

D7. RELATIONSHIP BETWEEN REAL LOSSES EXPRESSED AS % OF SYSTEM INPUT

D7a. Real losses curve definition

| Curve Definition | | | | | |
|-------------------------------------|--|------|------|------|------|
| Consumption litres/serv conn/day | Real losses in litres/service connection/day | | | | |
| | 50 | 100 | 200 | 500 | 1000 |
| 100 | 33.3 | 50.0 | 66.7 | 83.3 | 90.9 |
| 250 | 16.7 | 28.6 | 44.4 | 66.7 | 80.0 |
| 500 | 9.1 | 16.7 | 28.6 | 50.0 | 66.7 |
| 1000 | 4.8 | 9.1 | 16.7 | 33.3 | 50.0 |
| 2000 | 2.4 | 4.8 | 9.1 | 20.0 | 33.3 |
| 3000 | 1.6 | 3.2 | 6.3 | 14.3 | 25.0 |
| 5000 | 1.0 | 2.0 | 3.8 | 9.1 | 16.7 |
| 10000 | 0.5 | 1.0 | 2.0 | 4.8 | 9.1 |

D7b. Components of water balance in litres/service connection/day (Actual Results)

| | | | | |
|-----------------------------------|---------------------------------|---|---|--------------------------------|
| System Input Volume = 3,046 | Total Consumption = 2,797 | Billed Authorised Consumption = 2,634 | Authorised Consumption = 2,735 | Revenue Water = 2,634 |
| | | Unbilled Authorised Consumption = 101 | | Total Losses = 311 |
| | | Apparent Losses = 62 | | |
| | | Real Losses = 248 | | |

D7c. Current Real Losses as % of System Input Volume

| Details | Calculation | Actual Result | Units |
|--------------------------|---------------------------------|---------------|-----------------|
| System Input Volume | from D7b | 3,046 | Litres/conn/day |
| Total Consumption | from D7b | 2,797 | Litres/conn/day |
| Annual Real Losses | from D7b | 248 | Litres/conn/day |
| ARL as % of System Input | ARL / System input volume x 100 | 8 | % |

D7d. Potential Real Losses as % of System Input Volume

| Details | Calculation | Actual Result | Units |
|---------------------------------------|--|---------------|-----------------|
| Unavoidable Annual Real Losses (UARL) | from D3 | 29 | Litres/conn/day |
| Target Loss Factor (TLF) | User defined for each system | 3 | Dimensionless |
| Target Annual Real Losses (TARL) | TLF x UARL | 87 | Litres/conn/day |
| Current Annual Real Losses (CARL) | CARL from D5a | 248 | Litres/conn/day |
| Potential savings | CARL - TARL | 162 | Litres/conn/day |
| Potential ARL as % of System Input | TARL / (System input volume - Potential savings) x 100 | 3 | % |

D7e. Real Losses as a % of System Input Volume versus Consumption in litres/service connection/day for different values of Real Losses in litres/service connection/day

