

ORANGE RIVER PROJECT: OVERVIEW

LOCATION

The Orange River Project (ORP) is the largest scheme in the Orange–Senqu River basin, and includes the two largest dams in South Africa, the Gariep and Vanderkloof. They regulate flows to the Orange River and increase assurance of supply.

DESCRIPTION

Gariep and Vanderkloof dams were constructed as part of the project, and have a combined storage of 8,500 million m³. The ORP includes several sub-systems.

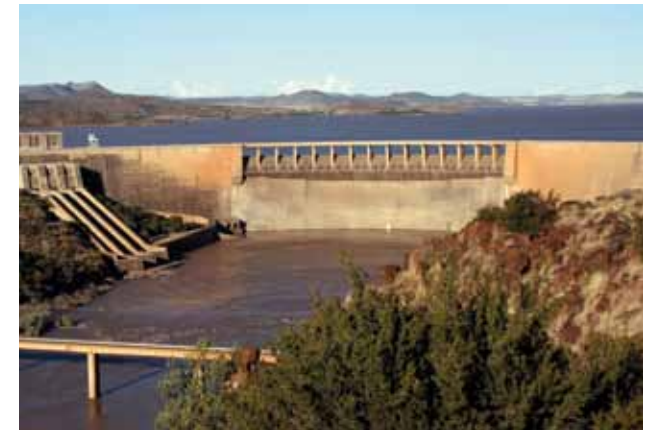
- ▣ The Orange–Riet Water Scheme.*
- ▣ The Orange–Fish Transfer Tunnel.*
- ▣ The Orange–Vaal Transfer Scheme.*
- ▣ Bloem Water: Pipeline network between Gariep Dam and the towns of Trompsburg, Springfontein and Philippolis.
- ▣ Irrigation abstractions: Between Gariep Dam and downstream of Vanderkloof Dam, up to the confluence of the Vaal and Orange rivers (near the town of Marksdrift).
- ▣ Urban and industrial abstractions: Between Gariep Dam and Marksdrift (including Hopetown and Vanderkloof towns).
- ▣ Support to the Lower Orange Water Management Area Schemes:* Support to most of the demands in the Lower Orange, including irrigation, urban use and power generation.
- ▣ Caledon–Bloemfontein Government Water Scheme.*

* Further details are given on separate pages

PURPOSE

The purpose of this very complex scheme is to supply demands within several sub-systems, including the Upper and Lower Orange water management areas all the way down to the Orange River mouth, and the Eastern Cape Province. These demands include irrigation, urban, industrial and environmental water requirements. Power generation is also part of the system, including at Gariep and Vanderkloof dams, which contributes to the Eskom national power grid.

From: *The Orange–Senqu River Basin Infrastructure Catalogue*, ORASECOM Report 001/2013



Gariep Dam (© Hendrik van den Berg/Panoramio.com)



Vanderkloof Dam (© S Crerar)