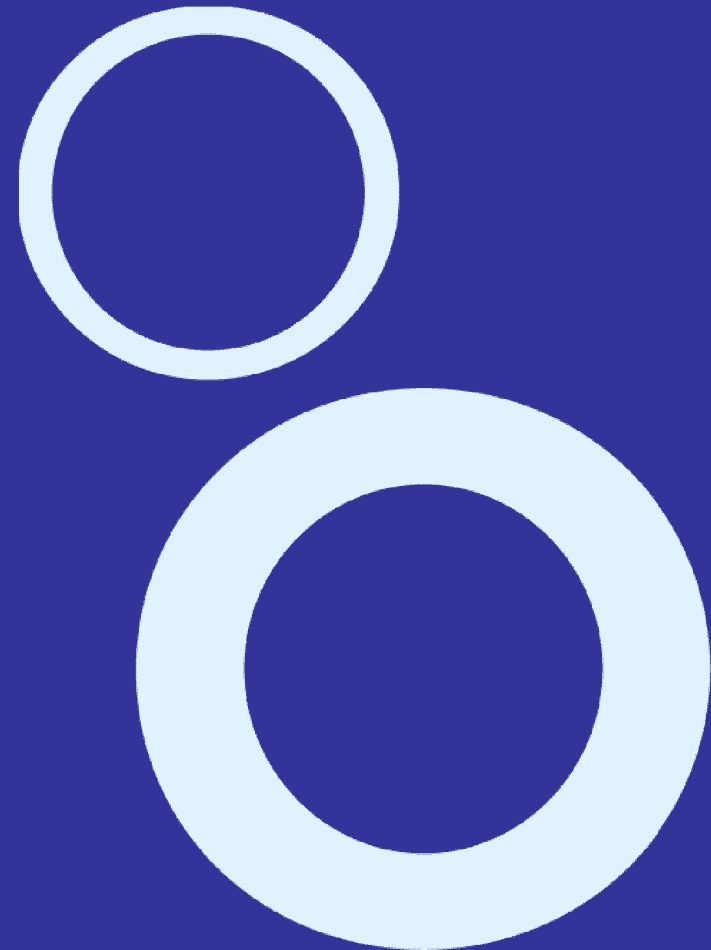


Case Study on Utilities' Good Practices

Municipality of Walvis Bay,
Namibia

May 2012



The Background

The town of Walvis Bay is located on the Namibian coast. The conveyance and the distribution of the water are under the responsibility of two different entities. The Namibia Water Corporation Limited (NamWater) is in charge of the water abstraction from the Kuiseb aquifer system, as well as the conveyance to storage reservoirs, while the Municipality of Walvis Bay is responsible for the water distribution to its customers.

In 2009, the Municipality of Walvis Bay succeeded to supply water to the entire population living in the service area which represented 63,000 persons. The utility registered a low rate of non-revenue water (NRW; between 14% and 15%) and provided water 24 hours per day. It is important to note that these results were stable for most of the time.

Nevertheless, the district underwent several periods of water supply disruption due to water flood events in the Kuiseb river during the past years, especially in 2000, 2006, 2009 and 2011. In these years, strong and unprecedented continuous river floods due to heavy rains in the catchment area resulted in damages to the borehole- and to connected parts of the water supply network, as well as to the power supply, causing discontinuous water supply.

Good Performance - questions and answers

■ The utility showed good results in terms of NRW and 24 hours of supply per day. How was this good performance achieved?

- **Consistent and 100% meter reading** on a monthly basis by Finance and Dept WWE (Relatively easy to achieve on our size).
- **Bi-weekly control meter readings** of bulk users by the Dept WWE.
- **Regular replacement of meters**, especially bulk meters (<8 years).
- Tightening up on administration – like ensuring new meters are recorded, routed and read.
- Using only Class C, SANS approved meters with a high level of accuracy and ability to recorded low flows.
- **Surprise meter readings** over weekends that enable to catch illegal water users and meter tampering.
- Reviewing of **water by-laws** in order to deter offenders with stiffer penalties for water theft and infrastructure damages.
- **Improved communication** with the consumers on water preservation and reporting of illegal activities.
- **Closer monitoring** of water statistics to highlight the high risk areas.

- **In reaction of the flooding events, what kind of measures did you take to prevent future floods' damage?**

As the boreholes and supporting infrastructure belong to NamWater, it is their responsibility to ensure adequate protection capacity against flood damage, contingency planning in case of disruptions etc.

The Walvis Bay Municipality currently has no alternative water source and therefore is dependent upon NamWater and the Kuiseb system. Regular meetings are held with them in order to ensure that they take the issue seriously and are constantly trying to better protect the system against floods which are becoming more regular.

- **How did you manage the different flood crisis in term of infrastructure and how did you supply water for the population?**

As the supply from NamWater to the final distribution reservoir dropped below the average requirement of the town, intermitted water supply was basically the only option. Depending on the quantity of water received into the reservoir, the town was restricted to full supply only during certain hours. In the worst case scenarios, water was available early in the mornings (06h00-09h00) and again late afternoons (18h00-21h00).

Water points were opened at certain points throughout the town where water could be collected free of charge during the closed periods. Water was also supplied by truck to critical points like schools, hospitals and old-age homes.

The main plans in the near future

- Apart from further strengthening the existing NamWater infrastructure, **adding additional capacity** to it could help and is being planned by NamWater.
- In addition, it is almost certain that **a desalination plant** needs to be built north of Swakorpfmund , primarily for new uranium mining requirements, and a planned pipeline linked to Walvis Bay from its source would also largely mitigate the risk of a disruption in the Kuiseb.

For more information on Walvis Bay,
please contact: Andre Burger
aburger@walvisbaycc.org.na