

## ORANGE RIVER PROJECT

## ORANGE-RIET WATER SCHEME

## LOCATION

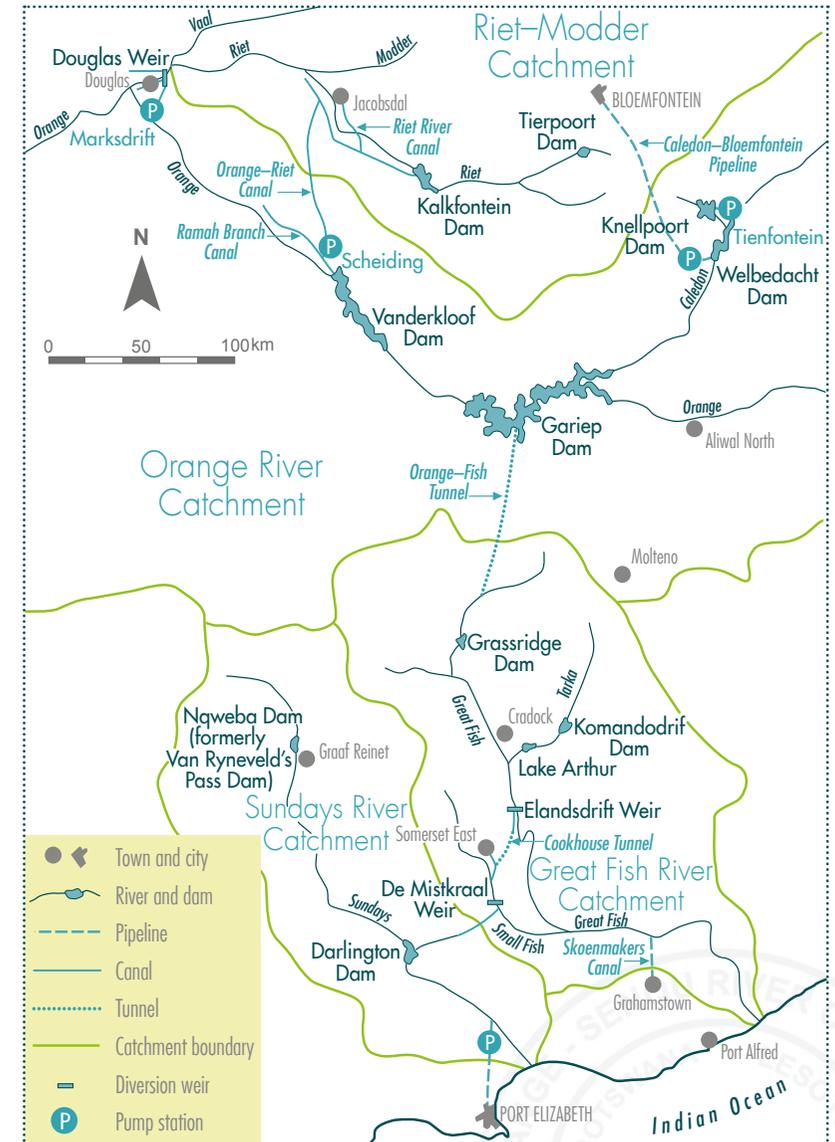
The Orange-Riet Water Scheme is a sub-system of the Orange River Project. It is located between Vanderkloof Dam and the Riet River catchment (a tributary of the Vaal River).

## DESCRIPTION

The transfer scheme consists of the Orange-Riet Canal, which goes from Vanderkloof Dam to the Riet River catchment. In 1983 the construction of Kalkfontein Dam was completed. The purpose of this dam was to supply downstream users such as farmers, the Riet River Settlement, the Ritchie Irrigation District and the Scholtzburg Irrigation District, as well as assist in urban water supply to the towns of Koffiefontein and Jacobsdal. Eventually the demands grew too large to be supplied from the dam only, and the Orange-Riet Canal was constructed in 1983 to transfer water from the Orange River (Vanderkloof Dam) to the Riet River.

The water is pumped from Scheiding Pump Station into the Orange-Riet Canal, where it is transferred to a balancing dam near Jacobsdal, which is 112 km away. From the balancing dam, water is transferred via smaller canals to the Scholtzburg and Ritchie Irrigation Districts, as well as the Riet River Settlement.

Water is also supplied to the Lower Riet Irrigation Board, which is situated downstream of the Modder-Riet confluence. It supplies all the farmers along the Riet River downstream of Ritchie as far as the weir at Soutpansdrift, by direct releases of Orange River water from the canal and the balancing dam into a drainage canal, which discharges into the Riet River.



Orange-Riet Transfer Scheme (adapted from ORASECOM, 2007a)

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### PURPOSE

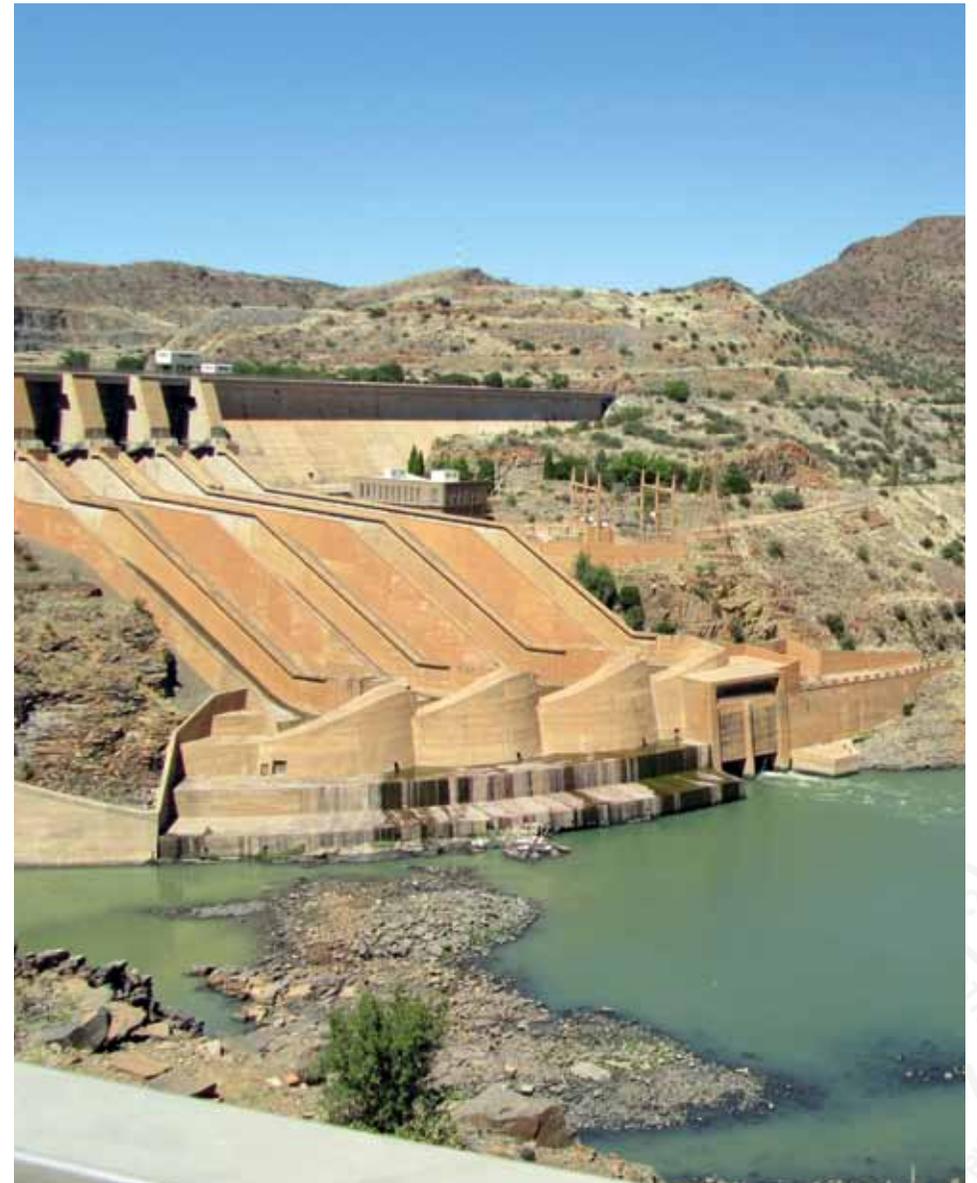
The scheme is used mainly for irrigation, but also supplies urban requirements of Koffiefontein, Ritchie and Jacobsdal.

### PHYSICAL INFORMATION: CANALS

Canal name	Length (km)	Capacity (m <sup>3</sup> /s)
Orange-Riet (1st section)	73	16
Orange-Riet (2nd section)	39	13

### OPERATING RULE

Both the Orange-Riet and Douglas Weir irrigation schemes are operated to minimise pumping costs and water wastage. Inflows and spillages are kept to a minimum and under normal operating conditions these areas are dependent on imported water from the Orange River. Only sufficient water is pumped to meet the demands of these farmers, so that spills over Soutpansdrift are minimised.



Vanderkloof Dam (© Ian Cameron-Clarke)