

DOUGLAS STORAGE WEIR

COORDINATES (degrees, minutes, seconds)

LATITUDE	LONGITUDE
29° 02' 36" S	23° 50' 13" E

LOCATION

Douglas Storage Weir is located in quaternary catchment C92C in the Lower Vaal Water Management Area, South Africa.

DESCRIPTION

Douglas Weir is part of the Orange–Vaal Transfer Scheme (also known as the Orange–Douglas Government Water Scheme), and was initially completed in 1896, but raised in 1977. Water is transferred via the 24-km, concrete-lined Douglas Canal, which runs alongside the left bank of the Vaal River.

Douglas Storage Weir is a labyrinth barrage, with a full supply level of 990.5 m and a dead storage level of 988.6 m. The bottom of the reservoir is at 987.8 m.

PURPOSE

Originally the weir was constructed partly to solve water quality problems, but also to assist with water shortages. The scheme is used to supply an area of 8,113 ha of irrigation. Water quality is still a concern at the weir as the salinity levels have increased in recent years.

PHYSICAL INFORMATION

Dam name	River	Quaternary catchment	FSC* (million m ³)	FSA (km ²)	Owner	DWA code	Wall height (m)	Wall length (m)
Douglas Weir	Vaal	C92C	17	7.99	DWA	C9R003	10	1,063

* Live full supply capacity (SANCOLD, 2009)



Douglas Storage Weir (source: R McKenzie)

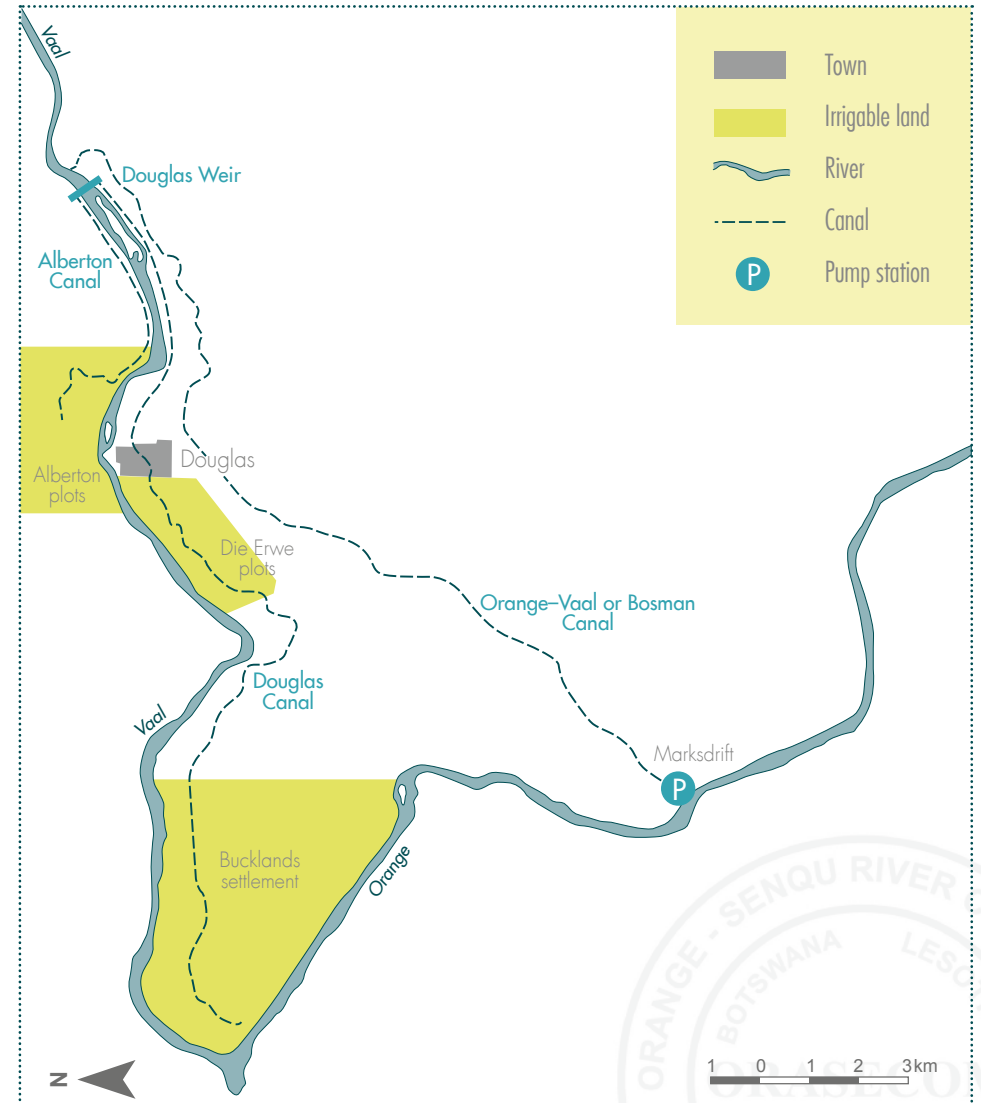


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Year of completion	Demands/abstractions (million m ³ /a)			1:50 yield (million m ³ /a)	Maximum spillway capacity (m ³ /s)
	Domestic	Irrigation	Other		
1977	Unknown	Unknown	Unknown	Unknown	7,800

AREA-CAPACITY RELATIONSHIP

Elevation (m)	Storage (million m ³)	Surface area (km ²)
990.5	16.05	7.81
990.3	14.43	7.57
990.1	12.94	7.35
989.9	11.49	7.12
989.7	10.09	6.86
989.5	8.75	6.56
989.0	6.18	5.26
988.6	3.70	4.69
988.2	1.63	4.16
987.7	0.00	0.00



The Orange-Vaal Transfer Scheme

