


Proposed Revision of Reconciliation Strategy

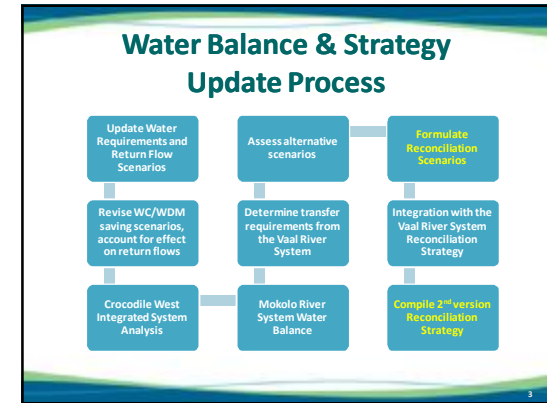
Maintenance of the Crocodile West River System Reconciliation Strategy Study

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Current Strategy

- **Rand Water service area**
 - Continued supply from the Vaal River
- **Areas north of the Magaliesberg**
 - Increasing treated effluent from metropolitan area will be future source of water for mining and urban requirements north of the Magaliesberg
- **Waterberg area (north of Crocodile West catchment)**
 - Optimal utilisation of local resources to be continued
 - Surplus effluent to be transferred to Lephalale area , if required



Factors to consider in updated Strategy⁽¹⁾

- Growth in water requirements
- Natural water resources already fully developed
- Strong dependence on transfers from the Vaal River system
- Already large and projected increasing volumes of return flows
- Implementation of the Reserve
- Water quality
- Linkages to neighbouring catchments

Factors to consider in updated Strategy⁽²⁾

- Dynamic planning assumption of water requirements, particularly in the Lephalale area and mining sector
- Applications for increased water allocations
 - Magalies Water: Vaalkop Dam (in addition to 90 million m³/a issued in 2010)
 - Tshwane Metro: At Leeukraal Dam (increased allocation from current 16 million m³/a to more than 48 million m³/a)
- Approval and implementation planning of above applications

Factors to consider in updated Strategy⁽³⁾

- Growing future urban water requirements in Limpopo WMA (suggested Klipvoor Dam vs. Roodeplaat Dam)
- Impact of suggested abstraction options on water availability to relevant existing water users
- Utilisation of expected future surplus in the Crocodile West River catchment

Recommendations (1)

- Validation and verification of existing lawful use should be carried out to confirm excess and establish assurance criteria of irrigators in Lower Crocodile
- Confirm water requirements with other users
- Evaluation of operating rules and integration with long term planning scenarios
- Engage water users through System Operation Forum
- Review spatial and temporal distribution in water requirements and return flows

Recommendations (2)

- Obtain revised water requirement scenarios for mining sector (Joint Water Forum)
- Apply WRPM to determine projected excess in subsystems (location and timing)
- Investigate options for reuse of excess for urban and/or industrial purposes
- Commission study to develop long term water requirement scenarios up to the year 2050

Reserve Study Recommendations

- Detail water availability assessment in the Maloney's Eye dolomitic compartment (consider EWR requirements) – from Reserve Study
- Implement the ecological Reserve monitoring programme
- More detailed study required for identified wetlands to be affected by licence applications

EWR = Ecological Water Requirements

Water Quality Recommendations

- Salinity impacts needs to be managed
- Management of eutrophication due to increasing nutrient loads and concentrations
- Set Resource Water Quality Objectives (RWQOs)
- Investigate management options for achieving RWQOs
- DWA considering the development of a water quality action and implementation plan

Next Steps

- Collate revised projection information
- Incorporate calibrated salinity modules into WRPM
- Apply WRPM for projection scenarios
- Compile Reconciliation Strategy Report
- Schedule 3rd SSC meeting (September 2011?)

Thank you



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