



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

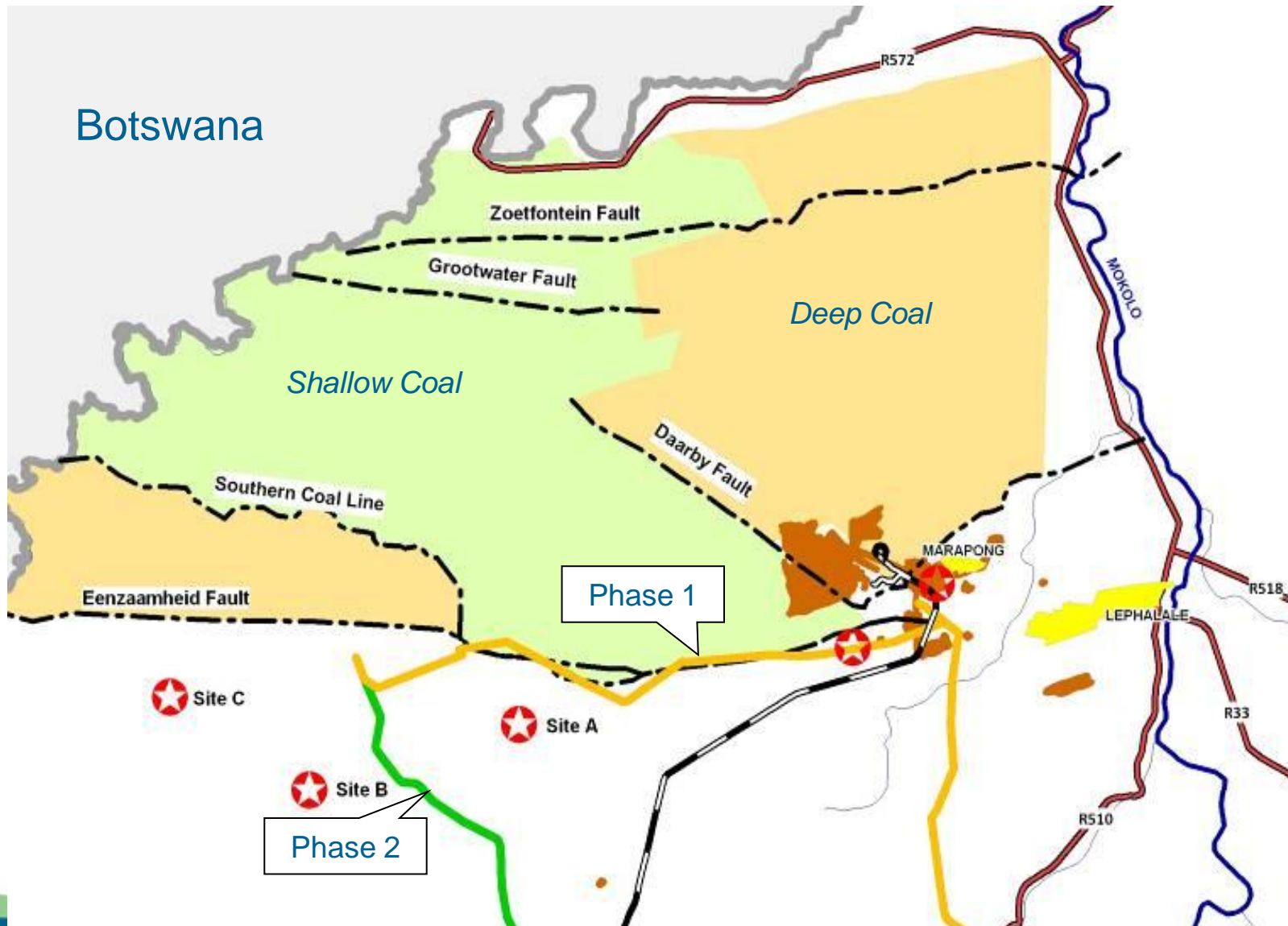
MOKOLO & CROCODILE WATER AUGMENTATION PROJECT (MCWAP)

Crocodile West Water Supply System Maintenance of the Reconciliation Strategy

25 July 2012

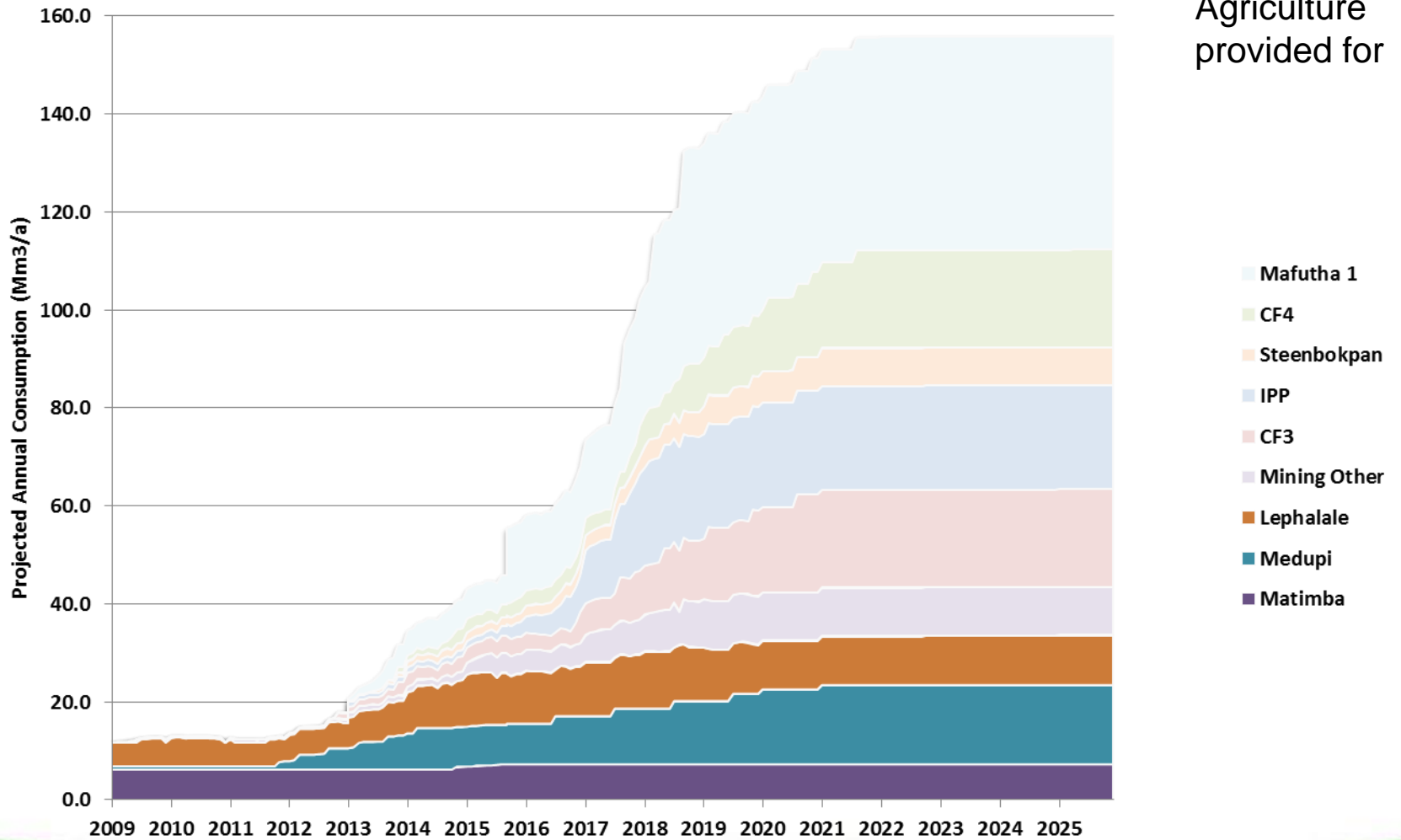
Ockie van den Berg
Chief Engineer: Options Analysis North

Waterberg Coal Fields



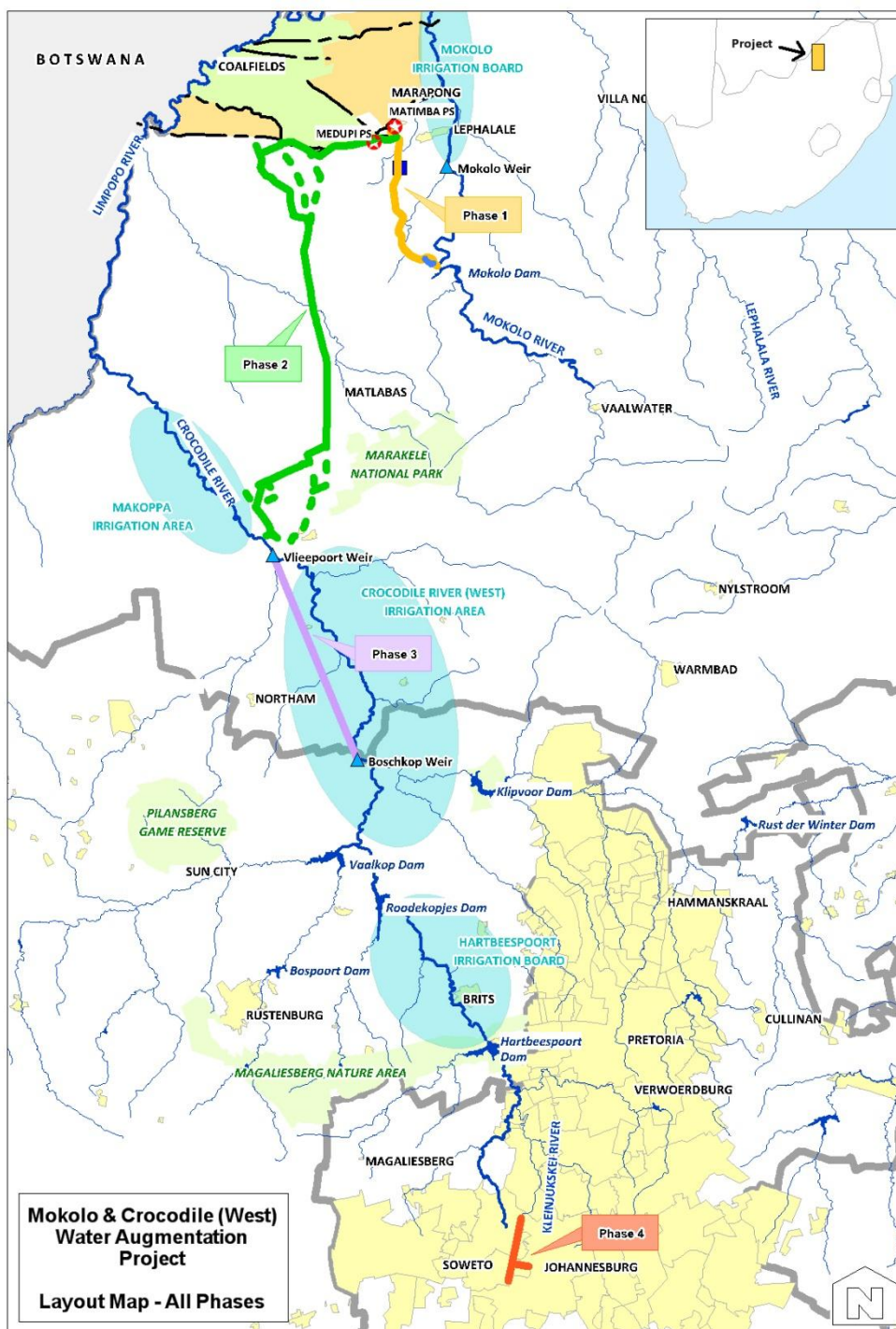
SCENARIO 12

Phase 1 Projected Water Requirements



SIP 1: Unlocking the Northern Mineral Belt with Waterberg as the Catalyst

- Investment in rail, water pipelines, energy generation and transmission infrastructure will catalyse unlocking of rich mineral resources in Limpopo resulting in thousands of direct jobs across the areas covered. Urban development in the Waterberg will be the first major post apartheid new urban centre and will be a “green” development project.
- Mining includes coal, platinum and other minerals for local use and export, hence the rail capacity is being extended to Mpumalanga power stations and for export principally via Richards Bay and in future Maputo (via Swaziland link).
- The additional rail capacity will shift coal from road to rail in Mpumalanga with positive environmental and social benefits. Supportive logistics corridors will help to strengthen Mpumalanga’s economic development.



**Mokolo & Crocodile (West)
Water Augmentation
Project**
Layout Map - All Phases

PROJECT STATUS

- **Phase 1**
 - Environmental Authorisation granted in December 2010
 - Water use licences (Sect 21(a) – abstraction of water) issued for Matimba, Medupi, Grootegeluk and Lephale Municipality
 - Contractor appointed September 2011
 - Beneficial commissioning December 2013
 - Medupi first unit operational by September 2012
 - Contingency for approx 4 million m³/annum phase 1 shortfall: local return flows and groundwater

PROJECT STATUS Cont

- **Phase 2**

- EIA suspended pending clarity on scope and timing of phase 2
 - To be revived shortly
- **Strategic considerations**
 - **Considered as required, irrespective of future developments**
 - **Necessary to supply strategic industries from multiple sources**
- **Funding approach under review by inter-departmental forum and as part of SIP initiative**
- **Required capacity & timing to be reviewed (optimisation)**
- **River management system to be implementation jointly with Water User Association**

- **Phase 4**

- **Delayed / required at all?**

Thank you

Demand Changes

- Currently uncertainty re extent and timing of further developments due to delays in Government (DoE, DPE and DMR) decisions
- Planning performed on basis of up to 4 Eskom power stations (incl Matimba and Medupi) plus IDP & Sasol's Mafutha 1
- Dept of Energy's Integrated Resource Plan
 - Focus initially on renewable energy sources and nuclear power
 - Next coal power station probably only in 2022,
- Sasol's development plan delayed,
- This impact on extent & timing of the proposed 2nd phase of augmentation,
- Inter-department discussions initiated to resolve issue

Emphasis shifted from securing long term water supply to securing water supply to meet Medupi water requirements – hence initial focus on upgrading of water supply from Mokolo Dam (proposed 1st phase of augmentation)

Sources of Water

- **Mokolo Dam (Existing supply)**
 - Yield increased due to switch from irrigation to game and cattle farming
 - Raising not considered at this stage
- **Return Flows in Crocodile West River (Future supply - indirectly imported via Vaal River system) – not possible to proceed with transfer scheme at this stage due to insufficient commitment of users**
- **Augmentation from the Vaal River**
- **Further options (important but limited)**
 - Groundwater
 - Water conservation & demand management
 - Re-use of local return flows

Layout Phases 1 and 2

