

Postal Address:
P O Box 51
Bushman's River Mouth
Eastern Cape 6190



Phone: 046 648 1233
Mobile: 083 270 4874
Fax: 046 648 1552
Email: albwater@border.co.za

ALBANY COAST WATER BOARD

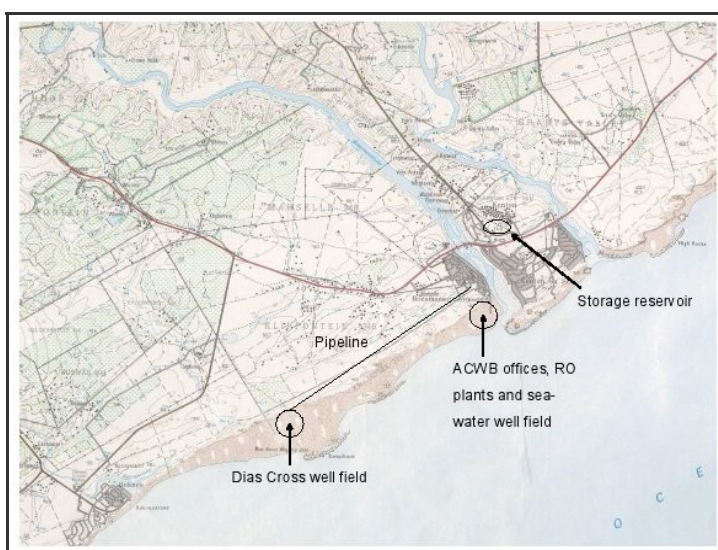
Providing Sustainable Futures

Date: 17th October 2006
Attention: Mr Bradley Viljoen
Acting Committee Secretary

REPORT TO PORTFOLIO COMMITTEE ON WATER AFFAIRS “SOCIO-ECONOMIC GROWTH & SERVICE DELIVERY TOWARDS RURAL DEVELOPMENT”

The Albany Coast Water Board is located roughly midway between Port Elizabeth and East London, and currently employs 6 personnel for the supply of bulk water to 5 rural communities within its area of jurisdiction, which extends along the coast just East of the Kariega River Mouth to just West of Boknes, and some 10 klms inland from the coast.

This is a water scarce region with limited resources and no freshwater dams or rivers. The 'Bokke Veld Shale' geological conditions prohibits the use of boreholes, therefore we are forced to rely on the only available alternative resources – those being brackish and sea waters. The bulk of our water (approximately 800 kilolitres per day), is sourced from 7 wells in the sand dunes above the Diaz Cross aquifer at Kwaihoek and pumped a distance of approximately 9 kilometres to the lifting station supplying the Ndlambe Municipal reservoirs at Kenton-on-Sea. The balance of our average daily demand, approximately 600 kilolitres, is abstracted from seawater - via our naturally filtering beachwells located at the mouth of the Bushmans Estuary and supplied to our Reverse Osmosis desalination plant (commissioned in 1997). This superior quality desalinated water is then blended with the brackish water from the Diaz Cross aquifer.



Albany currently supplies majority of its bulk water to the local Water Service Authority, Ndlambe Municipality, to meet the demands of approximately 15 000 permanent residents, (peaking during holiday season to 25 000) in the rapidly growing communities of:

1. **Marcelle** – Population approx. 6 000 – 8 000 – Previously Disadvantage Persons – Waterborne sanitation

2. **Ekuphumalene** – Population approx. 6 000 – 8 000 – Previously Disadvantaged Persons – French Drain/Septic Tanks
3. **Harmony Park** – Population approximately 3 000 – Previously Disadvantaged Persons – Waterborne sanitation
4. **Bushmansrivier Mouth** – Predominantly seasonal holiday cottages / retired residents – French Drain / Septic Tanks
5. **Kenton-on-Sea** - Predominantly seasonal holiday cottages / retired residents – French Drains / Septic Tanks

The majority of Ndlambe Municipality's customers are extremely poor and cannot afford to pay for water services, however they receive unrestricted water supplies. Naturally this places a heavy burden on Ndlambe's financial resources which has a knock-on effect for Albany Coast Water Board. Although Albany currently manages to operate on a self-supporting basis, its low annual turnover of between R2 - 3 million merely provides for its day-to-day operational expenses (of which electricity supply is the major cost component) with no possibility or provision for budgeting on future infrastructural or Capital expenditure projects.

Currently revenue received from water supplies to the more affluent communities is off-setting the financial short-falls of the cash strapped disadvantaged communities, many of which are unemployed. To ensure that we maximise potential earnings from the more affluent communities especially during peak holiday demand periods, whilst also looking to sustain uninterrupted supplies to our disadvantaged communities, it was necessary to provide an additional bulk water storage facility. Accordingly, Ndlambe Municipality assisted by its MIG funding reserves, is working closely with Albany on the installation of an additional 5 Megalitre storage reservoir. This additional 5 Megalitre storage forms part of Ndlambe's overall Water Supply Strategy to ensure sustainable supplies of fresh water over the next 10 – 15 years to meet the rapidly growing demands of its expanding communities.

However, due to increased economic and agricultural development in the region, these rapidly growing rural communities are putting pressure on the limited Diaz Cross brackish water resource at Kwaihoek. This is compounded by the Diaz Cross Aquifer drying out during periods of low rainfall and drought. Therefore our future Water Resource Management Plan calls for an increase in the supply of the only other available resource – seawater. The Reverse Osmosis desalination plant design is configured on a modular basis which allows for easy future expansion as and when the communities water demand increases.

The additional 5 Megalitre storage facility will allow us to maximise desalinated water production during off-peak periods to initially store and so meet these growing demands however we must carefully manage the balance between storage and production and consider the future modular expansion of the existing Reverse Osmosis desalination plant.

Furthermore, the deteriorating quality of the Diaz Cross Aquifer water compared to the superior high quality water produced by the desalination plant requires that we re-evaluate the benefits of supplying more desalinated water in the future.

The Albany Coast Water Board has enjoyed a close working relationship with the Department of Water Affairs since its inception in 1982, although over the past 12 month period we have not called on the Departments Services. However we look forward to renewing and developing a future reciprocal relationship with the Department, where Albany would share its key learnings and experience with seawater desalination developed over the past decade, and the Department may consider financially assisting our future desalination plant expansion requirements.