



water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA



DETERMINATION OF WATER RESOURCE CLASSES AND ASSOCIATED RESOURCE QUALITY OBJECTIVES IN THE THUKELA CATCHMENT: BACKGROUND

PUBLIC MEETING 01

Presented by:
Mohlapa Sekoele
Department: Water & Sanitation

Date: 26-27 February 2020

PRESENTATION CONTENT

- Legal Mandate
- The Water Resource Classification System (WRCS)
- Process for the classification of water resources and determination of the Resource Quality Objectives
- Water Resource Classes
- Resource Quality Objectives (RQOS)
- The Determination of Classes and RQOs in the Thukela Catchment
- Stakeholder Engagement

LEGAL MANDATE

- **The classification of South African water resources is required by the National Water Act (NWA) (No. 36 of 1998) (Chapter 3 regarding the protection of water resources)**
- **The Resource-Directed Measures for protection of water resources are:**
 - **Classification (S13)**
 - **Reserve (S16)**
 - **Resource Quality Objectives (S13)**
- **S12 requires the Minister to establish the Water Resource Classification System, (WRCS)**
- **WRCS was published as Regulation 810 in Government Gazette No. 33541 dated 17 September 2010**
- **According to the NWA, once the WRCS has been gazetted all significant water resources must be classified**

CLASSIFICATION SYSTEM

➤ **The WRCS defines:**

- **water resource classes and**
- **the procedure to determine Class, RQOs and Reserve**

CLASSIFICATION AND DETERMINATION OF RQOs: PROCESS

In accordance with the Classification and RQOs guidelines

1	Describe the status quo and delineate the study area into units of analysis (IUAs)	Stakeholder Engagement
2	Delineate and prioritise Resource Units (RUs)	
3	Quantify the ecological water requirements (EWRs)	
4	Identify and evaluate scenarios within the IWRM process	
5	Determine Water Resource Classes based on catchment configurations	
6	Determine RQOs and provide implementation information	
7	Gazette Water Resource Classes and RQOs	

WATER RESOURCE CLASSES

A Class

- describes what state the water resources need to be in to satisfy beneficial use;
- facilitates the balance between protection and use of the water resources;
- is defined by taking into account the social, economic & ecological landscape;

THREE WATER RESOURCE CLASSES

Classes	Description of use	Ecological categories
Class I	Minimally used	A-B
Class II	Moderately used	C
Class III	Heavily used	D & lower

Ecological Category (EC) - means the assigned ecological condition to a water resource in terms of the deviation of its biophysical components from a pre-development condition.

RESOURCE QUALITY OBJECTIVES (RQOS)

- RQOs are numeric or descriptive statements of conditions which should be met in the receiving water resource;
- RQOs represent the requirements for water quantity, quality, and habitat and biotic integrity to be maintained in aquatic ecosystems.
- They are targets that can be measured/audited, and can be used as benchmarks to monitor a combined resource that may have several licensed users.
- RQOs provide measurable goals that give direction as to how the resources need to be managed.

DETERMINATION OF CLASSES AND RQOS IN THE THUKELA CATCHMENT

- 30 Months project: from August 2019 to February 2021
- The aim of the project is to determine:
 - Water Resource Classes
 - Resource Quality Objectives
- Golder Associates Africa was appointed to assist DWS

STUDY AREA

- The study area is the Thukela Catchment
- Primary drainage region V.
- This includes the four sub-catchments,
 - Upper Thukela,
 - Buffalo,
 - Mooi/Sundays,
 - Lower Thukela catchments.



Thukela Quaternaries

The map displays the Thukela Quaternaries, a complex of geological units. The units are labeled with codes such as V31A, V31B, V31C, V31D, V31E, V31F, V31G, V31H, V31I, V31J, V31K, V31L, V31M, V31N, V31O, V31P, V31Q, V31R, V31S, V31T, V31U, V31V, V31W, V31X, V31Y, V31Z, V32A, V32B, V32C, V32D, V32E, V32F, V32G, V32H, V32I, V32J, V32K, V32L, V32M, V32N, V32O, V32P, V32Q, V32R, V32S, V32T, V32U, V32V, V32W, V32X, V32Y, V32Z, V33A, V33B, V33C, V33D, V33E, V33F, V33G, V33H, V33I, V33J, V33K, V33L, V33M, V33N, V33O, V33P, V33Q, V33R, V33S, V33T, V33U, V33V, V33W, V33X, V33Y, V33Z, V34A, V34B, V34C, V34D, V34E, V34F, V34G, V34H, V34I, V34J, V34K, V34L, V34M, V34N, V34O, V34P, V34Q, V34R, V34S, V34T, V34U, V34V, V34W, V34X, V34Y, V34Z, V35A, V35B, V35C, V35D, V35E, V35F, V35G, V35H, V35I, V35J, V35K, V35L, V35M, V35N, V35O, V35P, V35Q, V35R, V35S, V35T, V35U, V35V, V35W, V35X, V35Y, V35Z, V36A, V36B, V36C, V36D, V36E, V36F, V36G, V36H, V36I, V36J, V36K, V36L, V36M, V36N, V36O, V36P, V36Q, V36R, V36S, V36T, V36U, V36V, V36W, V36X, V36Y, V36Z, V37A, V37B, V37C, V37D, V37E, V37F, V37G, V37H, V37I, V37J, V37K, V37L, V37M, V37N, V37O, V37P, V37Q, V37R, V37S, V37T, V37U, V37V, V37W, V37X, V37Y, V37Z, V38A, V38B, V38C, V38D, V38E, V38F, V38G, V38H, V38I, V38J, V38K, V38L, V38M, V38N, V38O, V38P, V38Q, V38R, V38S, V38T, V38U, V38V, V38W, V38X, V38Y, V38Z, V39A, V39B, V39C, V39D, V39E, V39F, V39G, V39H, V39I, V39J, V39K, V39L, V39M, V39N, V39O, V39P, V39Q, V39R, V39S, V39T, V39U, V39V, V39W, V39X, V39Y, V39Z, V40A, V40B, V40C, V40D, V40E, V40F, V40G, V40H, V40I, V40J, V40K, V40L, V40M, V40N, V40O, V40P, V40Q, V40R, V40S, V40T, V40U, V40V, V40W, V40X, V40Y, V40Z, V41A, V41B, V41C, V41D, V41E, V41F, V41G, V41H, V41I, V41J, V41K, V41L, V41M, V41N, V41O, V41P, V41Q, V41R, V41S, V41T, V41U, V41V, V41W, V41X, V41Y, V41Z, V42A, V42B, V42C, V42D, V42E, V42F, V42G, V42H, V42I, V42J, V42K, V42L, V42M, V42N, V42O, V42P, V42Q, V42R, V42S, V42T, V42U, V42V, V42W, V42X, V42Y, V42Z, V43A, V43B, V43C, V43D, V43E, V43F, V43G, V43H, V43I, V43J, V43K, V43L, V43M, V43N, V43O, V43P, V43Q, V43R, V43S, V43T, V43U, V43V, V43W, V43X, V43Y, V43Z, V44A, V44B, V44C, V44D, V44E, V44F, V44G, V44H, V44I, V44J, V44K, V44L, V44M, V44N, V44O, V44P, V44Q, V44R, V44S, V44T, V44U, V44V, V44W, V44X, V44Y, V44Z, V45A, V45B, V45C, V45D, V45E, V45F, V45G, V45H, V45I, V45J, V45K, V45L, V45M, V45N, V45O, V45P, V45Q, V45R, V45S, V45T, V45U, V45V, V45W, V45X, V45Y, V45Z, V46A, V46B, V46C, V46D, V46E, V46F, V46G, V46H, V46I, V46J, V46K, V46L, V46M, V46N, V46O, V46P, V46Q, V46R, V46S, V46T, V46U, V46V, V46W, V46X, V46Y, V46Z, V47A, V47B, V47C, V47D, V47E, V47F, V47G, V47H, V47I, V47J, V47K, V47L, V47M, V47N, V47O, V47P, V47Q, V47R, V47S, V47T, V47U, V47V, V47W, V47X, V47Y, V47Z, V48A, V48B, V48C, V48D, V48E, V48F, V48G, V48H, V48I, V48J, V48K, V48L, V48M, V48N, V48O, V48P, V48Q, V48R, V48S, V48T, V48U, V48V, V48W, V48X, V48Y, V48Z, V49A, V49B, V49C, V49D, V49E, V49F, V49G, V49H, V49I, V49J, V49K, V49L, V49M, V49N, V49O, V49P, V49Q, V49R, V49S, V49T, V49U, V49V, V49W, V49X, V49Y, V49Z, V50A, V50B, V50C, V50D, V50E, V50F, V50G, V50H, V50I, V50J, V50K, V50L, V50M, V50N, V50O, V50P, V50Q, V50R, V50S, V50T, V50U, V50V, V50W, V50X, V50Y, V50Z, V51A, V51B, V51C, V51D, V51E, V51F, V51G, V51H, V51I, V51J, V51K, V51L, V51M, V51N, V51O, V51P, V51Q, V51R, V51S, V51T, V51U, V51V, V51W, V51X, V51Y, V51Z, V52A, V52B, V52C, V52D, V52E, V52F, V52G, V52H, V52I, V52J, V52K, V52L, V52M, V52N, V52O, V52P, V52Q, V52R, V52S, V52T, V52U, V52V, V52W, V52X, V52Y, V52Z, V53A, V53B, V53C, V53D, V53E, V53F, V53G, V53H, V53I, V53J, V53K, V53L, V53M, V53N, V53O, V53P, V53Q, V53R, V53S, V53T, V53U, V53V, V53W, V53X, V53Y, V53Z, V54A, V54B, V54C, V54D, V54E, V54F, V54G, V54H, V54I, V54J, V54K, V54L, V54M, V54N, V54O, V54P, V54Q, V54R, V54S, V54T, V54U, V54V, V54W, V54X, V54Y, V54Z, V55A, V55B, V55C, V55D, V55E, V55F, V55G, V55H, V55I, V55J, V55K, V55L, V55M, V55N, V55O, V55P, V55Q, V55R, V55S, V55T, V55U, V55V, V55W, V55X, V55Y, V55Z, V56A, V56B, V56C, V56D, V56E, V56F, V56G, V56H, V56I, V56J, V56K, V56L, V56M, V56N, V56O, V56P, V56Q, V56R, V56S, V56T, V56U, V56V, V56W, V56X, V56Y, V56Z, V57A, V57B, V57C, V57D, V57E, V57F, V57G, V57H, V57I, V57J, V57K, V57L, V57M, V57N, V57O, V57P, V57Q, V57R, V57S, V57T, V57U, V57V, V57W, V57X, V57Y, V57Z, V58A, V58B, V58C, V58D, V58E, V58F, V58G, V58H, V58I, V58J, V58K, V58L, V58M, V58N, V58O, V58P, V58Q, V58R, V58S, V58T, V58U, V58V, V58W, V58X, V58Y, V58Z, V59A, V59B, V59C, V59D, V59E, V59F, V59G, V59H, V59I, V59J, V59K, V59L, V59M, V59N, V59O, V59P, V59Q, V59R, V59S, V59T, V59U, V59V, V59W, V59X, V59Y, V59Z, V60A, V60B, V60C, V60D, V60E, V60F, V60G, V60H, V60I, V60J, V60K, V60L, V60M, V60N, V60O, V60P, V60Q, V60R, V60S, V60T, V60U, V60V, V60W, V60X, V60Y, V60Z, V61A, V61B, V61C, V61D, V61E, V61F, V61G, V61H, V61I, V61J, V61K, V61L, V61M, V61N, V61O, V61P, V61Q, V61R, V61S,



STAKEHOLDER ENGAGEMENT

OBJECTIVES OF THE STAKEHOLDER ENGAGEMENT

- To improve the management process of this project.
- To reduce the potential for future conflict.
- To enable the Department and stakeholders to share knowledge and expertise.

TARGETED STAKEHOLDERS

- Agriculture
- Emerging Farmers
- Mining – COM and mining houses
- Industries
- Local government – local and district municipalities in Catchment
- Conservation
- NGOs
- Regulators
- Water Service Authorities/Providers
- Information/Academic institutions – libraries, universities
- Unions & House of Traditional leaders
- Catchment Forums & WUA
- Civil society and the environment representatives
- Community members (public at large)

STAKEHOLDER ENGAGEMENT: COMMUNICATION METHODS

- Direct communication via meetings
 - Identified Platforms: Project Management Committee (PMC), Project Steering Committee (PSC), Technical Task Group (TTG), Existing Forums, Sector, Public Meetings
- Print media
 - newspaper adverts
 - BIDs, newsletters
- Electronic media
 - DWS internet site (www.dwa.gov.za/rdm/WRCs/default.aspx)
 - Emails
- Stakeholder database and Issues & Response Register to be updated regularly



OUTCOMES OF THE STAKEHOLDER ENGAGEMENT

- Updated data sources
- Issues and response register
- Updated stakeholder database
- Final technical reports

THANK YOU

Contacts:

	Email address	Telephone	Mobile
Project Manager: Ms Mohlapa Sekoele	sekoelem@dws.gov.za	012 336 8329	082 809 5418
Scientist Manager: Mr Mkhevu Mnisi	mnisim2@dws.gov.za	012 336 6887	0829083291