

# SUMMARY SHEET FOR LEAKAGE BENCHMARKING IN SOUTH AFRICA

Prieska

## S1. SYSTEM NAME AND CONTACT DETAILS

Name of Water Undertaking	Siyathemba Municipality	
Name of Water Supply System	Prieska	
Contact Details:	Name	Mr CN van Wyk
	Address	PO Box 16 Prieska 8940
	Telephone	053-3535 306
	Fax	053-3531 386
	E-mail	psk.muni@prieska.co.za

## S2. Performance Indicators of Water Loss

Viewpoint	Level	Parameter	Typical Range			Actual PI	Units
			Excellent	Good	Poor		
Operations management of distribution system at current pressure	Basic	% of year system is pressurised	100	100	<100	100	%
		Current Annual Real Losses (CARL) (when system is pressurised - see note 2)	30 to 100	100 to 200	>200	102	Litres/connection/day
	Detailed	Unavoidable Annual Real Losses (UARL) (see note 3)	n/a	n/a	n/a	43	Litres/connection/day
		Consumption	n/a	n/a	n/a	1043	Litres/connection/day
		Infrastructure Leakage Index (ILI) (= CARL/UARL - see note 4)	1	2	>3.0	2.4	non dimensional
Financial management aspects of water losses	Basic	Volume of non-revenue water as a% of system input volume (see note 5)	<10%	20%	30%	14	%
	Detailed	Value of non-revenue water as a % of annual cost of running the system (see note 6)	<5%	10%	15%	10	%

### Notes:

Note 1: taken from data in "AQUA" article, December 1999 or estimated by WRP

Note 2: takes account of % of time system is pressurised, but not system pressure, density of connections or customer meter location

Note 3: takes account of density of connections and customer meter location at current pressure

Note 4: measures overall efficiency of management of distribution system at current operating pressure

Note 5: strongly influenced by average consumption per service connection

Note 6: Allows different values of Rand/m<sup>3</sup> for different components of non-revenue water

## S3. Key Operating Parameters which influence Unavoidable Annual Real Losses (UARL)

Variable	Typical Range			Actual PI	Units
	Low	Medium	High		
Average Operating Pressure	30	45	100	35	Metres
Density of connections	20	45	120	42	per km of mains

## 4. Key Components of Annual System Input Volume

Component	m <sup>3</sup> /year	m <sup>3</sup> /connection/day	% of System Input Volume
Water Exported		not applicable	
Authorised Consumption excluding exports	1078000	1.04	89.1
Apparent Losses	26300	0.03	2.2
Actual Consumption excluding exports	1104300	1.07	91.3
Real Losses	105200	0.10 (see note 7)	8.7 (see note 8)
System Input Volume	1209500	1.17	100.0

Please return the completed form to R Mckenzie or J Kock at WRP Pretoria, tel: (012) 346 3496  
 Fax: (012) 346 9956  
 e-mail: wrp@wrp.co.za