

## **TERMS OF REFERENCE FOR A DIRECTED WRC PROJECT**

<b>THEME:</b>	Water Advisory
<b>TITLE</b>	Mapping water reuse., recycling and reclamation in the industrial, mining, large commercial and agro-processing sectors
<b>TOR NUMBER:</b>	<b>1010033</b>

### **Rationale**

It is now become apparent that securing South Africa's water future and its uses, will require a diversification of the water mix to meet the future demands. The Department of Water and Sanitation launched the second edition of the National Water Resources Strategy, which includes a section setting out the department's vision for the implementation of further water reuse in South Africa. Recently, the National Planning Commission also reflected on a national pathway to water security up to 2050 and identified the need for a national facility for research, development, innovation and testing with a focus on water reuse and desalination. Amongst the options reuse, mainly direct, offers the biggest opportunity in already stressed water use areas mainly in the municipal and the industrial/mining sectors. Thus the reuse activity in South Africa is set to explode in the near future, yet it remains an unregulated activity which while having several benefits on the resource side. However, tracking reuse has disappeared from the radar and there are some wonderful and innovations, as well significant initiatives which are setting global and international benchmarks on water reuse. These are going unnoticed and not supporting the sector from its learning such that this area can benefit significantly.

Thus there is a need to consolidate and understand the movement and update of water reuse in the sector.

### **Objectives**

- The objectives of the study are to:
  - Capture and establish a database with details and info, costs, technology used, etc, etc
  - Spatial Map these case studies on a map
  - Capture Case studies of - good and bad practice.
- Quantification of each stream of water and water quality challenges in water reuse , dealing with brines and brine management.
- Provide a high level status of the uptake of water reuse and its impact on the country

**Expected Deliverables:**

- A high level evidence based position paper
- A spatial database of all water reuse developments in south Africa
- Detail case studies highlighted good and bad practice
- Report on challenges and opportunities to support higher uptake
- Identifying policy and process gaps
- Any specific guidelines and recommendation
- Six webinars

**Total Budget:** R4 000 000.00 (Including VAT)

**Year 1:** R 1 000 000.00 (Including VAT)

**Duration:** 3 yrs months

**NB: This is planned as a directed targeted to new water centres at Mpumalanga, Limpopo and North West Universities. It is aimed to support the growth of these HDI centres and student development to undertake research in the field of water reuse. It is aimed to support Post Docs, PhDs and several MScs.**