# **Ground Water Development Potential**

#### • What does this dashboard relate to?

The dashboard aims to depict areas where there is a potential for further groundwater development. The maps show where different aquifer types occur and how the water could be extracted (e.g. hand-pump, motorised pump etc).

What is the main purpose of the dashboard? The dashboard (maps) aim to give an overview of where groundwater development potential exists. **It should be noted that the maps or information on the dashboard is static.** 

What is the main purpose of the dashboard? The groundwater potential has been classed as follows:

Extremely low development potential (0.0 - 0.1 l/s): – very little groundwater can be found in these aquifer classes and should any water be found, a wind pump or hand pump could be installed. At best this could be enough for individual household and/or stock watering (few animals) supplies.

Very low development potential (0.1 - 0.5 l/s): – one can generally expect enough water for either hand- and/or wind pumps, i.e. small supplies for small communities and/or stock watering or single households. Little additional groundwater could be available for community gardening or other poverty alleviation actions. Many boreholes will have to be drilled to obtain a yield at the high-end of the range.

Low development potential (0.5 - 2.0 l/s): – enough water for either hand- and/or wind pumps, i.e. small supplies for small communities and/or stock watering or single households can easily be achieved. Additional groundwater for community gardening or other poverty alleviation actions will be available. At the high-end of the yield range larger communities from single boreholes and well-fields supplying large communities would be possible. However, due to large variability in borehole yields, an appreciable amount of boreholes will have to be drilled to obtain a yield at the high-end of the range. Pumping at 2l/s for 8hours per day, 2000 persons, @25l/day can be supplied comfortably.

Medium development potential (2.0 - 5.0 l/s): – domestic water supplies for large villages, towns and small-scale irrigation from several boreholes, would be achievable in aquifers with medium development potential. The amount of boreholes to be drilled before high-end yields that can be expected depends on the variability of borehole yields. Wellfields and the concomitant benefit for the management of aquifer(s) make the development of groundwater within medium high potential aquifers very attractive. Pumping at 5l/s for 8hours per day 5000 persons, @25l/day, can be supplied comfortably.

High development potential ( > 5.0 l/s): – Large-scale irrigation and/or large village and even large town supplies can be obtained from these aquifers.

#### • Person(s) who championed the dashboard:

 Mrs Olga De Beer Geo-Hydrological Information

### • Enquiries:

- For all dashboard enquiries click <u>HERE</u> to go to the Contact Us page.
- What type/s of questions does the information product aim to answer:
  - What percentage of South Africa's (or WMA, or municipal) surface area can be classified as having (i) and extremely low, (ii) a very low, (iii) low, (iv) medium or (v) high development potential, and
  - What is the groundwater development potential at a given geographic location, and what type of device would be appropriate to abstract the water.

## • Data / Information discussion:

• What data/information is used?

The information source is the hydrogeological/groundwater development potential map series developed by the Department of Water and Sanitation. The maps are captured in electronic (GIS) and printed-paper formats.

• How is it extracted and from where?

The business unit sends a request to georequest for shapefiles depending on the availability of the information. **The information is static**. The shapefiles are saved on the N-drive and NIWIS is extracting the information from the N-drive.

• How often is ite extracted?

The information is updated on request depending on the availability of the information.

### • Links to other sources of related information

- o DWS Groundwater Home Page
- o Borehole Water Association
- o Groundwater Division of the GSSA

### • Are there any limitations / cautions related to using this information?

Yes, please refer to the below:

The scale of the maps was 1:500,000 thus the data is a broad overview. The quality of the data was dependent on the number of borehole information available, which varies spatially over South Africa.

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**Status**: Meanwhile data is continuously updated; the data set(s) supplied are already historical on the day of supply.

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