventions	
	 Mr Schroder briefly explained all possible future interventions, which included the following: Direct re-use of treated wastewater (eThekwini MM) Desalination of seawater (Umgeni Water) Mvoti River Scheme – iSithundu Dam (DWS) uMkhomazi Water Project: Phase 2 – Impendle Dam (DWS) Thukela Water Project (Milietuin or Jana Dams) Mzimkhulu River Development (DWS) A summary of information presented is provided as Appendix B, which was also shared separately with all SSC members via a dropbox link. 	

	ITEM	ACTION
The	following comments were raised and discussed:	
a)	Mr Gillham commented on Rainwater Harvesting by stating that there a lot of people who have invested in rainwater tanks but many of those people are not connected to the system. As such, it needs to become part of house plumbing to be effective.	
	Rainwater Harvesting is currently not adding a lot of value in terms of reducing consumption around the households, hence it is important to do surveys going forward.	
	Response: Mr Gillham was thanked for his valuable contribution.	
b)	Mr Holland reflected on the interventions that have been presented at the meeting. He complimented the team and confirmed that such interventions are needed. He then deliberated on the issue raised by Mr Meier and Ms Masefield which highlighted that even if you can build dams, if there is no rainfall, there is a problem as dams will remain empty. He indicated that he would like to add to the "mix of options" for DWS and eThekwini to consider.	
	He stated that most of the information influencing water requirements comes from the development potential, e.g. North Coast developments influencing future water requirements. The demand for all the infrastructure development, including dams, is built upon these figures.	
	The route that has been taken by eThekwini regarding re-use is supported. It therefore becomes important for eThekwini to recognise that they will have to assume a particular role when permission for particular developments in the North Coast.	
	As an example, Tongaat Hulett, a development giant which is involved in massive development in the North Coast area is not being asked or pressurised to consider re-use of water and/or rainwater harvesting (although they pay homage to it) for their water supply. The mandate of the developer does not talk about water scarcity and provision for dealing with water requirements in the future. He then questioned why eThekwini is not engaging developers to deal with the water problem?	
	Cornubia development could be implementing re-use options as implemented by Siza Water. Ballito area is using Siza Water through a Public Private Partnership (PPP) and is reasonably successful.	
	He then suggested that eThekwini should engage developers to deal with water issues as they have the resources and a highly proficient engineering component, which is also recognised as one of the best in the country. There is a need to start bridging the gap between available expertise and water challenges.	
	Response : Mr Holland's comments and suggestion for inclusion in the mix of options was appreciated, for further consideration as part of the strategy.	
c)	The comment raised by Mrs Jones under Item 5.1 (a) referring to Desalination Plants was revisited and Umgeni Water provided a response.	
	Response : Mr Meier stated that the east coast Desalination Plant that was planned in Illovo River is not on a floodplain, but outside of a 100-year flood plain. Umgeni Water originally considered alternative electrical supplies to the plant, but ultimately, Umgeni Water is not in the business of making electricity but in the business of making water.	
	What was resolved on that point is that if going out on a PPP or something similar, Umgeni Water would construct one of these plants and then invite tenders to offer electricity solutions at the cheapest	

	ITEM	ACTION
	available cost. Currently, buying electricity in South Africa remains cheaper than electricity which they (Umgeni Water) can produce using solar panels, etc.	
	Umgeni Water prefers to leave electricity generation technology with the companies that are specialising in it and then buy electricity from the grid. Umgeni Water would consider piggybacking a desalination plant plus generation of electricity if it comes at a lower cost.	
d)	Regarding the uThukela Water Project, Mrs Jones asked if fracking and its associated dangers were discussed. She is mindful of the fact that some dangers are inherent and some are unknown.	
	She stated that there is quite a huge reliance on Thukela catchment and fears for the future if more and more is put onto that system. Furthermore, there is no discussion of projects which are already running the fracking business (which are being proposed for the future).	
	She questioned if it would not be appropriate to add this component to the feasibility study as it poses a threat to the catchment.	
	Response: This comment was noted for consideration.	
e)	Mr Norman stated that there is a need for environmentally friendly developments such as use of grey water. This needs to be put into practice through legislation and/or regulations (both at national and provincial levels).	
	Every new development needs to be designed to use as little water as possible. He acknowledged that this is not going to happen at local government level because developers will say it will cost too much. This input is required from both national and provincial levels to ensure that 'green' developments are enforced.	
	Response: Mr Norman was thanked for his suggestion and contribution.	
9	WAY FORWARD FOR IMPLEMENTATION AND UPDATE OF RECONCILIATION STRATEGY	
	As part of way forward, Mr van Wyk stated the following:	
	• Valuable input has been received with some elements which need to be elevated more to a policy level.	
	 Acknowledged that good progress has been made throughout the years but there is still a lot of work to be done. 	
	 He then handed over to Mr Schroder to present the "Way Forward for Implementation and Update Reconciliation Strategy". 	
	Mr Schroder presented the "Way Forward for Implementation and Update Reconciliation Strategy" through the following key points	
	Drive key initiatives by core stakeholders:	
	• WSAs to continue with implementation of WC/WDM initiatives. This is the most cost-effective - we cannot afford not to.	
	 Operating rules need to be carefully implemented (or else we risk supply to basic human needs and economic activities). 	
	 Issues around uMkhomazi Water Project – Smithfield Dam need to be addressed. If this project is delayed, the risks are significant. 	

	ITEM	ACTION
	 Re-use of water on North Coast (uMdloti & Tongaat) requires institutional arrangements & monitoring of effluent growth. Design of construction of Lower uMkhomazi BWSS according to program, to augment South Coast and reduce load on Mgeni WSS. 	
	Drive the initiatives requiring greater community participation:	
	 Protection from further degradation and rehabilitation of catchments to maintain water quantity and water quality. Currently spearheaded by UEIP, but needs to spread to other areas and institutions. Rainwater harvesting has gained momentum through the drought. The need and potential benefit of formal programs to support ad-hoc installations by the private sector to be better quantified. The more the general public buy-in to and become involved in the above two activities, the greater the impact. The same can be said to apply for awareness and buy-in to the Strategy as a whole. Water is becoming everyone's responsibility! 	
The f	following comments were made:	
a)	Mr Norman stated that he appreciated the final slide which says " <u>Water is becoming everyone's</u> <u>responsibility</u> ". He then asked when is DWS going to do a national poster campaign to increase public awareness and populate the message. Response : Mr Mabuda indicated that the department is going to put together a National Water and Sanitation Master Plan which will look at a broader scale. It will be more aligned to the National Development Plan of the country and will draw from the work collated as the Reconciliation Strategy was developed and other relevant strategies. Once this is in place, as a nationwide effort, it will include administrative agreement on water and sanitation where the Minister and various other leaders in government and relevant entities will have a document that they can sign and commit to. As far as the Reconciliation Strategy is concerned, there was also request to put together a map that can summarise all the work done thus far and possible features in the various systems and sub- systems. SSC members must act as advocates in spreading Reconciliation Strategy information to relevant stakeholders and institutions represented.	
b)	Mr van Wyk stated that spreading the word on water challenges is not only the work of DWS or the water authorities but it is everyone's responsibility. He encouraged members to lead by example and be involved in ecological infrastructure initiatives in their personal capacity.	
c)	Mr Padayachee representing KZN COGTA suggested that the Joint Operating Committee should continue to meet as it provides a useful information sharing platform.	
d)	Mr Nkontwana indicated that the work that has been done by the SSC should be shared at a SALGA platform. They would be keen to invite one of the technical members or representative to update their SALGA members.	

	ITEM	ACTION
10	COMMUNICATION	
10.1	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, which will be considered for the next phase.	
10.2	Way forward with communication of the Updated Strategy	
	Mr van Wyk stated that documents can be accessed from the website as soon as they are finalised. Communication will be issued in this regard.	
	• He reminded SSC members that further comments on the Strategy should be submitted before 10 February 2017.	
	• The official closing date of Phase 2 of the project is 28 February 2017.	
	I he publishing of Opdated Strategy on DWS Website will signal the end of this phase.	
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.

Annexure B: Presentations

Subsequent to the SSC Meeting 11, all presentations were shared with SSC members via a dropbox link.