

## Groundwater Status Dashboard

- **What does this dashboard relate to**

The distribution between over allocated, fully allocated and under allocated areas with respect to ground water availability.

- **Contact details of person/s who championed this dashboard**

- Fanus Fourie  
Water Resources: Planning Systems

- **Enquiries:**

- For all dashboard enquiries click [HERE](#) to go to the Contact Us page.
- **Alternatively** you may reach us by calling or emailing us using the details below:

Department of Water and Sanitation

173 Francis Baard Street

012 336 8459 / 082 654 8363

Or email: [NIWIS\\_Support@dws.gov.za](mailto:NIWIS_Support@dws.gov.za)

- **What type/s of questions does the information product aim to answer:**

- Estimated total volume of groundwater stored at a National scale
- Estimated total volume of groundwater Reserve at a National scale
- Estimated total volume of groundwater already allocated at a National scale
- Groundwater (surplus) available for further allocation at regional scale (WMA)

- **Data / Information discussion:**

- Data used to generate the information
  - What data is used?
    - · Recharge volumes of groundwater provided by Head Office (GWRD)
    - · Groundwater Reserve volumes provided by Head Office (GWRD)
    - · Utilisable Groundwater Exploitation Potential (UGEP) provided by Head Office (WRPS)
    - · Volume of groundwater already allocated provided by Head Office (WARMS)
  - How is extracted and from where?
    - · Excel spreadsheets provided by Head Office (GWRD)
    - · Excel spreadsheets provided by Head Office (WRPS)
    - · Excel spreadsheets provided by Head Office (WARMS)
  - How often is it extracted?
    - Head Office (GWRD) provides Excel spreadsheets annually
    - Head Office (WRPS) provides Excel spreadsheets annually
    - Head Office (WARMS) provides Excel spreadsheets annually
  - Business processes related to the data
    - N-Drive
    - Groundwater Tracking System (Spreadsheet)
      - WARMS
      - WRPS
  - The algorithms / equations used to convert data into information
  - Key assumptions made
    - · Summaries of Groundwater Reserve volumes nationally
    - · Summaries of Groundwater already allocated nationally
    - · Summaries of Groundwater available for allocation nationally & locally (quaternary catchments)
    - ·  $V_{\text{available}} = V_{\text{UGEP Dry}} - V_{\text{allocated (WARMS)}}$
    - Where
      - $V_{\text{available}}$  is the recorded volume as reported by the Groundwater business unit

- $V_{UGEP\ Dry} (V_A)$  is the groundwater volume available for use as reported by the Groundwater business unit
- $V_{recharge} (V_C)$  is the groundwater recharge as reported by RDM
- $V_{reserve} (V_D)$  is the groundwater Reserve as reported by RDM
- $V_{allocated(WARMS)} (V_B)$  is the amount of groundwater that has been made available for abstraction(allocated) as recorded with WARMS

At Quaternary scale (Reserve scale) the availability can be re-written to show the terms by their data sources as:

- $A_{available} = V_{recharge} - V_{reserve} - V_{allocated (WARMS)}$

For further clarity, the terms have been assigned letters during the champion discussions:

- $V_{available} = V_A - V_B$

OR

- $V_{available} = V_C - V_D - V_B$

The class shall then be determined according to the following rule

- Negative %<sub>allocated</sub>: over allocated
- 0 – 94 %<sub>allocated</sub>: under allocated
- 95 – 105 %<sub>allocated</sub>: fully allocated
- Greater than 105 %<sub>allocated</sub>: over allocated

- **Links to other sources of related information**

- NGIS CHART-<http://www.dwa.gov.za/chart/default.aspx>
- NGA- <http://www3.dwa.gov.za/NGANet/Security/WebLoginForm.aspx>
- NGIS- <http://www.dwa.gov.za/Groundwater/NGIS.aspx>
- IWRP - <http://www6.dwa.gov.za/iwrp/>
- WARMS- <http://www.dwa.gov.za/Projects/WARMS/default.aspx>
- D:RD- <http://www.dwa.gov.za/rdm/RR.aspx>

- **Are there any limitations / cautions related to using this information?**

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