



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Gazette Issues and Responses Report

Mvoti to Umzimkulu WMA Classification Study

Classification of water resources and determination of the comprehensive reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area

ISSUES AND RESPONSE REPORT FOLLOWING 60-DAY GAZETTE NOTICE

JANUARY 2017

This Issues and Responses Report (IRR) captures the issues raised by stakeholders during the 60-day Gazette period for the classification study of significant water resources in the Mvoti to Umzimkulu Water Management Area (WMA). The purpose of this report is to ensure that the concerns and comments raised by stakeholders are noted and adequately and satisfactorily addressed. This study was commissioned by the Department of Water and Sanitation (DWS) in the period between July 2012 and January 2016. The report will form part of the supporting documentation of the IWRM template that will be submitted to the delegated authority of DWS with the recommendations on the approval of proposed Water Resource Classes.

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>1 Letter from Duzi Umngeni Conservation Trust (DUCT)</p> <p>CLASSIFICATION OF WATER RESOURCES AND DETERMINATION OF THE COMPREHENSIVE RESERVE</p> <p>IN THE MVOTI TO UMZIMKULU WATER MANAGEMENT AREA</p> <p>The "PROPOSED CLASSES OF WATER RESOURCES AND RESOURCES QUALITY OBJECTIVES WITH THE ACCOMPANYING RESERVE FOR THE CATCHMENTS FOR THE MVOTI TO UMZIMKULU", published under Notice 724 in <i>Government Gazette</i> 40075 of 17 June 2016 ("Notice 724") has reference.</p> <p>The Duzi Umngeni Conservation Trust, DUCT, (an NPO, with a specific focus around the health of the uMsunduzi and uMngeni Rivers – see http://duct.org.za/), respectfully wishes to comment on the above-mentioned draft legislation. As an Interested and Affected Party (IAP), DUCT has had an active role in the drafting process leading up to the publication of Notice 724, having made submissions at various stages and attended public meetings held by the Department of Water and Sanitation (DWS).</p> <p>We have the following comments and concerns:</p> <p>1 Comments:</p> <p>1.1 Inadequacy of the classes of water resources and resource quality objectives proposed in Notice 724 to meet water resource protection requirements prescribed by the National Water Act 36 of 1998 ("NWA") for the amongst others the uMngeni Catchment:</p> <p>Context</p> <p>Chapter 3 of the NWA prescribes the measures that must be developed and implemented by the Government of South Africa to "protect water resources comprehensively" in the context of the sustainable use, development, conservation, management and control of resources. To achieve this the minister is required to "prescribe" a process, including establishment of guidelines and procedures, for the classification of water resources which incorporates the determination of the Reserve and balance the use and protection of water resources in accordance with the class through Resource Quality Objectives ("RQOs"). Section 1 of the NWA defines Resource Quality (in the context of RQOs) as the quality of all aspects of a water resource including:</p> <ul style="list-style-type: none"> (a) the quantity, pattern, timing, water level and assurance of instream flow; (b) the water quality including the physical, chemical, and biological characteristics of the water; (c) the character and condition of the instream and riparian habitat; and (d) the characteristics, condition and distribution of the aquatic biota. 	<p>1.1 DWS has many mechanisms (as defined by the National Water Act) other than the Water Resource Class and RQO tools, to manage and protect the water resources. All information produced in the study serves the purpose of informing management activities, with the published WRC and RQOs being for significant resources only.</p> <p>In the Mvoti to Umzimkulu WMA, DWS followed the approach to classify by using the information and resources that were available rather than to delay and postpone the setting of protection targets.</p> <p>Lack of RQOs for wetlands and the Mngeni Estuary: The decision was made not to include RQOs with lower confidence information in the gazette as indicated above. All the wetlands mentioned were of high (very) ecological importance, but were defined as low priority RUs as there were no development demands on these. Priority of RUs does not equate to biodiversity or conservation importance. Therefore, wetlands were evaluated at a broad scale and as none of the wetlands were impacted on by future scenarios, further detailed work was not undertaken.</p> <p>Available information from previous studies on the Mngeni Estuary was used for this study. However, EcoSpecs (habitat and biota RQOs) were not assessed as part of previous studies. There was an initiative by Ethekwini Municipality to update the preliminary Reserve and to include the assessment of EcoSpecs. As this information became available after the finalisation of the project, it may now be gazetted as part of the Reserve which happens after Classification.</p> <p>Dams: RQOs for dams have not been included in the Letaba, Inkomati and this study in terms of inundation levels. However, they are included in terms of hydrological RQOs. The EWR for EWR sites provides the hydrology RQOs upstream and downstream of the dams. Other</p>

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<p>As such, all of these considerations must be taken into account for the uMngeni Catchment for ALL water resources, which, as defined in Section 1, include rivers, wetlands, groundwater, dams and the uMngeni Estuary.</p> <p>In March 2011, the Department of Water Affairs (now DWS) published guidelines for the development and implementation of RQOs for water resources in South Africa titled the "Procedures to Develop and Implement Resource Quality Objectives" ("2011 DWA RQO Guidelines"). Considered to be best practice, these procedures have been applied in numerous other RQO studies (for example: the Olifants-Doring, Olifants, Upper, Middle and Lower Vaal – see https://www.dwa.gov.za/rdm/wrcs/) and their application was specified in the terms of reference (TOR) for the study required to determine the Classification of Water Resources and Determination of the Comprehensive Reserve in the Mvoti to Umzimkulu Water Management Area ("the Study"). However, it is submitted that the RQOs proposed in Notice 724 have not been determined using best practice as the Study undertaken for their determination did not apply the DWA 2011 guidelines.</p> <p>1.2 Notice 724 does not consider all significant water resources as required by the NWA: The 2011 DWA RQO Guidelines identifies rivers, wetlands, groundwater and estuarine ecosystems as significant water resources that should be considered for RQO determination. During the implementation of the guidelines through selected and previously gazetted studies (again, for example: the Olifants, Upper, Middle and Lower Vaal, see https://www.dwa.gov.za/rdm/wrcs/) dams have been included in addition as significant water resources that should be considered in RQO assessments. The RQOs being proposed in Notice 724 do not provide for wetlands, groundwater, dams and the uMngeni Estuary. It is acknowledged that additional RQOs are provided for the rivers, wetlands and groundwater ecosystems for catchment in the final reports of the projects as recommendations (DWS, 2015A,B,C and D), but that these recommendations were not taken forward in Notice 724. If these RQOs are not gazetted, they remain as mere recommendations and there is no legal validity in these. As such the proposed RQOs are not based on sound reasoning and that the Minister, if considering only the proposed RQOs, and not taking into account other relevant information for other resources, will not be applying sound reasoning and in accordance with the NWA.</p> <p><i>Specific importance of establishing RQOs for dams in the uMngeni Catchment:</i></p> <p>The determination of RQOs for dams in this WMA is of particular importance as within this working catchment the Water Services Authority (WSA) are totally dependent on the suitable management of the dams for the provision of Water for Basic Human Needs (for the major urban centres of KwaZulu-Natal including the eThekweni and Msunduzi Municipalities), and to meet the Ecological Reserves for the rivers, and other formal use of water in the catchment. Again it is acknowledged that the E-flow requirements in the rivers will provide guidance to regulators for the management of dams, but without specific RQOs</p>	<p>RQOs will not be relevant in terms of gazetting as only <u>high confidence outcomes</u> are included in the gazette. This decision was made by the Legal Department in DWS post the Vaal and Olifants RQO gazettes being finalised. The only high confidence information available is in terms of the EWRs which must be managed from the dams as provided above.</p> <p>Dams and BHN: Any water supplied from a dam does not comply to the definition of BHN. BHN is calculated for users with no access to formal water supplies. The BHN will be included in the Reserve to be gazetted post the gazetting of the Mvoti Water Resource Classes and RQOs (RDM/WMA11/00/CON/CLA/0212, BHN report).</p> <p>1.2 The RQO guidelines are only as such, guidelines, and while they may have been best practice at the time written, the guidelines did not cater for application of approaches at the WMA scale. Adjustments have therefore been made during the applications of various Classification and RQO studies. In summary in terms of RQOs; it is important to note that only high confidence information in terms of the aquatic ecosystems will be gazetted.</p> <p>In summary: The Department is always improving on approaches and apply adaptive management, i.e. Learning by Doing. As such, all the Lessons Learnt during these studies have been applied in subsequent studies and these examples which have been used in the letter cannot be seen as a fixed way of presenting RQOs.</p> <p>1.3 Regarding the issue of terminology re: comprehensive Reserve: This was dealt with on a technical level in the Inception report (RDM/WMA11/00/CON/CLA/0112). This has also been dealt with in detail in the various responses provided in the IRR that was documented throughout the course of the study. Just to cite a few, see below extracts from the said IRR:</p>

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<p>for the dams (which are available in the RQOs for the Olifants WMA for example) these resources will not be afforded adequate use and protection requirements as stipulated by the NWA. Operational rules for the storage and release of water, and management of the dams for ecological and economic benefit, with consideration of the safety of the water and fish in the dams should be addressed (as has been gazetted in the Olifants WMA RQOs). Note: that the scope of the study included the requirement to establish RQOs for significant water resources. As precedent has already been set where other similar studies considered dams as significant water resources, and they are particularly important in the Umgeni Catchment, they should have been considered and the current proposed RQOs in Notice 724 is therefore inadequate in this respect.</p> <p>As indicated, for the gazetted RQOs to make a positive contribution to the management of ALL of the important water resources in the Water Management Area, important estuarine and wetland ecosystems should be considered. Some of these ecosystems were considered in the study behind the derivation of these RQOs, albeit in low confidence. However, these RQOs have not been included in Notice 724 which suggests that the RQOs proposed may be insufficient to adequately manage water resources in the WMA. Specific shortcomings are as follows, and which specifically relate to resources and published documents from the same study which underpins the derivation of the proposed RQOs and available from the DWS website:</p> <p>Consideration of RQOs for Wetlands (specifically https://www.dwa.gov.za/rdm/wrcs/Doc/Wetland%20RQOs%20Report_Final%20Draft_July%202015.pdf):</p> <p>A comprehensive document – “Volume2: Wetlands Resource Quality Objectives” was produced from the same study which underpins the derivation of the proposed RQOs but these RQOs were not included in the proposed RQOs for gazetting. Additionally:</p> <ul style="list-style-type: none"> • Assessment was done at a desktop level using available data, with determination of the Present Ecological State: Ecological Importance and Ecological Sensitivity (PES EIES) at a quaternary catchment scale. Many of these were rated as C, C/D and D. • High priority individual wetlands were selected to determine detailed RQOs. These four wetland systems are: <ul style="list-style-type: none"> • The Ntsikeni wetland, a RAMSAR site within -quaternary catchment T51H-04846. • The uMgeni sponge, a RAMSAR site within -quaternary catchment U20A-04253. • The Swamp, a priority KZN Ezemvelo wetland monitoring site located on the Pholela River within sub-quaternary catchment T51E-04478; and • The Mvoti Vlei, a priority KZN Ezemvelo wetland monitoring site located on the Mvoti River within sub-quaternary catchment U40A- 03869. <p>These wetlands have baseline EcoStatus and other monitoring data available, but no RQOs are being gazetted based on this information.</p>	<p>PSC Meeting 1 held on 19 March 2013 at Durban Jewish Centre, Mr Yakeen Atwaru (Director, Reserve Requirements) explained that “the low level of the Reserves is determined to a large extent by the quality of data. DWA is using public funds (which have a limited budget) and has to rationalise the use of these funds. It is a fact that covering the whole study at a comprehensive level will have high costs, time and resource implications. Therefore, in order to try and rationalize this, a prioritisation process was followed to identify hotspots (high priority areas) and will be the focus of detailed investigations (intermediate or comprehensive). The low confidence studies are useful to the Department because they enable decision making for water use licences, mainly for low impact uses. The way DWA deals with this is that we look at it from a progressive approach, so it does not mean that the entire WMA will not be covered at a comprehensive level; we will relook it at a national level and compare to other studies running in other provinces, throughout the country. We are also looking at ways of effectively using public funds.”</p> <p>PSC Meeting 226 November 2013 Durban Country Club, Ms Delana Louw (PSP study team leader) explained that “the Rapid, Intermediate and Comprehensive methods represent different methods of detail. These different methods are potentially linked to confidence, i.e. the more detailed methods are expected to have higher confidence, but this is not necessarily always the case. For example, if you do not have good hydrological data (as an example, if there is no gauge on the system or any other data) you can do as much detailed work as you can but you may still not end up with high confidence.</p> <p>Regarding desktop level, there are desktop models that have been built to estimate these requirements, so, it entails no field work. The rapid level that was undertaken</p>

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<p>Consideration of RQOs for Estuaries specifically: https://www.dwa.gov.za/rdm/wrcs/Doc/Estuary_RQO_Final%20Draft.pdf The study for the derivation of the proposed RQOs used Ecological Water Requirements (EWR) results from previous studies at ten of the sixty-four estuaries in the Mvoti-Mzimkulu WMA. It was stated in the Inception Report that a comprehensive desktop study would be conducted for these ten estuaries, and this would be followed by a more detailed study in the form of field surveys for 7-10 estuaries, in order to improve overall confidence. As such the PSPs study was limited and does meet the intentions of the Act · Again, Volume 4: Estuary Resource Quality Objectives – Comprehensive document, yet the RQOs for this water resource were not included in the final proposed RQOs.</p> <p>Consideration of RQOs for Groundwater resources specifically: https://www.dwa.gov.za/rdm/wrcs/Doc/Groundwater%20RQOs%20Report_Final%20Draft_%20March%202015.pdf A comprehensive document, which was part of the series of documents produced during the derivation of the proposed RQOs, entitled “Volume 3: Groundwater Resource Quality Objectives”. These RQOs were not included in the proposed gazetting of RQOs.</p> <p>Collectively these are significant shortcomings with respect to the RQOs proposed in Notice 724 which require the RQOs to be revised prior to them being set in law.</p> <p>1.3 Concerns that these low to moderate confidence objectives will be gazetted and their misuse of the term “Comprehensive” in the Reserve, Classification and RQO determination process: Numerous concerns that the TOR of the Reserve, Classification and RQO study required “Comprehensive Reserve Determination” (as a pronoun) procedures to be undertaken with associated use of this confident information in the Classification and RQO determination procedure has not been undertaken. Many stakeholder engagement meetings have identified this shortcoming which is documented in the steering committee and stakeholder minutes throughout the study (see https://www.dwa.gov.za/rdm/wrcs/ specifically Classification of water resources and determination of the comprehensive reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area. ISSUES AND RESPONSE REPORT. 14 April 2016). Specific issues extracted from the Closing Report: Reserve determination The TOR indicated a Comprehensive level of Reserve assessment. It was assumed that this implied comprehensive in terms of the coverage of study area and did not refer to the Comprehensive Ecological Reserve Methodology (CERM).” – This point was brought up several times, as recorded in the Issues and Response Register, and queried at length by amongst others, DUCT, consider submitted comments of 12th December 2013 and 21st</p>	<p><i>for these sites represents the most detailed rapid level. The focus is more on the base flow or low flows, so, you have fewer specialists involved. However, one still does the same field work but the process of setting the flows is different in that one uses the desktop models to determine a flow. This is then verified and adjusted based on the available data. A flood component set by the riparian vegetation specialist was added to the method to increase the level of confidence.</i></p> <p><i>For the intermediate and comprehensive levels, field work is undertaken: all disciplines involved would go through the full process of using the tools that are available to set flow requirements. The only difference is the level of field work that changes, i.e. more detailed for the intermediate and comprehensive levels.</i></p> <p><i>The different levels are aided by the results of the hot spots determination presented at the first PSC meeting. Hotspots represent areas that require detailed work and studies due to their water resource use, and their ecological and socio-cultural importance.</i></p> <p><i>As an example, for the uMkhomazi River where there is a big change, such as a dam that will be built, there is obviously going to be a large water resource use importance, the river is in a good ecological state and there is some social cultural importance. This immediately comes out as a hotspot. By implication, this means one should be looking at doing intermediate or comprehensive reserves. In contrast, if one has an area that has a very high ecological importance but has no water resource use importance, this implies that there will be no demand made on that system. Therefore, there is no need to spend a lot of effort on investigations; rather relying on a desktop study.”</i></p> <p>DWS response to an email dated 11 June 2014 from Mr</p>

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<p>August 2014.</p> <p>Additional comments:</p> <ul style="list-style-type: none"> · March –April 2013 – the use of the term “Comprehensive” was queried by stakeholders. · Throughout 2013, this query was made at various stakeholder meetings and PSC meetings · The Project team responded with an explanation that not all water resources will be studied at the same level of detail and that is what determines whether it is Rapid, Intermediate or Comprehensive. It was explained that it is not practical for the entire WMA to be subject to a Comprehensive Reserve methodology but certain critical nodes will have to be subjected to this method so that confidence levels would be high. · DUCT also raised this issue via an e-mail in December 2013 and expressed his dissatisfaction with there being gaps in the study, as certain critical points/areas in the catchment, were not being prioritised, such as downstream of Inanda Dam. · E-mail from Bill Pfaff (Ethekeeni Water and Sanitation) with regard to this study being largely desktop and the implications of the low confidence levels, bearing in mind that strategic decisions are going to be made based on this (11 June 2014). <p>None of these queries have been addressed to the satisfaction of the stakeholders, yet the study proceeded despite its procedural and technical deficiencies. This RDM process will have far reaching consequences to a wide range of stakeholders including formal water resource users and the environment, with potentially associated high economic cost.</p> <p>The argument that the limited financial resources available for the study to the PSP did not allow the TOR to be met is unacceptable.</p> <p>Our concern is that these RQOs are inappropriate for the regional management of water resource use in this river system and associated estuary, and that if formal users successfully challenge this RDM process, all of the Classes and associated RQOs for the system will be invalidated. Society and particularly DUCT will then lose this opportunity to establish a suitable balance between the use and protection of our resources through this process.</p> <p>1.4 The study did not adequately use existing information which would have improved the confidence of this rapid and intermediate confidence assessment:</p> <p>There are numerous studies that have been completed/are being completed in the WMA which could have made a positive contribution to the RQO determination process that were not addressed in the Study. Including:</p> <ul style="list-style-type: none"> · SANBI has been involved in the uMngeni Ecological Infrastructure Partnership (UEIP) and projects within this partnership are rehabilitation projects, Palmiet Rehabilitation, Save Midmar, Baynespruit Rehabilitation. This work has not been considered. · The University KwaZulu Natal (UKZN) and Durban University of Technology (DUT) have a 	<p>Bill Pfaff (eThekweni Metropolitan Municipality)</p> <p><i>“Classification is a robust framework in which future management and planning can take place. Previous studies that took place refer to the Reserve studies on various estuaries. Classification incorporates Reserve results and Reserves would not be undertaken differently as part of classification (referring to the statement in the third paragraph).</i></p> <p><i>There seems to be a serious misconception of the relationship between confidence and level of Reserve undertaken. These will be further explored and clarified during a technical task group meeting to which PSC members will be invited to.</i></p> <p><i>Comment on the reference to the Desktop Estuary report of the constraints imposed by lack of long term monitoring data etc: The lack of sufficient gauging structures and instruments (both water level and flow gauging) is acknowledged and steps are being taken by the appropriate directorates in DWS to address these issues. Irrespective of when these instruments are installed, the results would be insufficient to make any changes to the Reserve determination as part of the NWRCS. Taking into account the robust framework which the NWRCS represents, the confidence of these results is suitable to undertake Classification.</i></p> <p><i>With respect to the third last paragraph the following: It is assumed that data collection refers to the water level, hydrology and water quality data as discussed above. It is not the domain of the Directorate Classification to collect this data, but the Directorate can certainly support and encourage this data collection.</i></p> <p><i>With reference to the request for the assignment of confidence levels the following: All EWR reports document the confidences of different types of information in detail as a standard”</i></p> <p>Expert opinion on the confidence issue provided</p>

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<p>number of students and academics involved in projects within the WMA and focussing on various aquatic ecological and hydrological issues. These could have created opportunities to add value to research projects and exchange information, or academic input could add value to the setting of RQOs.</p> <ul style="list-style-type: none"> • There is also data being generated from various studies in the WMA which could have been used to supplement information that is already available. This process could also influence the type of information and data being generated so that as RQOs are being set for other WMAs nationally, and for future reserve determination studies there is mutual benefit. • In the last 18 years or so, there have been a large number of Masters and PhD theses generated with research focussed on the uMngeni catchment and possibly in the entire WMA. • Other sources of information would include Ezemvelo KZN Wildlife, WESSA, Municipal IDPs and strategic plans and provincial planning strategies and projects. • Numerous DUCT projects and monitoring of local water resources which have highlighted key areas of water quality concern etc. which would have been logical inputs to the setting of RQOs for this study <p>Through various stakeholder meetings and the project Steering Committee, the team that undertook the Study have been made aware of these studies and the data and information from them have been offered to the project team, yet they made no effort to make use of them. The lack of incorporation of many of these studies, data and observations around key water quality and quantity challenges within the WMA are a serious shortcoming and accentuate the limitations of the proposed gazettement of RQOs. A case in point, is the Mthinzima Stream entering Midmar Dam. The latter arguably one of the most significant water resources within the WMA. However the Mthinzima Stream has a long and unenviable record of poor water quality and this pollution entering Midmar. This site (amongst many other key sites (including the Msunduze River joining the uMngeni River, the uMngeni River below Inanda Dam, etc.) within the WMA) was not identified as a key RQO site.</p> <p>1.5 Inconsistency between previously gazetted RQOs and Notice 724: The Classes and associated RQOs gazetted as part of the NWA, 466 of 2016; 467 of 2016; 468 of 2016; 469 of 2016 and 470 of 2016 are comparable. The four previous gazetted RQOs, had consistent terminology and approaches/methodologies. This has set legal and procedural precedent. However, the terminology used, layout and importantly content of the RQOs in particular in this proposed gazettement of RQOs is unique. The inconsistency in terminology in this study will compromise the intention to address the balance between the use and protection of water resources as demonstrated in the other gazettes. Concerns</p>	<p>during a special presentation regarding the issue at PSC Meeting 5, 24 March 2015, Durban Botanic Gardens by Prof Denis Hughes:</p> <p><i>“One cannot criticise the way that EWR studies and classification studies (which he has been part of) has been done as it follows the recommended approach. There have however been numerous discussions around the confidence issue, which is highly complex and difficult to implement. This project has highlighted some of the issues relating to uncertainty and confidence. Acknowledging Mr Pfaff’s concerns, it may be necessary to develop a process to convert confidence statements into something much more useful and informative for the decision makers.</i></p> <p>1.4 Response to Comment 1.4 from a water quality perspective: The following is an extract from the water quality (rivers) section of the RQO report (RDM/WMA11/00/CON/CLA/0315) – shown in italics: <i>Mention must be made of extensive input received from the following sources:</i></p> <ul style="list-style-type: none"> ▪ <i>Umgeni Water: data from monitoring sites were used for the water quality assessment at EWR sites, and a detailed Google Earth (GE) layer of users used to inform the RQO report.</i> ▪ <i>eThekweni Municipality: Some water quality data were provided, as well as data required for the development of the following GE layers, used to inform the RQO report:</i>

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<p>particularly relate to the following components:</p> <ul style="list-style-type: none"> · The term Target Ecological Category (TEC) is uncommon and has only been used in Notice 724 and not included in any other RQO gazettes. The term Recommended Ecological Category (REC) is more common. The TEC appears to be a type of interim class that should be achieved prior to the REC which will result in unsustainable RECs as objectives. From a classification and the NWA perspective this is not permissible. These TEC's are not required in Notice 724 which provides the objective for the resource. By its very definition RQOs are objectives which allow regulators an appropriate amount of time to achieve the RQO and or demonstrate adequate improvement in the quality of the resource feature towards achieving the RQO. Thus RECs between a Class A and D should be gazetted alone as these are not requirements but objectives. · Case studies provide descriptive vs. numerical RQOs – no distinction/insufficient information is provided in the proposed RQOs. A number of RQOs are given as simply A, B, or C. <p>However there is insufficient background (giving explicit information) as to how these are achieved and what these actually mean in practise. Hence there is insufficient information to describe numerical vs narrative RQOs.</p> <ul style="list-style-type: none"> · Priority RQOs vs. secondary RQOs? In Notice 724 there are 11 Hydrological and 11 superficial WQ, geomorphology, riparian vegetation, invertebrates, and fish RQOs for rivers (i.e. 11 RQO sites). No prioritisation process spatially or prioritisation of specific components or subcomponents for the RQOs to demonstrate meeting and aligning the balance between use and protection of the resource are provided. Where is the consideration of quality, quantity, habitat and biota components (as described in other previous gazetted RQO studies) to meet water use and protection issues across catchment? · What are key priority areas/hot spots in the context of integrated management of water resources on a WMA scale? There is no demonstration of synchronisation and connectivity between RQOs spatially to achieve the Classes proposed for IUAs. There are actually contradictions in the proposed RQOs. Consider for example the critical flow requirement proposed for the Mvoti Estuary of >1 m³/s compared to the RQO requirement upstream of the estuary in the Mvoti River at site EWR 2 of >0.174 m³/s. There are many other examples of mis-matched upstream-downstream targets. It appears that no reconciliation process to align spatially connected RQOs has been undertaken. This jeopardises the validity of all RQOs proposed in Notice 724. · The paucity of EWR sites (and hence RQOs) relative to previously gazetted studies for the Classification of Water Resources and Determination of the Comprehensive Reserve in the Mvoti to Umzimkulu Water Management Area. To demonstrate this serious under-representation of RQOs sites within this proposed gazetting, a simple comparison between the number of RQOs established for the Olifants WMA and those proposed in Notice 724 	<div data-bbox="1391 193 1715 523"> </div> <p><i>Data were also received from a number of other stakeholders, e.g. the Duzi uMngeni Conservation Trust (DUCT), post-matric students from Treverton College working on the uMkhomazi, and numerous literature sources.</i></p> <p>Note that water quality data can only be used to set immediately applicable RQOs if from a long-term monitoring point with an associated database of high confidence (as per DWS requirements for setting up and monitoring against RQOs). One other important requirement is that objectives have to be in place against which to monitor. If not available, e.g. for turbidity/clarity, this developmental step must be conducted before the RQO can be used. These developmental steps are listed where required. Work such as DUCT and student data on turbidity needs to be used in the future to set up long-term turbidity databases, however, monitoring objectives related to ecological categories still need to be developed.</p> <p>1.5 In terms of reference to previous gazetted RQOs: During the preparation of this legal notice, all current comments and changes to other legal notices were considered. Lessons learnt from the Vaal and Olifants (south and north), were applied to the Inkomati and Letaba Classification studies. These were further updated after a post gazetting internal review by DWS. These outcomes</p>

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>has been made. To standardise the comparison, the number of RQOs relative to the number of major river catchments considered in the WMA has been made. Here the number of RQOs established for the single Olifants River has been compared to the RQOs in Notice 724 for nine major river systems including the Mvoti, Tongati, Mdloti, Mgeni, Mlazi, Lovu, Mkomazi, Mzimkhulu and Mtamvuna. Figure 1 demonstrates the relative comparison of the 15 to 33 RQOs in the Olifants River, compared to the 1.2 to 5.2 RQOs per river from the nine major rivers of the Mvoti to Umzimkhulu WMA and the 4 RQOs within the Mgeni River specifically. There are between 12.3 and 23 times more RQOs in the Olifants case study per river compared to the number proposed in Notice 724. Similarly, there are between 3.75 and 7 times more RQOs in the Olifants River case study compared to the Mgeni River in Notice 724. Consider also that there are between 0.33 and 0.7 RQOs gazetted per major dam for the Olifants River and no RQOs for dams in Notice 724 (Figure 2)! Also consider that only between 0.02 and 0.03 RQOs have been proposed per estuary in Notice 724 (Figure 3). These observations suggest that significantly less effort has been afforded to this RQO study and the RQOs proposed in Notice 724 compared to previously gazetted studies.</p> <p><i>Figure 1: Resource Quality Objectives per major river system for the Olifants River, the nine major rivers of the Mvoti to Umzimkhulu WMA and the Mgeni River specifically.</i></p> <p><i>Figure 2: Resource Quality Objectives per major river system for the Dams in within the Olifants River, the nine major rivers of the Mvoti to Umzimkhulu WMA and the Mgeni River specifically.</i></p> <p><i>Figure 3: Resource Quality Objectives for estuaries per major river system for the Olifants River, the nine major rivers of the Mvoti to Umzimkhulu WMA and the Mgeni River specifically.</i></p> <p>These figures and analyses highlights that RQOs for multiple spatial scales – sites (eg, dams or wetlands), RU scale and IUA (regional scale) for groundwater, rivers and wetlands for example, are inadequately represented in Notice 724 for the Classification of Water Resources and Determination of the Comprehensive Reserve in the Mvoti to Umzimkulu Water Management Area</p> <p>1.6 Insufficient stakeholder consultation and poor use of available/existing information:</p> <ul style="list-style-type: none"> Guidelines requires the following levels of stakeholder involvement à Inform, Consult, Involve, Collaborate and Empower. See too point 1.4 above. <p>However, this is in contradiction with DWS' own position. See for example an extract below from a public presentation in February 2015, on this particular study for the derivation of these proposed RQOs:https://www.dwa.gov.za/Projects/KZN%20Recon/documents/SSC%207/7.1.1%20Water%20Resources%20in%20Mvoti%20to%20Mzimkhulu%20WMA.pdf, which highlighted</p>	<p>have culminated in the current (revised) format of the Letaba and Inkomati Legal notices. Some adjustments must still be made to the Mvoti legal notice so as to comply to the current DWS preference of the legal notice as was done for the Letaba and Inkomati notices, which are now held by the DWS to be the best example considering legal implications. These changes will still be made and some of the RQO information will be simplified to be consistent with the Letaba and Inkomati notices.</p> <p>The TEC (RDM/WMA11/00/CON/CLA/0215, Water Resource Class report) is not an interim category and the end objective is not always to achieve the REC. The TEC may be the PES, or the REC or something in between, or even lower than the PES. This is where Classification comes in in terms of achieving a balance which results in the situation that the REC cannot always be met. A target (category) (which is part of Classification and to which RQOs must be complied) is referred to in the Classification Guidelines. To refer to this as the REC is incorrect as the REC may not always be possible to achieve. Therefore, the lack of consistent terminology was identified and used in Classification studies post the Olifants and Vaal. This term is described in detail in the technical documentation. It is the Ecological Category which must be maintained or achieved to comply to the Class and Catchment Configuration, i.e. the target. The RQOs specifies the objectives (qualitative and quantitative) that defines the Target Ecological Category.</p> <p>Number of EWR sites: There were 12 sites in all that were dealt with at a detailed level. These number of sites were not constrained by resources. The process of selecting the sites is standard. The comparison to other recent Classification studies all refer to Reserve studies that were done outside of Classification. In the case of the Mvoti-Umzimkulu study, the bulk of the Reserve work was undertaken by the same PSPs. The number of sites and</p>

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>the following in terms of moving forward with this study i.e. a process for: <i>“Consolidating water quality concerns from stakeholders in order to set appropriate Resource Quality Objectives (RQOs)”</i> Furthermore, by gazetting these Classes and associated RQOs, any further assessments to improve the confidence and associated accuracy of these measures, for the management of the suitable balance between the use and protection of water resources will not be afforded as the NWA does not appear to provide any vehicle for the amendment or improvement of RQOs.</p> <p>It is for these numerous deficiencies in Notice 724 that DUCT feels that this proposed gazetting is flawed and hereby requests the Minister to reconsider and revise the RQOs before they published into law. We look forward to your meaningful feedback on these comments and in the interests of protecting South Africa's water resources and fulfilling the purpose of the NWA, we are more than willing to meet with your officials to explain our submissions more fully and assist in the redrafting process.</p> <p>2 References cited: Department of Water Affairs (DWA), 2011: Procedures to Develop and Implement Resource Quality Objectives. Department of Water Affairs, Pretoria, South Africa. (https://www.dwa.gov.za/rdm/documents/proceduresToDevelop&ImplementResourceQualityObjectives.pdf) Department of Water and Sanitation (DWS), 2015A. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Volume 1: River Resource Quality Objectives. Prepared by: Rivers for Africa eFlows Consulting (Pty) Ltd. DWS Report: RDM/WMA11/00/CON/CLA/0315. Department of Water and Sanitation (DWS), 2015B. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Volume 4: Estuary Resource Quality Objectives. Prepared by: Van Niekerk, Adams, Taljaard, Weerts. DWS Report: RDM/WMA11/00/CON/CLA/0615. Department of Water and Sanitation (DWS), 2015C. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Volume 2: Wetland Resource Quality Objectives. Prepared by: Rivers for Africa eFlows Consulting (Pty) Ltd. Authored by Rountree, M. Department of Water and Sanitation (DWS), 2015D. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Volume 3: Groundwater Resource Quality Objectives. Prepared by: Rivers for Africa eFlows Consulting (Pty) Ltd. Authored by Karim Sami National Water Act, 1998 (Act No.36 Of 1998) (NWA, 466 of 2016), Classes and Resource Quality Objectives of Water Resources for Catchments of the Olifants Catchment. Gazette 466 of 2016. National Water Act, 1998 (Act No.36 Of 1998) (NWA, 467 of 2016), Classes and Resource Quality Objectives of Water Resources for Catchments of the Olifants-Dooring Catchment. Gazette 467 of 2016. National Water Act, 1998 (Act No.36 Of 1998) (NWA, 467 of 2016), Classes and Resource Quality Objectives of Water Resources for Catchments of the Lower Vaal Catchment. Gazette 470 of 2016. National Water Act, 1998 (Act No.36 Of 1998) (NWA, 468 of 2016), Classes and Resource Quality Objectives of Water Resources for Catchments of the Upper Vaal Catchment. Gazette 468 of 2016. National Water Act, 1998 (Act No.36 Of 1998) (NWA, 469 of 2016), Classes and Resource Quality Objectives of Water Resources for Catchments of the Middle Vaal Catchment. Gazette 469 of 2016.</p>	<p>selection process was presented to the Project Steering Committee (PSC) for comment, the reasoning for the selecting was provided and the sites were accepted.</p> <p>Please note the following regarding the RQOs set for nodes in the Olifants Gazette versus this gazette: as indicated, a decision was taken by DWS legal services post the Olifants gazette not to include low confidence nodes and RQOs. As such, none of the dam RQOs which were in the Olifants as well as the others reported on would be in the gazette if this decision was in place by then. Please note that different levels of RQOs were undertaken for approximately 180 river nodes and for each of the 65 estuaries in the Mvoti project. This is significantly more work than what was done in the Olifants study and this was done for every node, not just high confident nodes. This is provided in the technical RQO document (or numerical document) for the Mvoti project; such a document was not produced for the Olifants. (RDM/WMA11/00/CON/CLA/0315, River RQOs; RDM/WMA11/00/CON/CLA/0615, Estuary RQOs).</p> <p>1.6 All the results and outcomes of the study have been provided through presentations at 6 PSC meetings that have been held to date; during these meetings, discussions were held to provide clarity and active engagement with stakeholders. Additionally, results and outcomes have been provided per area at the Catchment Management Forum Meetings (CMF) meetings. All inputs made to date were addressed and documented in the Issues and Response Register (available on DWS website (http://www.dwa.gov.za/rdm/WRCS/default.aspx)).</p> <p>Various reports have been produced in the study and stakeholders were afforded a 3-4 weeks comment period per report and the manner in which their input was incorporated is documented in the appendix at the back of the relevant reports (also available on the website</p>

	COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
		<p>provided above).</p> <p>The Department acknowledged that the process is technically extensive and hence a Background Information Document and additional information was provided to stakeholders prior to each PSC meeting. Furthermore, 5 Technical Working Group Meetings were held during the course of the project where extensive discussions took place. Lastly, 2 public meetings were held to consult with the stakeholders on all the outcomes of the project prior to the publication of the gazette.</p>
2	<p>Letter from Paper Manufacturers Association of South African (PAMSA)</p> <p>Dear Ms Matlala RE: PROPOSED CLASSES OF WATER RESOURCES AND RESOURCE QUALITY OBJECTIVES WITH THE ACCOMPANYING RESERVE FOR THE CATCHMENTS OF THE MVOTI TO UMZIMKULU (NOTICE 724 OF GOVERNMENT GAZETTE 40075 OF 17 JUNE 2016)</p> <p>Our main comments and concerns as follows:</p> <p>Scenario evaluation and recommendation of Water Resource Class</p> <p>1. Our understanding is that the overarching aim of the scenario evaluation process is to find the appropriate balance between the level of environmental protection and the use of the water to sustain socio-economic activities. Once the preferred scenario has been selected the Water Resource Class is defined by the level of environmental protection embedded in that scenario. In order to find this balance, the impact of each scenario is quantified in terms of the Ecology, Ecosystem Services and the Economic benefits obtained from the use of a portion of the water resource. At this point, we need to mention that no scenario was defined to specifically evaluate the economic and ecological consequences pertaining to the portion of water used by the pulp and paper industry in the catchment.</p> <p>2. Implications of the Water Classification and associated Resource Quality Objectives for the Lower uMvoti River and Estuary</p> <p>It is unfortunate that the whole Lower uMvoti River from the confluence of the Hlimbitwa River to the uMvoti Estuary has been delineated into one Integrated Unit of Analysis (IUA), namely U4-3 for the study and needs reconsideration: These IUAs are used to represent a spatial area that contains a generally uniform water</p>	<p>1: All the scenarios were presented to stakeholders for approval at various forums as well as in discussion documents. The scenarios were also defined in a technical report (RDM/WMA11/00/CON/CLA/0414, Water Resource Analysis report) and in most of the range of Consequences reports). Stakeholders were also provided opportunity to comment on these reports and therefore the scenarios. No recommendation was made that there would be any scenarios that in future would change the portion of water used by the pulp and paper industry in the catchment. Note that most of the scenarios did include an increase in future demands in general associated with growth.</p> <p>(Note that the water resource modelling incorporated all the water requirements for the Present Day scenario).</p> <p>2: IUA U4-3 consists of 4 biophysical nodes (RDM/WMA11/00/CON/CLA/1114, Water Resource Class Report). The EWR site represents the main Mvoti River and there are 3 nodes that represent the tributaries. Management and planning in this IUA are relevant for the Catchment Configuration represented by these 4 nodes. The IUA is not managed for the Class but for the 4</p>

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>resource use or protection scenario. For this study, from the confluence of the Hlimbitwa River to the uMvoti Estuary, one Class has been assigned to achieve the “vision” for balance between use and protection of water resources for the region. This does not allow for the differentiation between the water resource use regions within this IUA. From a manufacturing perspective, as an industry within this large IUA, the vision and associated moderately used Class II where the overall condition of the resource is moderately altered from its predevelopment condition may certainly restrict activities.</p> <p>3. Furthermore, the uMvoti Estuary which has been delineated to extend from the N2 Bridge to the mouth of the uMvoti River has been allocated with a Class III (heavily used), where the overall condition of that water resource is significantly altered from its predevelopment condition. The TEC associated with the Class is a Category C/D which requires the wellbeing of the estuary to improve from current Category E-F. The implications are that the current synergistic effects of (1) the water quality impacts associated with Sappi, the Stanger WWTW and upstream agriculture and informal settlements with (2) flow impacts associated with abstractions from agriculture, Stanger, Gledhow and Sappi and (3) habitat impacts associated with regional agriculture activities must be reduced to maintain the system in a C/D category. With this in mind, our comments on the RQO’s as follows:</p> <p>Resource Quality Objective considerations:</p> <p>4. A Sappi mill occurs within IUA U4-3 and needs to adhere to the WRC (Class II and TEC of C) and RQOs for the site. No RQOs have been provided for the reach of the uMvoti River at the lower end of the IUA (U40J-03998).</p> <p>This is irregular as the only specific downstream RQOs proposed occur in the uMvoti Estuary and needs clarification.</p> <p>If the intent is to apply RQOs established for the EWR site 2 it may not allow adequate abstraction by Sappi and the other local users and the RQO monitoring point should be at the EWR site and not below the IUA at the N2 Bridge but this should also be clarified, which is a requirement of the Water Act.</p> <p>If the intent is to apply the RQOs from the uMvoti Estuary, then:</p> <p>5. Hydrology TEC category C/D (maintain score >57%) including maintenance of critical monthly river inflow of >1 m³/s but a discharge of >2 m³/s must persist for longer than 3 months in a row (presumably during high flow period – no months are specified), and a mean discharge must be >2 m³/s. From a Sappi perspective this is strange in that a critical requirement in the uMvoti Estuary is greater (>1 m³/s) compared with the RQO requirement at site EWR 2 upstream of Stanger of >0.174 m³/s for critical low flows and >0.622m³/s for median flows. This alarmingly includes the median flows for the EWR site of >0.402 m³/s (60%tile), upstream of Stanger during low flows while the estuary requirements are >2 m³/s (50%tile). Note recent drought has resulted in a no flow situation in the Mvoti River upstream of Sappi. These requirements suggest that additional flows should be made</p>	<p>reaches within the IUA which represents the Catchment Configuration.</p> <p>The IUAs were selected during the start of the study and there were some revisions during the course of the study. Stakeholders at all stages had insight to this process and could provide comment.</p> <p>3: The PES of the estuary is a D and not an E/F as mentioned. The TEC was set to improve to a C/D. As quoted from the report, the original REC was changed from a C to a C/D as it was acknowledged that changes to SAPPI may have economic implications. There is therefore nothing SAPPI has to currently do to achieve the TEC. The relevant quote is below (RDM/WMA11/00/CON/CLA/0514, Mvoti Estuary Consequences Report):</p> <p><i>“If the Sappi effluent is retained, but other interventions applied TEC = C/D. Sc 21, 22, 41, 42 and 43 (which includes a proposed dam) will also achieve the TEC with the above measures. Limited increase in WW to this system is not likely to degrade it below a D as long as the system remains open. The TEC is set as a C/D which can be maintained with a new dam, possibly limited increases in waste water, and by addressing the interventions above without the removal or organic content from the SAPPI effluent”.</i></p> <p>4: The RQOs set at detailed level at EWR2 is relevant for the whole MRU which includes the SQ mentioned.</p> <p>5: The water resource modelling undertaken in the Classification Study incorporated the water requirements of the indicated water users and the scenarios that were analysed made allowance for the proposed future water resource developments and the associated future abstractions (RDM/WMA11/00/CON/CLA/0414, Water</p>

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>available from the local catchment including the Nchaweni and Mbozambo streams to augment river flows in the uMvoti River during low flow periods. It appears that no allocation for water abstraction by Stanger, Gledhow and Sappi, has been considered in this assessment, which should according to the Water Act. This is a critical flaw in the proposed gazette which may have major ramifications for the operation of the Sappi Mill.</p> <p>6. In addition, the 95th percentile of data on Electrical Conductivity (EC) must be less than or equal to 30 mS/m for IUA U4-3.</p> <p>The RQOs have been set as a result of aquatic ecosystem drivers. However, no supplementary information is provided to justify how this conclusion has been reached. For example, SANS 241:2011 standard for drinking water currently specifies a limit for EC of < 170 mS/m. It is difficult to conclude how the standards for drinking water allows more than five times the salt content than what is specified as the RQO for this catchment.</p> <p>In conclusion, clarity is needed on:</p> <p>7. <input type="checkbox"/> The absence of an associated socio-economic study. The introduction of this legislation as it currently stands would certainly cause significant strain on operations which could see devastating impact on the localised region from a socio – economic perspective.</p> <p>8. <input type="checkbox"/> These RQOs may be inappropriate for the regional management of water resource use in the lower uMvoti River and Estuary as per above concerns;</p> <p><input type="checkbox"/> It appears that no allocation for water abstraction by Stanger, Gledhow and Sappi, has been considered in this assessment, which should according to the Water Act; and</p> <p><input type="checkbox"/> RQO's stricter than drinking water standards (for example electrical conductivity) also taking above comments in consideration and considering it in context.</p> <p>Many thanks for considering our comments. Please do not hesitate to contact us for further information should this be necessary.</p> <p>Kind regards Jane Molony Executive Director PAMSA www.thepaperstory.co.za</p> <p>References cited: <i>Department of Water and Sanitation (DWS) 2015a. Classification of Water Resources and Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu Water Management Area: Main Report. Prepared by: Rivers for Africa eFlows Consulting (Pty) Ltd. DWS Report Number: RDM/WMA11/00/CON/CLA/0815.</i> <i>Department of Water and Sanitation (DWS) 2015b. Classification of Water Resources and</i></p>	<p>Resource Analysis report).</p> <p>The approach that was followed in setting the EWR and RQO is that the PES will prevail until such time as the proposed water resource development is implemented.</p> <p>The TEC will remain a target (from a flow perspective) for which the aim is to achieve it once the proposed development is implemented. The economic consequences (of reducing upstream abstractions) will be very high (that is until the development is implemented) and would be an unacceptable scenario. In this regard DWS is following practical management methods to maintain and in the long term set the target to improve the ecological state of the water resource.</p> <p>6: RQOs are set in terms of the most stringent user based on available information, which in this instance was the aquatic ecosystem. Note that electrical conductivity objectives for riverine biota dependent on low salt levels will be more stringent than human use requirements. All supporting information is provided in the study reports. Water quality RQOs for MV_I_EWR 2 on the lower Mvoti, which is upstream of the site, states that conductivity levels should be below 30 mS/m, This is based on data from a monitoring point on the Hlimbitwa River upstream of the EWR site and is therefore not high confidence. Subsequently the conductivity RQO appears in the RQO report as a guide but has not been gazetted (RDM/WMA11/00/CON/CLA/0315, Rivers RQO report).</p> <p>7. A socio-economic component was conducted in the study and in the spirit and main aims of Classification, a balance was sought between the protection and use of water resources (RDM/WMA11/00/CON/CLA/1114, Water Resource Class Report).</p>

	COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
	<p><i>Determination of the Comprehensive Reserve and Resource Quality Objectives in the Mvoti to Umzimkulu WMA: Volume 2a: Supporting Information on the Determination of Water Resource Classes – Mvoti (U4) Estuary EWR and Ecological Consequences of Operational Scenarios. Prepared by CSIR for Rivers for Africa eFlows Consulting PTY Ltd. DWS Report: RDM/WMA11/00/CON/CLA/0614.</i></p>	<p>8. The water resource simulation modelling did account for these and various other abstractions in the system including the proposed abstractions to be supplied from the development scenarios. (RDM/WMA11/00/CON/CLA/0414, Water Resource Analysis report).</p>
3	<p>Letter by C.E. Fennemore from Ethekewini Municipality: Water & Sanitation Unit</p> <p>Dear Madam</p> <p>RE: FINAL COMMENTS ON GOVERNMENT NOTICE 724, GAZETTE NO. 40075: PROPOSED WATER RESOURCE CLASSES AND RESOURCE QUALITY OBJECTIVES FOR THE MVOTI TO UMZIMKULU CATCHMENTS</p> <p>1. This letter is in response to your Department's call for comments regarding the above draft gazette.</p> <p>The City has severe concerns in this regard which has caused some discontent within the National Department of Water and Sanitation. eThekwini Municipality wishes to invoke the Cooperative Governance Act in order to discuss this matter further. DWS appears to be acting in an autocratic manner and not in the spirit as one of the three tiers of government. 2 We believe that provisions of this act have been ignored by National Government since comments by eThekwini Municipality have largely ignored. The implications of this study and the requirements of the draft gazette would require tens of billions of rand of investment based on desktop and rapid studies with low to medium confidence. This, together with the fact that future storm water contamination has been omitted, represents a significant flaw in the document. Upstream impacts in river catchments from Dam construction and activities in other municipalities are beyond the control of eThekwini. These objectives ignore the means by which they can be achieved. The city has to deliver services within its capacity and financial constraints. It ignores the realities that the national and provincial spatial development plans work against meeting these objectives. Further, these impacts culminate in the estuaries yet the City would have to meet the bill for relevant interventions. To exacerbate this issue the City has no effective control over Trust Lands such as the Ngonyama area. In addition, City officials cannot stem the rapid urbanization of the City and</p>	<p>1. The statement that DWS did not take stakeholder input into consideration is incorrect. As indicated under point 1.6 of issue 1 above, various platforms were utilized to obtain stakeholder inputs and the manner in which these were incorporated was documented in an Issues and Response Register either at the back of a report or in the general IRR containing all issues raised at various stakeholder engagement platforms. In addition to the platforms listed under point 1.6 of issue 1 above, a separate special committee was established between the Ethekewini Municipality and DWS where all the issues were clarified and resolved.</p> <p>DWS has a regulatory mandate (sanctioned by the National Water Act) to publish the Water Resource Class and Resource Quality Objectives to protect significant water resources. DWS has fulfilled this mandate after extensive consultation and engagement with all stakeholders including eThekwini as demonstrated and recorded in official study documents. Furthermore, a separate committee was formed between DWS and eThekwini where all the issues raised pertaining to the study were discussed. In addition, the result of the study that was commissioned by eThekwini during this Classification study were incorporated and fully acknowledged.</p>

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>the establishment and sprawl of informal settlements. National legislation does not empower the City to prevent such informal development or remove settlements in the short to medium term. More of the province's population is migrating to the City with no additional income, except for the equitable share. The equitable share is, unfortunately, insufficient to provide full services to informal settlements which must be funded from a constrained income base.</p> <p>The Department of Water and Sanitation is the custodian of the water resources of Southern Africa and thus the construction of dams severely impacts on the assimilate capacity of rivers and estuaries. This then requires extremely expensive interventions by the City and thus bares the full environmental cost of the impacts from such construction whilst other municipalities would benefit with little or no contribution. This is particularly true of eThekweni's coastal environment because the "sins of upstream water users" result in significant impacts on estuaries. 3. To illustrate this fact are the following examples are given in the table below:-</p> <p>Estuary TEC RQO Comments uMngeni D * Wastewater discharge from WWTWs not the significant cause of deterioration of estuary. Nutrient removal at all WWTWs discharging to uMgeni is a likely future requirement. This would require expensive tertiary treatment which would be unlikely to reduce the nutrient loads to levels in the river which would prevent environmental degradation through excessive plant and algae production. Durban Bay Shallow Zone D *</p> <p>Wastewater discharge from WWTWs is not the significant cause of deterioration of this part of the estuary. Durban Bay</p> <p>EF * Wastewater discharge from WWTWs is not the significant cause of deterioration of this part of the estuary. iSipingo E I,</p> <p>Only minimal wastewater discharge takes place to the estuary and this is not the significant cause of deterioration of this estuary. There is opportunity to discharge wastewater from other river / estuaries to iSipingo but any such proposal needs to be carefully considered in view of potential impact of the future dig-out port. Mbokodweni EF * Whereas additional wastewater is permitted with a TEC of EF an additional requirement included in the technical reports is that the estuary should be fit for contact recreation. The TEC of EF is likely to be objected to by Environment Branch (and the public) who will want to see an improvement in the ecology of the estuary by the removal of the existing and future wastewater flows. Little aManzimtoti EF Whereas additional wastewater is permitted with a TEC of EF an additional requirement included in the technical reports is that the estuary should be fit for contact recreation. The TEC of EF is likely to be objected to by Environment Branch (and the public) who will want to see an improvement in the ecology of the estuary by the removal of the existing and future wastewater flows. uMkhomazi B/C The uMkhomazi estuary is set at a TEC of B/C and the resource quality objectives state that no wastewater</p>	<p>2. DWS applied a systems approach where all activities affecting the resource (including those used by Ethekeweni) were considered in setting the Water Resource Classes and RQOs.</p> <p>DWS duly considered the costs of various alternative environmental measures (the cost information was provided by Ethekeweni) in arriving at the published Water Resource Classes and RQOs.</p> <p>3. Ethekeweni is contradicting themselves in several of their comments which emphasize DWS must lead by setting the WRC and RQOs.</p>

	COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
	<p>would be allowed into the estuary. Currently the community rejects the recycling of sewage effluent. We cannot force SAPPI SAAICOR to use this effluent in place of fresh water or accept residues into their pipeline. The expansion of the marine protected area will prohibit the construction of a new pipeline parallel to the existing SAAICOR infrastructure. This would then even prevent the use of membrane technologies unless the brines are crystallized. In a period of climate change and carbon emission restrictions/ taxes this would not be expedient. N Not included in the gazette In the light of the above we strongly recommend that the publishing of this gazette is postponed until such time that there is integration between all national, provincial and local development plans and national environmental legislation. We implore the Department of Water and Sanitation to set up an intervention, in terms of the Cooperative Governance Act, between The Department of Economic Development Tourism and Environment Affairs, National DEA and The National Department of Water and Sanitation.</p> <p>Our impression is that DWS wishes to implement the provisions of this gazette immediately on publishing when considering Water Use Licences. At this stage it is unlikely that the City could meet these requirements in the short, medium or long term time horizons. We feel that an adaptive management approach should be taken for any implementation of such objectives. We believe that the publishing of the above gazette would not be in the interest of sustainable national development and would indeed impede progress."</p> <p>Yours faithfully EDNICK MSWELI HEAD: ETHEKWINI WATER & SANITATION</p>	
4	<p>SALGA hereby acknowledge the receipt of the proposed classes of water resources and resource quality objectives for umvoti to umzimkulu, notice number 724.</p> <p>It is appreciated tht the National Minister took an initiative to undertake this exercise to ensure that water resources are protected and sustained. This is in line with National Water Act which ensure tht our main water sources are used, developed, conserved, managed and controlled in ways that take into account in meeting the basic human needs of present and future generation and more over protecting aquatic and associated ecosystems and their biological diversity. This cannot be achieved in isolation except by making sure that the quality of water sources is monitored and managed to ensure that living organisms equitably benefit.</p> <p>Comments</p>	The supportive comments made by SALGA are noted and well received with thanks.

COMMENTS, QUESTIONS AND ISSUES	RESPONSE(S)
<p>Proposed classes of water resources and resource quality objective</p> <ol style="list-style-type: none"> 1. SALGA support the methodology applied in the determination for water resources that were assessed for umvoti to umzimkhulu catchments. Also welcomes the results of the preliminary study initiated by the DWS in 2012 in undertaking comprehensive reserve and classification of water resources to determine resource quality objectives. It is believed that the Department will scrutinize closely the authenticity of data collated that formed the basis of the classification report. There is a need for assurance that Eco classification process of Kleynhans and Louw was applied empirically to ensure that variables are addressed. 2. The calculation system for EIS is entrusted however there should be a comparison with other methodologies to ascertain the findings of the study. However components used are relevant and were correctly chosen i.e. presence of rare and endangered species, habitat diversity, and connectivity of the river, conservation and sensitivity of the systems. 3. To mention the few the utilization of habitat flow stressor response method (HFSR) proved to be excellent in making the classification of water source and quality to be understood without doubt. 4. Evaluation of ecological importance and sensitivity (EIS) for water resources is supported based on determinant used however future scenarios should be presented. 5. There is no objection over the resource quality objectives as presented in page 29 of the document. <p>There is no further comment except that such information should be shared and capacity building be conducted to strategic water users and catchment management committees in the Province to solicit inputs.</p> <p>For more information do not hesitate to contact Ms. Bathandwa Vazi or Bright Nkontwana at bnkontwana@salga.org.za.</p> <p>Your response would be highly appreciated.</p> <p>Kind regards,</p>	

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	Bright Nkontwana Programme Manager: Municipal Infrastructure and Services: SALGA KZN	