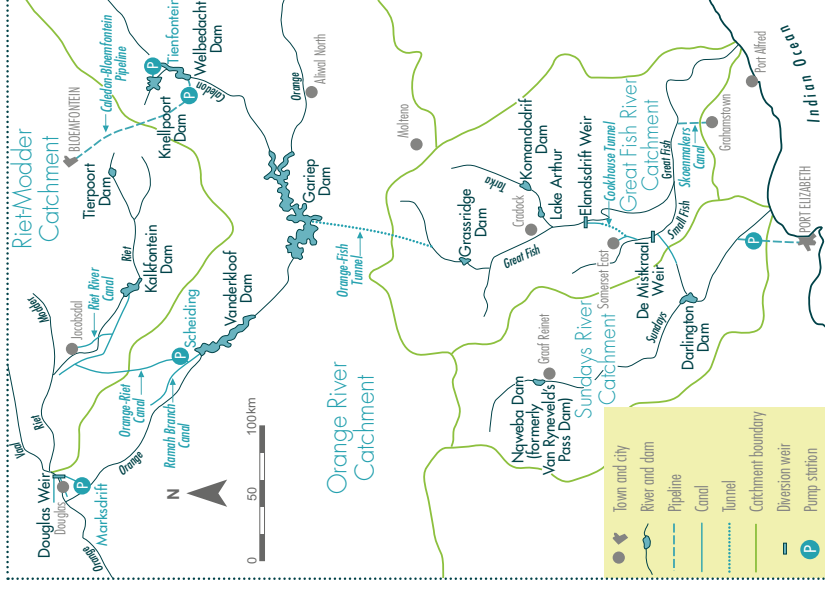


ORANGE RIVER PROJECT

ORANGE-FISH TRANSFER TUNNEL

South Africa



The Orange-Fish Transfer Tunnel (from map produced by ORASECOM/SA Dept of Water Affairs)



LOCATION

The Orange-Fish transfer tunnel runs from Gariep Dam on the Orange River to Grassridge Dam located in the upper reaches of the Great Fish River.

DESCRIPTION

Due to the severe stress the Eastern Cape underwent for many years, partly due to water shortages and exacerbated by salinisation and siltation occurring in the reservoirs, the Orange-Fish Tunnel was constructed, together with a network of canals, weirs and balancing dams, restoring and enabling thousands of hectares of irrigation. The Orange-Fish Tunnel was completed in 1975 and is the key structure by which water is delivered from the Gariep Dam to the Teebus Spruit and the Great Brak River and from there to the valley of the Great Fish River and the Sundays River valley. The tunnel has a length of 82.8 km, a diameter of 5.35 m, and maximum capacity of 54 m³/s. An intake tower in the lake some 20 km from Gariep Dam heads the tunnel through the Suurtberg plateau.

PURPOSE

The purpose of the tunnel is to divert water to the Eastern Cape for irrigation, urban (including Grahamstown and Nelson Mandela Metropole) and industrial use. Due to siltation, the capacities of dams in these two river basins became greatly reduced and arable land had to be de-scheduled prior to construction of the tunnel.

PHYSICAL INFORMATION

Canal name	Length (km)	Capacity (m ³ /s)
Orange-Fish Tunnel	83	54