

CLASSIFICATION OF SIGNIFICANT WATER RESOURCES AND DETERMINATION OF RESOURCE QUALITY OBJECTIVES FOR WATER RESOURCES IN THE USUTU TO MHLATHUZE CATCHMENTS (WP11387)
CLASSES AND RQOs – GENERIC DESCRIPTION

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Classes and RQOs – generic description

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WHAT ARE RQOs?

RQOs capture the **Water Resource Class** of the Classification System and the **ecological needs determined in the Reserve** into **measurable management goals** that give direction to resource managers as to how the resource needs to be managed.

*“RQOs for a water resource are a **numerical or descriptive statement** of the conditions which should be met in the receiving water resource, in terms of resource quality, in order to ensure that the **water resource is protected.**”*

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WHAT ARE RQOs?

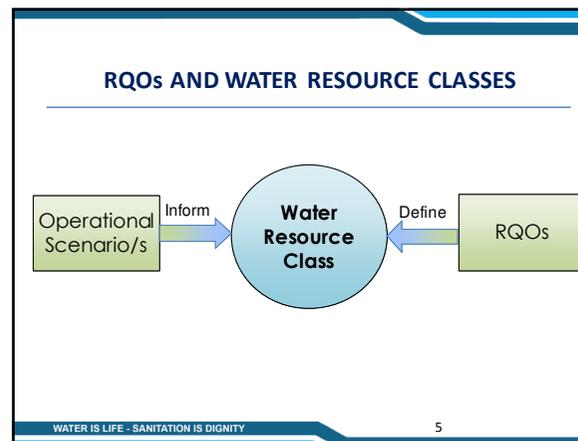
In essence:
 RQOs are the objectives or goals which can be measured or monitored to determine whether the Class is being achieved.

i.e.
 RQOs are set for the Water Resource Class – more applicably

FOR THE TARGET ECOLOGICAL CATEGORY (TEC) FOR EACH COMPONENT (CATCHMENT CONFIGURATION)

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WHERE DO YOU SET RQOs?

In Resource Units (**homogeneous river reach which can be represented by an EWR site**):

- RQOs can be set for each Resource Unit – at a minimum at high priority RUs
- Resource Units must be prioritised, and high priority Resource Units must have detailed RQOs
- Resource Unit priority level linked to hotspots
- Different levels of RQOs are set for each priority level

NB: Provide some level of RQO for each RU

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FOR WHICH INDICATORS ARE RQOs SET?

- **Hydrology** (flow): Quantity, pattern and timing of instream flow (repr. by time series, FDC). Defined by the recommended scenario.
- **Water quality**: Narrative + numerical values that define the fitness of use and/or ecological requirements for various variables.
- Characteristics and condition of **riparian habitat and biota** (% alien vegetation, cover, species).
- Characteristics and condition of **instream habitat and biota** (frequency of occurrence, species/taxa, abundance, habitat).

NOTE: Not all RQOs are set for all RUs – depends on priority.

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RU PRIORITY LEVELS AND ASSOCIATED RQOs

- **RUs with EWR sites**
 - Flow RQOs (EWRs according to TEC)
 - Habitat and biota RQOs for fish, aquatic invertebrates, riparian vegetation, geomorphology and water quality
- **High priority RUs with no EWR sites**
 - Broad (desktop level) flow RQOs (EWRs according to TEC)
 - Available information used to provide qualitative biota and habitat RQOs. If none available, then PES and TEC.
 - Broad water quality info (unless wq hotspot)
- **Other priority RUs**
 - Broad (desktop level) flow RQOs (EWRs according to TEC)
 - Habitat and biota RQOs represented by the PES and TEC

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ECOSPECS AND RQOs

- ECOSPECS are the numerical RQOs provided for high RU priority level for biota and habitat.
- ECOSPECS can only be provided at EWR sites where detailed field and workshopped information are available.
- **I.E, the difference between RQOs and ECOSPECS are that there are additional RQOs which are not ECOSPECS – User water quality specifications.**
- **Additional difference: ECOSPECS ARE NUMERICAL AND THEREFORE ALWAYS RELEVANT FOR EWR SITES.**

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ECOSPECS AND RQOs

- **Thresholds of Potential Concern (TPCs) are upper and lower levels along a continuum of change.**
- **Approaching TPCs would initiate more detailed investigation and management actions.**
- **TPCs are regarded as early warning indicators of potential change from a particular EC to another (lower EC).**
- **TPCs are linked to EcoSpecs.**

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REMINDER: DESCRIPTION OF RIVER STATE

Close to Natural: Good condition → Very different to Natural: Very Poor condition

Ecological Categories (EC): A, A/B, B, B/C, C, C/D, D, D/E, E, E/F, F

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