Resource Management

Water Demand in the Basin

Water Demand Management

Water Use and Allocation

Upper Orange-Senqu River Basin

Vaal River Basin Lower Orange River Basin Mining and Industry Hydroelectric Power

Introduction

Agriculture

Urban and Rural Consumption

Water Demand in the Basin: Urban and Rural Consumption: Vaal River Basin

Rand Water supplies water to the urban/industrial centre of Gauteng and other areas within the Vaal River catchment. Gauteng province has the largest population of any province in South Africa and is the economic powerhouse of South Africa. The urban demand on the main Vaal River system is shown in the table below.

Table 1: Year 2000 urban water requirements in the Vaal River Water Management Area.

| ISub-Area I | Urban Population | Domestic (direct) | Indirect | Urban | Total | Н | | Urban return flow | |
|----------------|---------------------|----------------------|----------|-------|-------|---|-------|-------------------------|--|
| | | Mm³/a | | | | | I/c/d | % | |
| Upper Vaal | 5 456 397 | 309,2 | 209,4 | 116,8 | 635,4 | | 155 | 54 | |
| Middle Vaal | 1 165 329 | 44,1 | 29,1 | 19,8 | 93,0 | | 104 | 32 | |
| Lower Vaal | 611 719 | 30,0 | 20,5 | 17,2 | 67,7 | | 134 | 0 | |

I/c/d = litres per capita, per day Source: DWAF 2003c,d,e

The rural domestic and stock watering demands for the Upper, Middle and Lower Vaal Water Management Areas are mainly supplied from groundwater.

Table 2: Year 2000 rural water requirements in the Vaal River Water

| Management Area. | | | | | | | | |
|------------------|---------------------|----------|-------------------|-------|------------------------|--|--|--|
| Sub-Area | Rural Population | Domestic | Stock watering | Total | Rural human per capita | | | |
| | | Mm³/a | | I/c/d | | | | |
| Upper Vaal | 606 926 | 5,7 | 36,9 | 42,6 | 25 | | | |
| Middle Vaal | 363 714 | 3,3 | 28,7 | 32,0 | 25 | | | |
| Lower Vaal | 726 068 | 8,7 | 35,9 | 44,6 | 33 | | | |

l/c/d = litres per capita, per day ource: adapted from DWAF 2003c,d,e

Next: Lower Orange River Basin















