



PROCESS AND CHEMICAL ENGINEERING

Groundwater Supply and Wellfield Management

3 day course

Classroom, online or in-house

Course overview

Groundwater schemes are commissioned on a yield measured over a few days and then operated for decades, which is why so many boreholes that tested well are now pumping air by the end of the dry season. This course covers managing the resource properly. Delegates work through aquifer types and what each means for sustainable abstraction, then through siting, drilling supervision and the construction decisions that determine borehole life. Test pumping is covered including step and constant rate tests, and interpreting drawdown rather than accepting a driller's figure. Pump selection and setting depth follow. Wellfield operation is addressed, including rotating abstraction and interference between boreholes. Water quality issues specific to groundwater are covered, including iron, manganese, fluoride, nitrate and salinity. Borehole deterioration, screen clogging and rehabilitation follow. Monitoring water levels and abstraction is addressed. The course closes on protection zones, on abstraction licensing and on planning for a failing source.

What you will learn

- Relate aquifer type to sustainable abstraction
- Supervise siting, drilling and construction decisions that set borehole life
- Conduct step and constant rate tests and interpret drawdown
- Select pumps and setting depth appropriately
- Operate a wellfield accounting for interference between boreholes
- Manage iron, manganese, fluoride, nitrate and salinity problems
- Monitor levels and abstraction, protect sources and plan for a failing borehole

Who should attend

- Utility engineers operating borehole supplies
- Hydrogeologists and water resource officers
- Rural water supply technicians
- Municipal staff managing wellfields
- Project staff commissioning new boreholes

Course outline

- 01 Tested for days, operated for decades
- 02 Aquifer types and sustainable abstraction
- 03 Siting, drilling supervision and construction
- 04 Step and constant rate testing
- 05 Interpreting drawdown
- 06 Pump selection and setting depth
- 07 Wellfield operation and borehole interference
- 08 Groundwater quality, rehabilitation, monitoring and licensing

Upcoming dates

Dates	Venue	Format	Fee per delegate
11 to 13 November 2026	Kampala, Uganda	Classroom	USD 995
16 to 18 November 2026	Online	Online	R6,500
23 to 25 November 2026	Johannesburg, South Africa	Classroom	R14,950



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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