

# SERFONTEIN DAM

COORDINATES (degrees, minutes, seconds)

| LATITUDE      | LONGITUDE     |
|---------------|---------------|
| 27° 42' 11" S | 27° 18' 20" E |

## LOCATION

Serfontein Dam is situated near Kroonstad in the Free State, South Africa, in quaternary C60D on the Vals River.

## DESCRIPTION

Serfontein Dam is a rock foundation gravity dam. It has a full supply level of 1,303 m. The dead storage level and bottom of the reservoir are at 1,300 m.

## PURPOSE

Serfontein Dam is heavily silted up. Water is released from Serfontein Dam to the Vals River, where it is pumped to Bloemhoek Dam, which supplies water for Kroonstad.

## PHYSICAL INFORMATION

| Dam name   | River | Quaternary catchment | FSC* (million m <sup>3</sup> ) | FSA (km <sup>2</sup> ) | Owner                  | DWA code | Wall height (m) | Wall length (m) |
|------------|-------|----------------------|--------------------------------|------------------------|------------------------|----------|-----------------|-----------------|
| Serfontein | Vals  | C60D                 | 5.30                           | 1.80                   | Kroonstad Municipality | C6R002   | 15              | 1,515           |

\* Live full supply capacity (ORASECOM, 2007a, WRYM datasets and DWA, 1990)



## SERFONTEIN DAM

| Year of completion | Demands/abstractions (million m <sup>3</sup> /a) |            |         | 1:50 yield (million m <sup>3</sup> /a) | Maximum spillway capacity (m <sup>3</sup> /s) |
|--------------------|--|------------|---------|--|---|
|                    | Domestic   | Irrigation | Other   |  |   |
| 1967               | Unknown  | Unknown    | Unknown | Unknown                                | 1,100   |

## AREA-CAPACITY RELATIONSHIP

| Elevation (m) | Storage (million m <sup>3</sup> ) | Surface area (km <sup>2</sup> ) |
|---------------|-----------------------------------|---------------------------------|
| 1,303.5       | 5.43                              | 1.85                            |
| 1,303.0       | 5.25                              | 1.81                            |
| 1,302.5       | 4.35                              | 1.62                            |
| 1,302.0       | 2.17                              | 1.07                            |
| 1,301.5       | 0.99                              | 0.69                            |
| 1,301.0       | 0.87                              | 0.64                            |
| 1,300.5       | 0.44                              | 0.42                            |
| 1,300.0       | 0.00                              | 0.00                            |

