

# Post Doctoral Research Fellowship

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DUT, Steve Biko Campus

**Kim Hodgson**

**Umgeni Water (Water Quality Management)**

# Overview of Umgeni Water Who we are and What we do

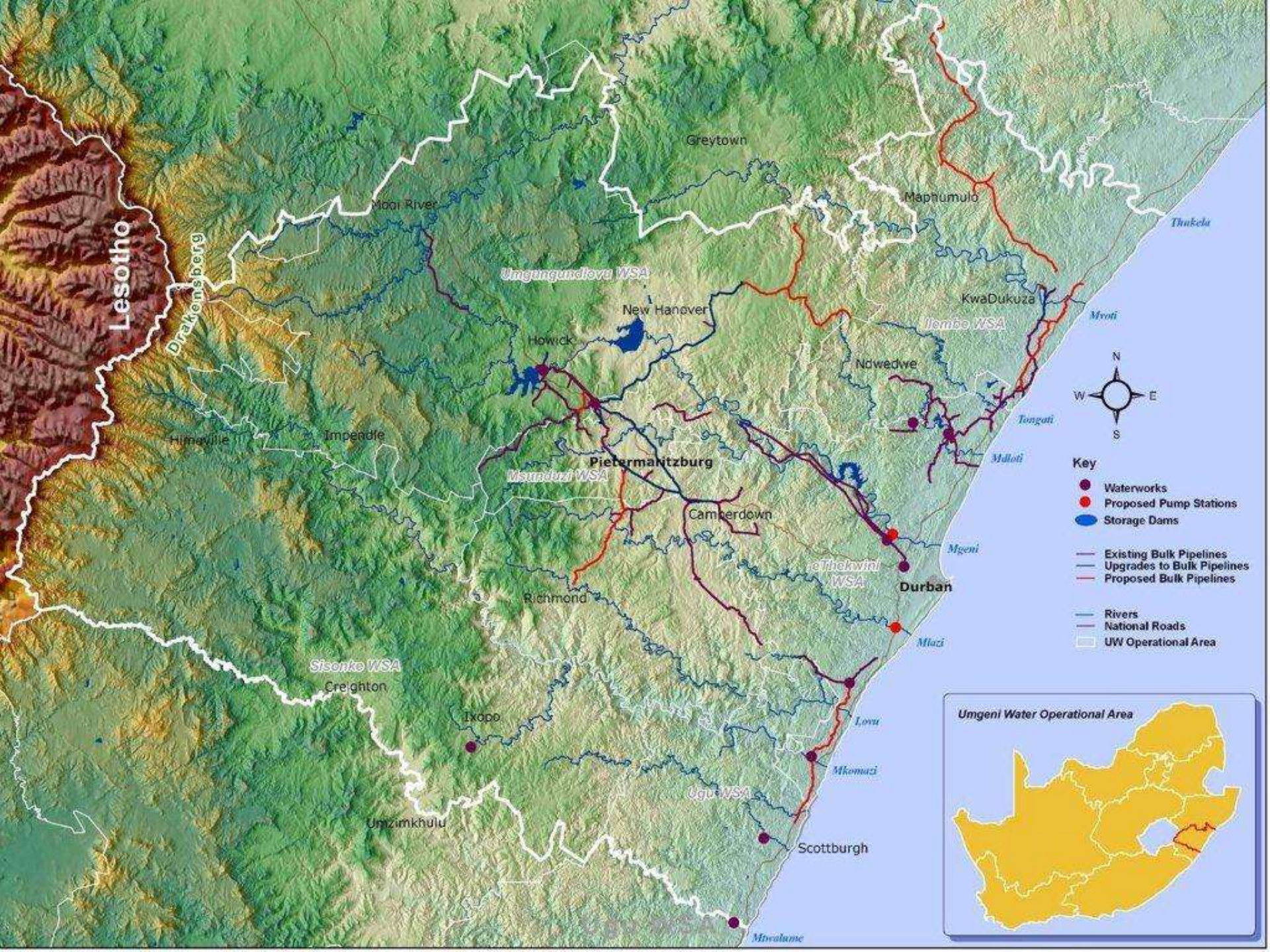


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# Overview of Umgeni Water

## Who we are

- ◆ Umgeni Water was **established in 1974**, to supply bulk treated water to municipalities, in an area of 2000 km<sup>2</sup>
- ◆ UW is now a major **bulk water and sanitation services provider** and covers over 24 000 km<sup>2</sup>
- ◆ **Customers** include eThekweni, Ilembe, Sisonke, uMgungundlovu, Ugu and Msunduzi municipalities
- ◆ Umgeni Water supplies 361 million kilolitres of potable water to customers and **4.8 million consumers** receive water supplied by Umgeni Water
- ◆ Umgeni Water is a **state-owned business** and reports to the Minister of the Department of Water Affairs and Forestry



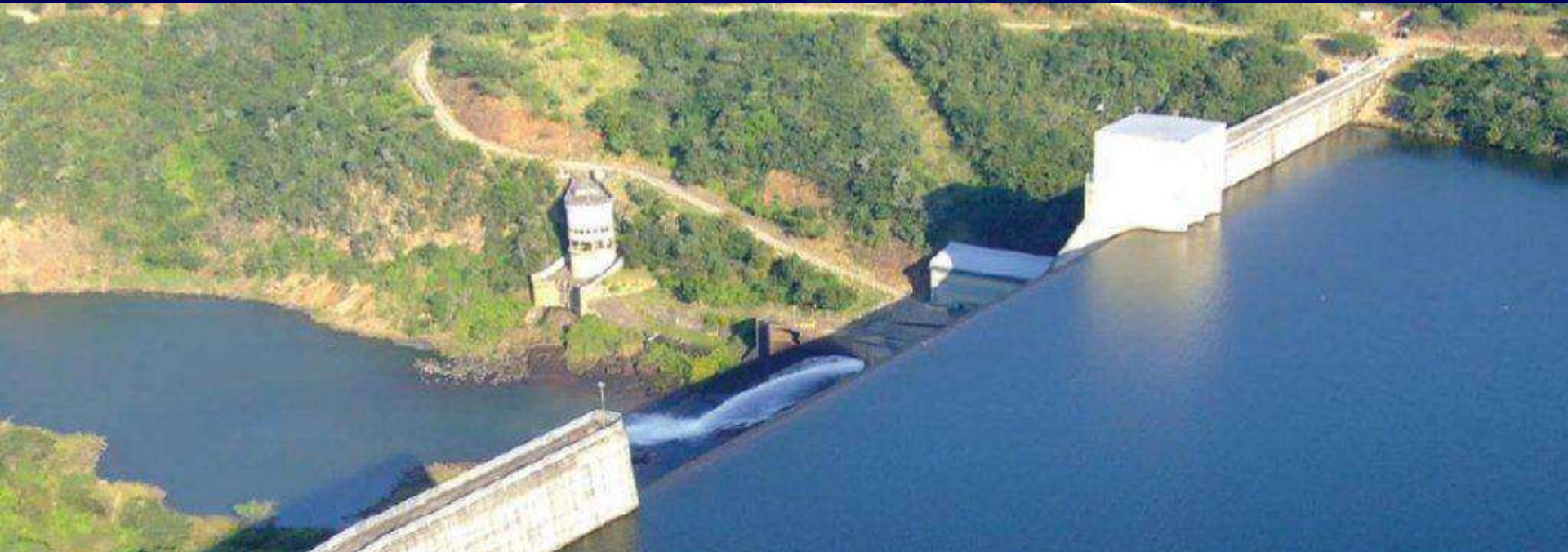
- Key**
- Waterworks
  - Proposed Pump Stations
  - Storage Dams
  - Existing Bulk Pipelines
  - Upgrades to Bulk Pipelines
  - Proposed Bulk Pipelines
  - Rivers
  - National Roads
  - UW Operational Area



# Overview of Umgeni Water

## What we do

- ◆ Umgeni Water **supplies treated water in bulk** to its customers, the municipalities
- ◆ Umgeni Water **treats wastewater** and discharges it to river
- ◆ Umgeni Water **owns and manages dams**





UMGENI VLEI

MEARNS PUMP STATION

MIDMAR DAM

ALBERT FALLS DAM

PIETERMARITZBURG

DARVILL WW

NAGLE DAM

DURBAN HEIGHTS WW

INANDA DAM

DURBAN

**KEY:**

- Waste Water Works
- Water Works
- Bulk Raw Water Pipelines
- Potable Water Pipeline

# Overview of Umgeni Water



**River**  
Resource quality is assured by monitoring and assessing rivers feeding our water supply dams, to flag risks to quality and to lobby the relevant catchment management authorities.

**Dams**  
Through partnerships, Umgeni Water is developing water resource utilisation plans for the dams it manages in the interests of ensuring a balance between economic, development, community benefits and resource sustainability. A systems approach and operating rules are used to manage supply risk and cost effectiveness.

**Water Treatment Works**  
ISO 9001:2000 certified water treatment works treat over 1000 Ml per day. Our treatment systems are informed by research and development, utilising the most appropriate technology. Quality is assured by treating to current South African national standards for drinking water specifications.

The ISO 17025, SANS accredited laboratory conducts a wide range of analyses used to assess the integrity of water and wastewater treatment and environmental water quality. The laboratory boasts state of the art technology and continually strives to keep abreast of the latest advancements in water analysis.

**Bulk Distribution Networks**  
The extensive network of bulk pipelines (over 540 km) and tunnels (over 118 km) are planned and constructed to ensure that there is minimal environmental impact. The organisation is gearing towards addressing the challenges in the provision of safe bulk water and have recently embarked on many capital intensive projects including the South Coast and Umbumbulu pipelines.

**Customers**  
Umgeni Water is focused on providing bulk water of quality fit for lifetime human consumption. Water treated by Umgeni Water reaches almost 5 million customers in the Rambe, Umlanjeni, Maudusi, eThakuzi, Sisonke and Ugu district municipalities.

**Wastewater Treatment**  
Umgeni Water manages and operates the Barville, Isopo and Howick Wastewater works, treating in excess of 70 Ml/day to meet the requirements of legislation (DWAF).

**Sea**  
Umgeni Water has an integrated approach to management, ensuring impacts on environmental resources are considered and mitigated throughout our business as we add value from source to sea.



Source to Sea



# The End Questions?

