

The Re-Use of treated effluent from the Vaal River System

Crocodile West Strategy Steering Committee No. 1

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Extent of Approach

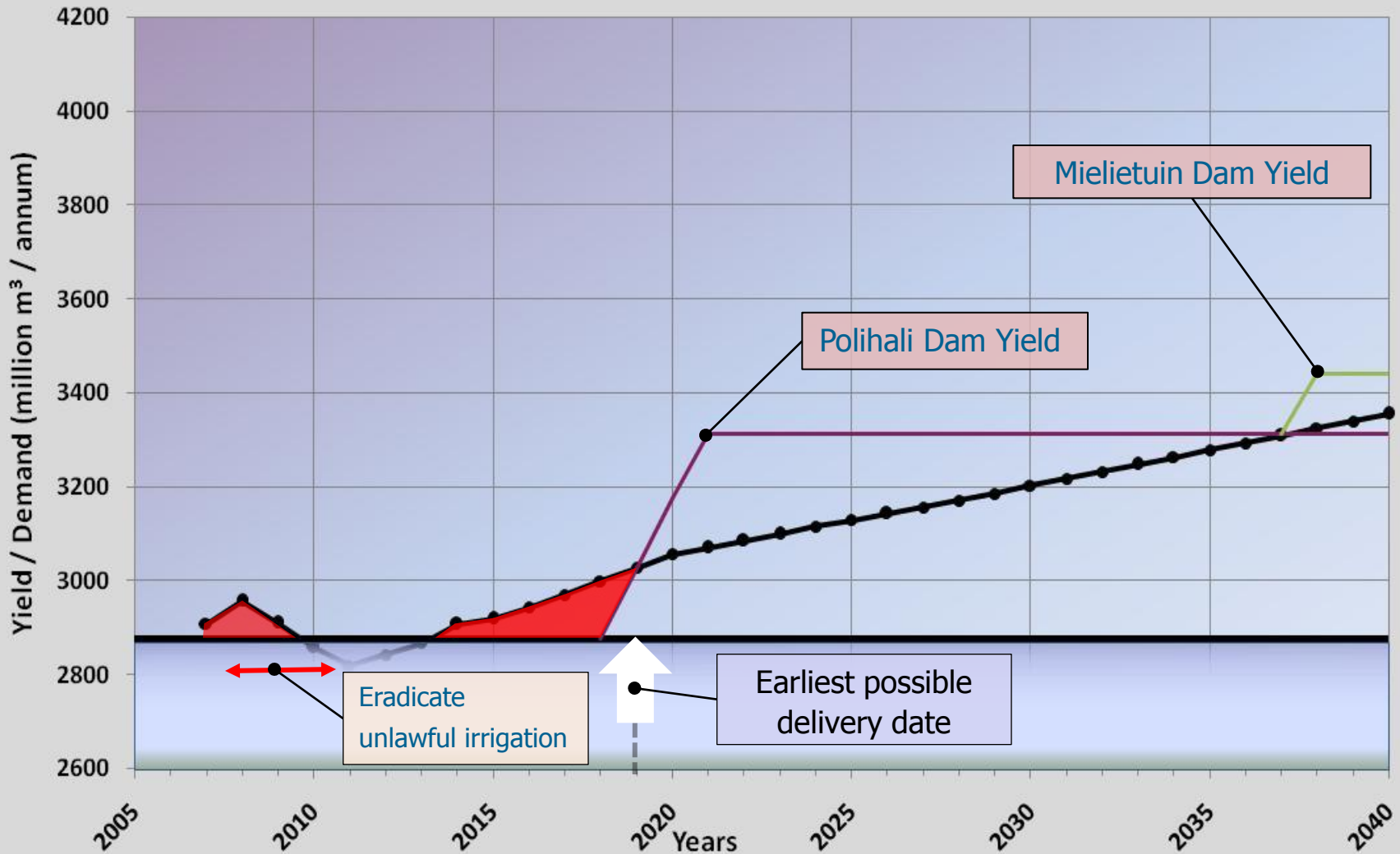
The Re-use Strategy includes both the re-use of mine water and treated sewage effluent

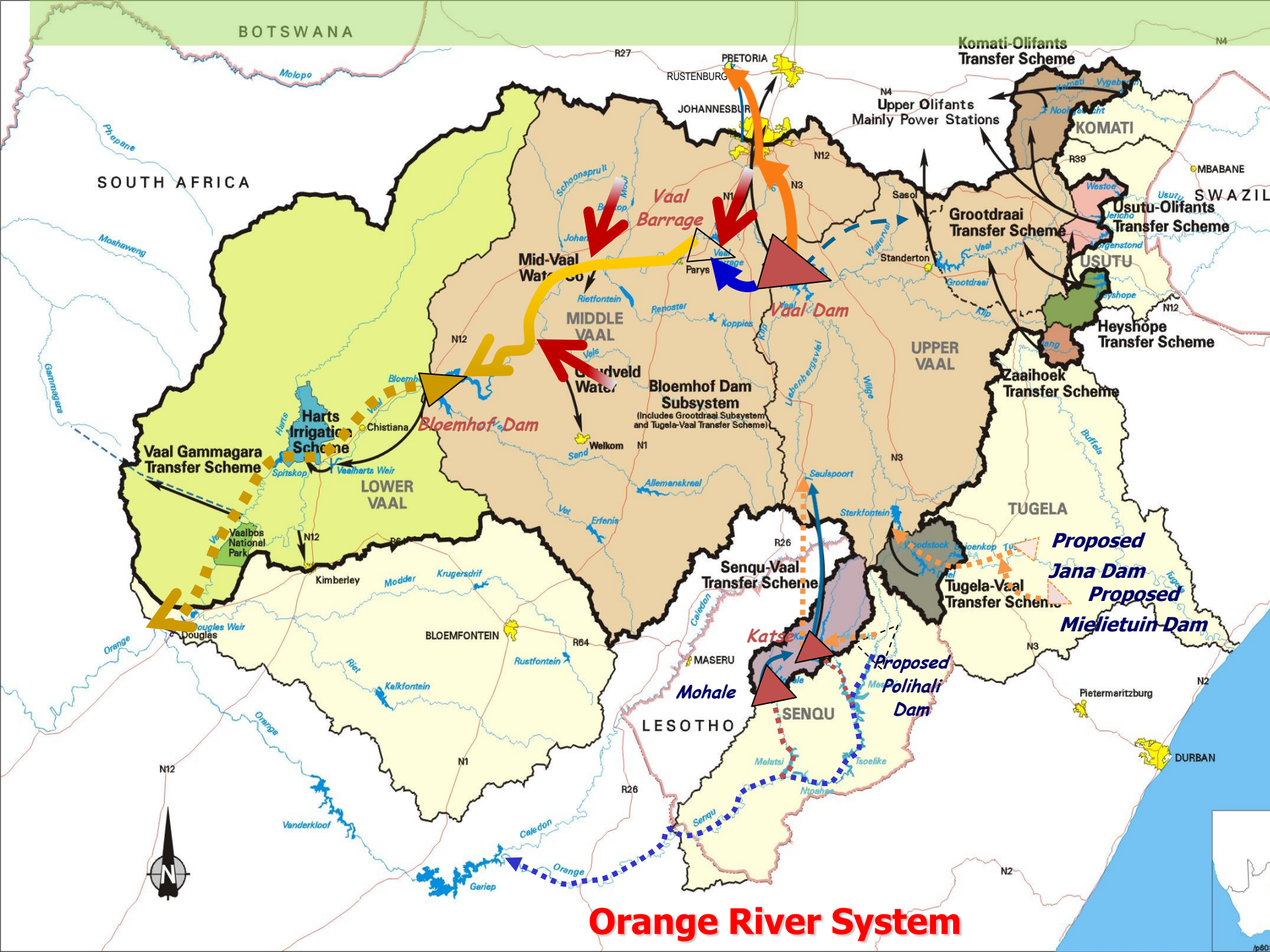
Background to Re-use Strategy

- **Ensuring that sufficient water is available to supply the future requirements of the Vaal River System requires a five pillar strategy**
 - **Eradicate unlawful water use**
 - **Reduction in water use by 15% through WC/WDM**
 - **Re-use of treated effluent**
 - **Augmentation (LHWP#2)**
 - **Establish Strategy Steering Committee**

Reconciliation Scenario (High)

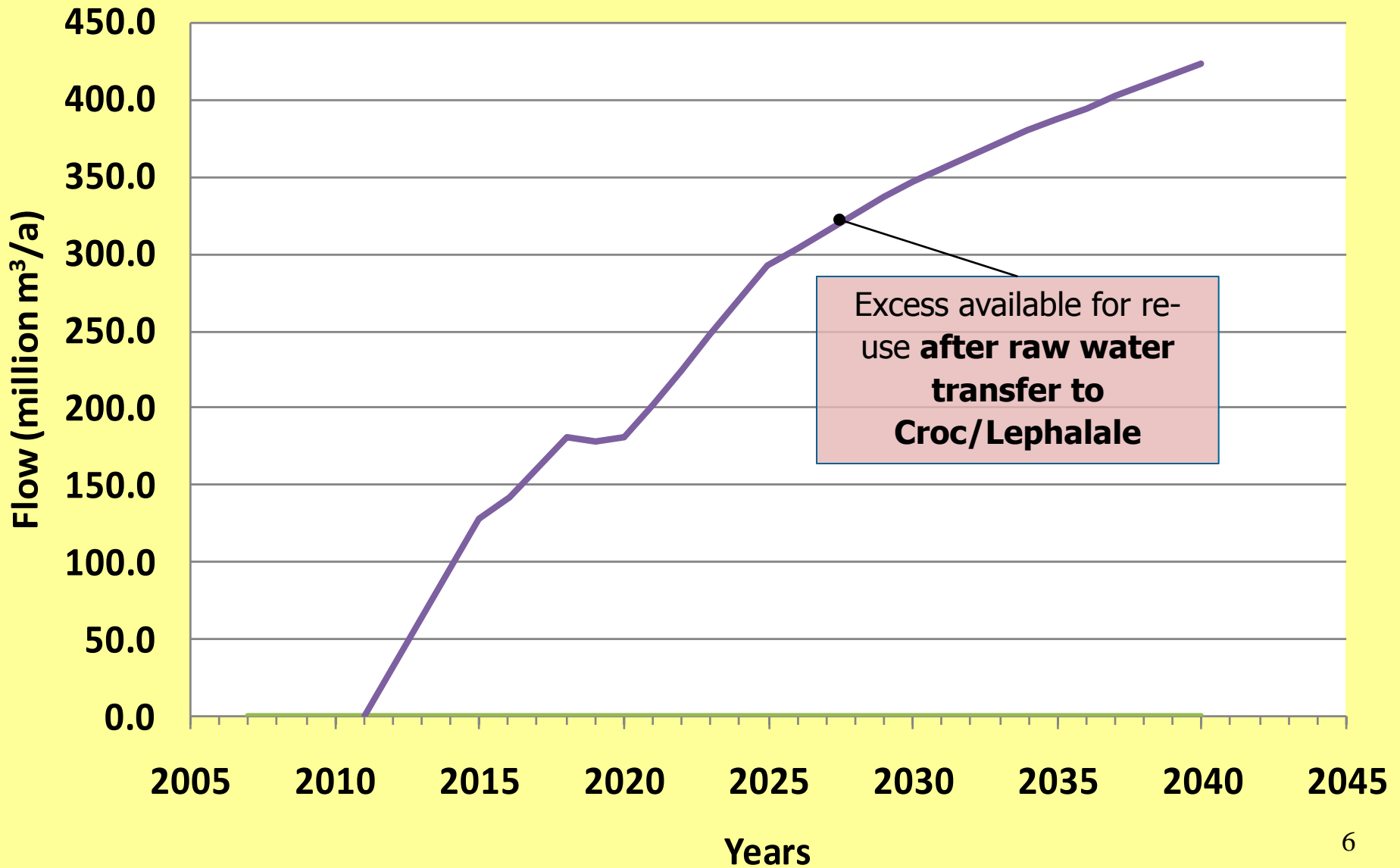
15% WC/WDM, LHWP#2 and TWP





Orange River System

Excess effluent



Progress with re-use (1/4)

- **Acid Mine Drainage**
 - This is an urgent problem
 - Looking at immediate action (partial desalination and discharge to blend) and long-term plan
 - All of this potential resource will be re-used as far as possible
 - Can cover deficits of the near future
- **An investigation to the re-use of treated sewage effluent has also started**

Progress with re-use (2/4)

- **Location, volumes and qualities of current and future effluent discharges have been confirmed and mapped**
- **Location and volumes where the effluent can be re-used has been determined (potable and industrial re-use) (Have concentrated thus far on Rand Water)**
- **This also involves transfers to adjacent catchments such as the Crocodile West and Olifants**
- **Develop water quality requirements for the treatment of effluent if the water is to be transferred into adjacent catchments**
- **Receiving water quality of adjacent catchments will dictate water quality requirements**

Progress with re-use (3/4)

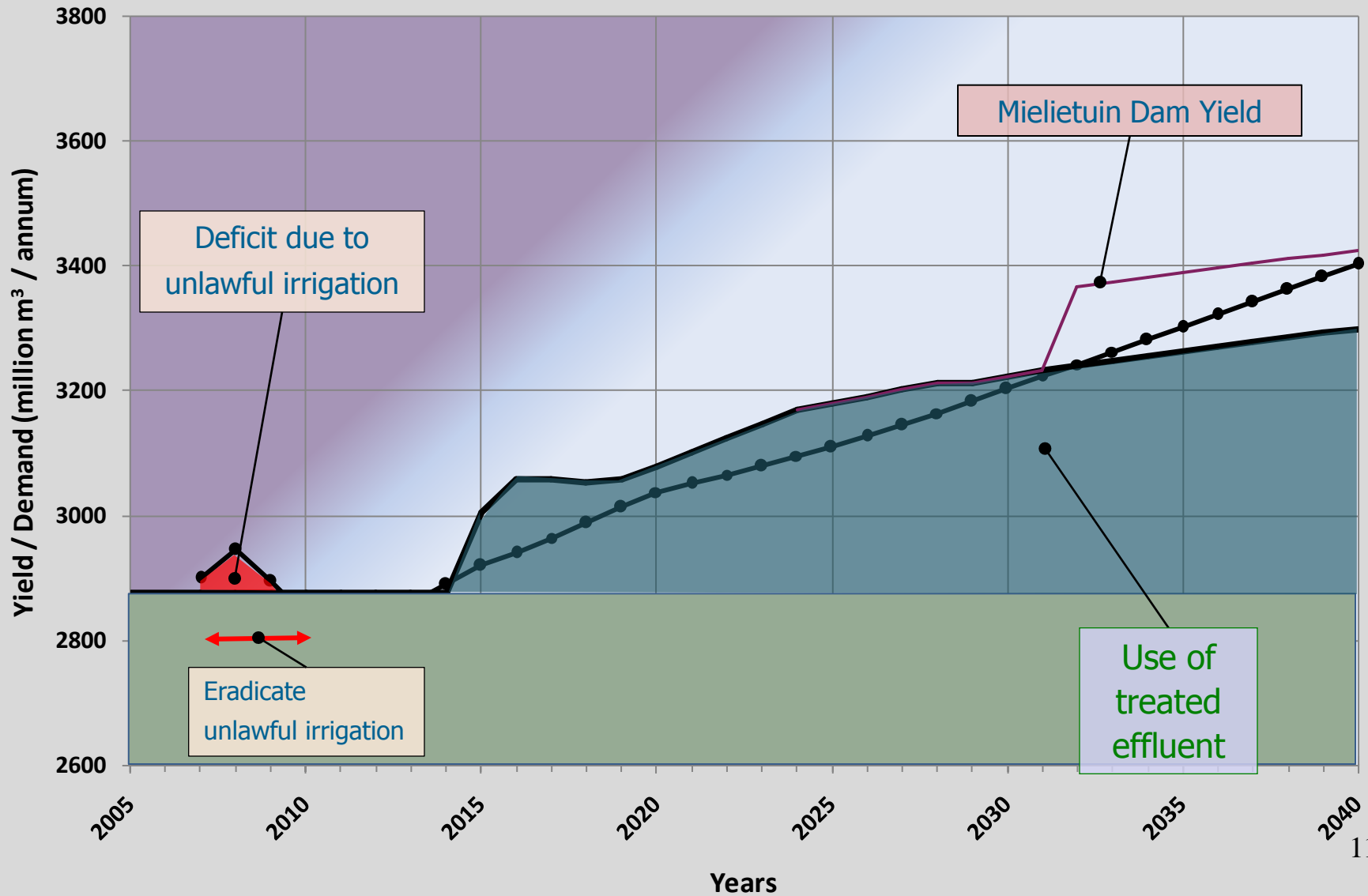
- **Develop, design and cost re-use scenarios**
- **Build on work that has been done to date**
- **Analysis of proposed schemes using the WRPM to assess impacts on the Vaal River System**
- **Develop a framework for the financing of the re-use schemes, with *inter alia* the following in mind**
 - Which tariff applies?
 - Integration with mine water strategy
 - Role that WDCS will play in financing the schemes
 - Payment of transfer schemes by receiving catchments
- **The Reserve will influence scenarios**

Progress with re-use (4/4)

- **The institutional structures to be adopted for the re-use schemes**
- **The outcome will be the plan to use the excess water and will lead to feasibility studies and/or tender processes**
- **Will have some firm answers at the next Vaal SSC meeting on the 19th of August 2010**

Reconciliation Scenario 2

High Demand, Unlawful irrigation out
15% WC/DM, Reuse, TWP



Thank you



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA