7.5 Lower Mgeni System

7.5.1 Maphephethwa WTP Upgrade

<table>
<thead>
<tr>
<th>Planning No.</th>
<th>106.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project No.</td>
<td>UI49A</td>
</tr>
<tr>
<td>Project Status</td>
<td>Construction phase (as of January 2011)</td>
</tr>
</tbody>
</table>

Project Description

The Maphephethwa Water Treatment Plant (WTP) was originally commissioned as part of a rural scheme (Lower Ngcolosi Scheme). The WTP is located on the west bank of Inanda Dam within eThekwini Municipality and draws water off of the Nagle raw water Aqueduct 2 supplying Durban Heights WTP. The existing WTP has a treatment capacity of 0.75 Ml/day. The treated water is supplied into a 1ML on-site storage reservoir.

There has been increased demand from the WTP in recent years and the WTP currently produces an average of 1.4 Ml/day. It was initially proposed that the WTP be upgraded to a capacity of 2.5 Ml/day, allowing for later expansion to an eventual 5Ml/day. The growth in water consumption has resulted in eThekwini Municipality requesting that the WTP be upgraded immediately to a capacity of 5Ml/day.

Key information on this project is summarised in Table 7.24.

Table 7.24 Project information: Maphephethwa WTP Upgrade.

| Project Components | 250mm mPVC class 9 raw water off-take pipeline from Portal Outlet No. 8 of the Nagle Aqueduct No. 2, flow measurement and control, coagulant rapid mixing, flocculation channels, clarifiers, sludge drying beds, recycle filter, dirty backwash reservoir, rapid gravity sand filters, clean backwash reservoir, chlorine contact channel and new 1ML treated water reservoir (increasing the storage capacity to 2ML). |
| Capacity | 5.0 Ml/day |

Institutional Arrangements

Umgeni Water will own, operate and maintain the Maphephethwa WTP and will sell potable water from this system to eThekwini Municipality per the existing bulk water supply agreement.

Beneficiaries

The upgrade of the Maphephethwa WTP will benefit the Maphephethwa community and surrounding areas in eThekwini Municipality.

Implementation

The duration of this project is anticipated to be completed by 2012. The total cost is estimated to be R 36 million at 2010 prices.
Figure 7.21 Upgrade of Maphephethwa Water Treatment Plant

Source:
Department of Water Affairs (Elevation)
DORLCR (Settlements)
K2I Department of Transport (Roads)
Municipal Demarcation Board (WAs)
Umgeni Water (Infrastructure, Dams, Rivers)

Original Scale on A4 at 1:3000

0 0.1 0.2 km