

Determination of Ecological Water Requirements for Surface Water (Rivers, Estuaries and Wetlands) and Groundwater in the Lower Orange WMA: WP10974

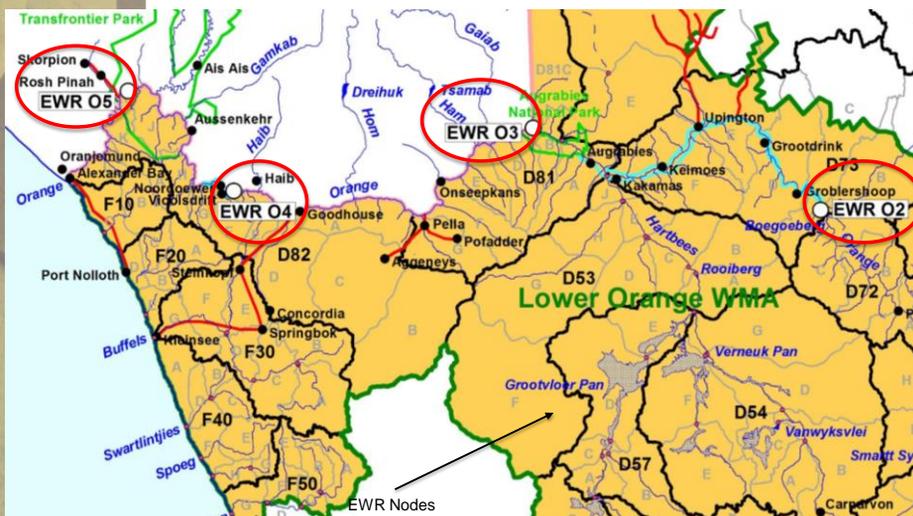
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SCENARIO EVALUATION AND RECOMMENDATIONS: INTRODUCTION

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EWR SITES & NODES SURFACE WATER



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PROJECT PLAN: SUMMARY STEPS

1. Initiate the BHN and EWR assessment

How will the study be executed?

2. Delineate RU, select study sites

Where will detailed work be undertaken?

4. Determine BHN and EWR

How much water do you need for basic human needs and to maintain a certain ecological status?

3. Determine reference condition, PES and EIS

What are the ecological status, importance and future ecological objectives?

5. Determine operational scenarios and evaluate consequences

How will the current state and ecological objectives be influenced by future changes in operation?

6. Ecological specification, monitoring and implementation information

How do we know that we will achieve our objectives

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Introduction: Preliminary Reserve, Classification, Reserve

- Determination of the Reserve and the National Water Resources Classification is a legal requirement according to the National Water Act.
- The Reserve can only be gazetted once the Classification has been determined and gazetted.
- The act allows for a Preliminary Reserve to be determined prior to Classification. Although not gazetted, the Preliminary Reserve is signed off by the Minister (or the delegated authority) and is legally binding.
- As such, the Preliminary Reserve is undertaken prior to Classification or as part of a Classification study.

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Introduction: Preliminary Reserve, Classification, Reserve (slide 2)

- The decisions taken can be reviewed and updated during Classification as detailed consideration is given to the socio-economic issues.
- The Orange River study is determining the Preliminary Reserve prior to Classification.
- Further development of the Orange River is on the table and will happen. This will allow for more management options of amongst others, the EWRs.
- The scenarios & recommendations which are made for this phase pertain to the **post-dam recommendations**.
- Immediately applicable is the provision of EWRs through the operation of the system without additional storage.

Introduction: Preliminary Reserve, Classification, Reserve (slide 3)

- These are referred to as the **pre-dam scenarios** and will be immediately applicable.
- **Therefore, the focus of this (Preliminary) Reserve study is on pre-dam situation.**
- Recommendations are also made for the post-dam situation regarding scenarios as well as further work required in preparation for Classification.

**Difference between the Preliminary Reserve and Classification:
The Preliminary Reserve focusses on ecological objectives and BHN.
Classification considers the balance between protection and use.**

EVALUATION OF SCENARIOS & RECOMMENDATIONS

- Objective of this session is to evaluate present and future operational scenarios and to determine whether the ecological objectives can be met.
- The pre-dam recommended scenarios will be used to set the objectives which will be in place until the Reserve is gazetted.
- If the Recommended Ecological Category cannot be met with the pre-dam scenarios, then the most realistic Ecological Category will become the objective.
- As this relates to the Preliminary Ecological Reserve, this category is the **Preliminary Ecological Reserve Category (PERC)**.
- This may be the REC (first prize), or may be an improvement of the PES or may be the same as the PES.

THIS SESSION WILL

- Explain the different scenarios that have been evaluated (presented to you at previous meeting and modified based on comments received.)
- Provide the ecological consequences on the river and estuary and refer to the Ecosystem Services.
- Provide the consequences in terms of yield which relates to the economic consequences.
- Provide recommendations for the post-dam phase.
- Recommend the PERC and Preliminary Reserve flows for the pre-dam phase.