



uMkhomazi Water Project – Phase 1 (uMWP-1): Project update

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Presentation Outline

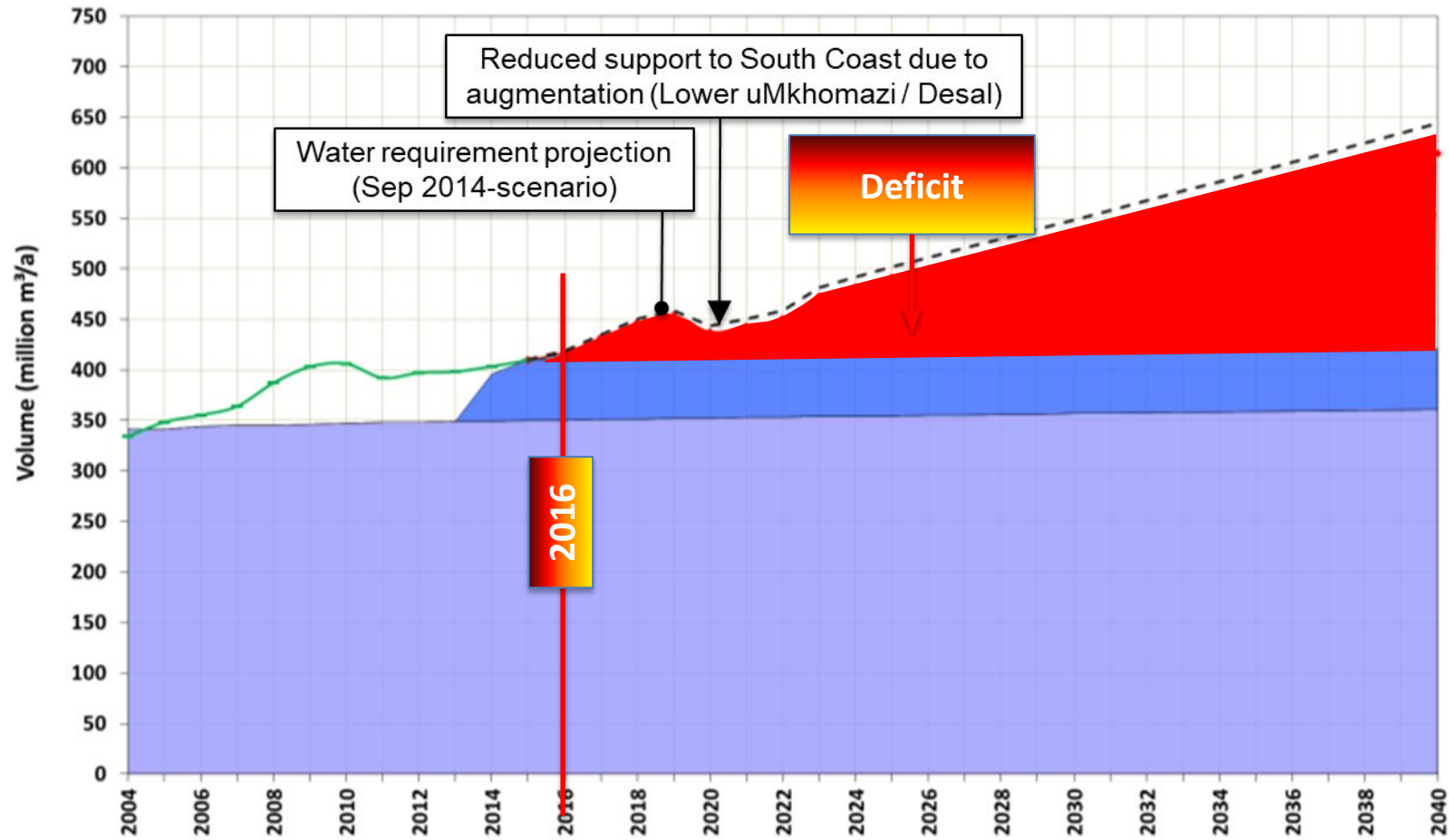
- Purpose and Strategic need
- Background & Project Development
- Scheme & layout
- Progress to date
- Conclusion



Project Purpose

- uMWP-1 is a strategic bulk water augmentation scheme.
- Raw water will be transferred from the upper uMkhomazi River to the proposed UUW's water treatment plant.
- The uMngeni system supplies 6 municipalities across KZN.
- The current system yield is approx 398million m³/a annually.
- uMWP-1 is planned to augment this by transferring approximately 220 million m³/a.

Strategic need for the Project





Project Background

- Pre-feasibility: uMWP-1 (concluded 1998).
- Technical Feasibility Study: uMWP-1 (from 2011 to 2014).
- EIA (from 2012 to 2022) – two Authorisations received.
- Minister of Water and Sanitation declared the project a government water works on 22 February 2019 and directed TCTA to implement the project.
- The then Minister also approved the construction of the project on 9 September 2022 in terms of the National Water Act.
- Project gazetting took place 21 April 2023.



Project Description

- **Smithfield Dam and Associated Infrastructure**

- 81 m high ECR Smithfield Dam in uMkhomazi River near Bulwer
- 26 m high ECR saddle dam
- Three flow gauging weirs in uMkhomazi River
- Operator facilities
- Resettlement houses for the affected families/households
- Roads
- Land and land rights
- Potential hydropower plant

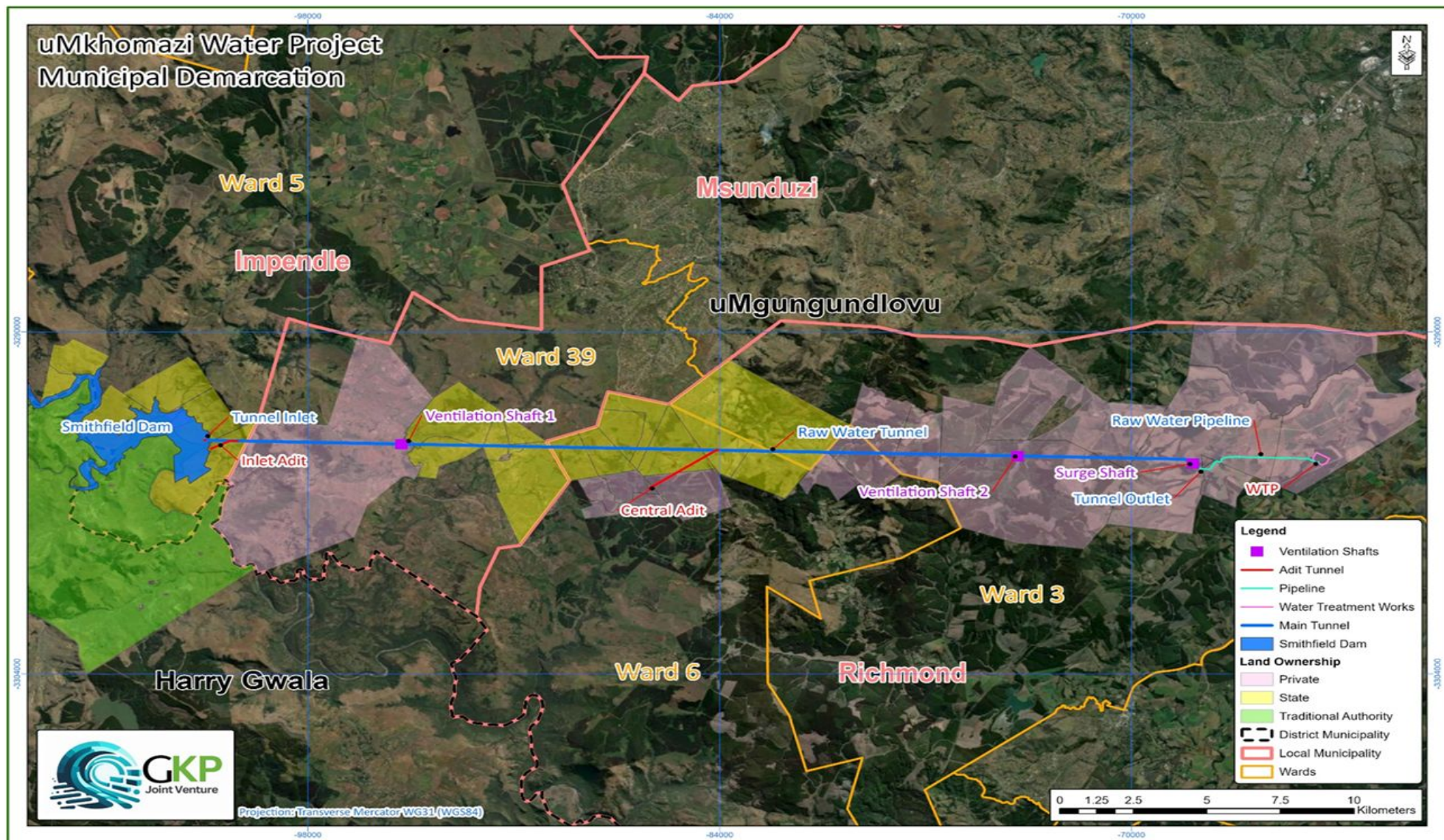


Project Description

• Water Conveyance Infrastructure

- 32 km long, 3.5m internal diameter tunnel from Smithfield Dam to the uMlaza River Valley.
- 5km long, DN 2600mm steel pipeline from the tunnel's surge shaft to the proposed UUW's Water Treatment Works in the uMlaza River Valley.
- Access adits, ventilation shafts, access roads.
- Land and land rights.
- Potential hydropower [feasibility study].

uMWP-1: Scheme & Layout





Progress to date

- **Inception reviews completed.**
 - Scope definition, data review and gap identification.
 - Key technical risks and assumptions confirmed.
- **Geotechnical & hydrogeological investigations completed.**
 - Drilling, geophysics, packer testing and logging executed.
 - Geotechnical conditions and tunnel design *considerations-next presentation*
- **Tender Design & modelling in progress.**
 - Tender design development in progress
 - Design considerations and construction strategies – *later presentation*



Conclusion

- Project responds to critical long-term water security needs in KZN.
- Investigations completed; modelling underway to reduce construction risk.
- EA conditions and land access remain key programme constraints.
- Project is on course for water delivery in 2032.



Thank you