

SURFACE WATER MONITORING NETWORKS DASHBOARD

- **What does this dashboard relate to?**

This dashboard shows the surface water monitoring points that are managed by the DWS. It shows the trends over time relating to the number of open and closed stations, according to different site types. These trends are shown since coordinated hydrological monitoring started in South Africa in the early 1900s. It also shows the percentage of reliable data available per site, and provides a link to the online DWS Hydstra data portal for users to access the information. Meta data associated with each monitoring site is also provided, and it is possible for users to analyse the available points in relation to their needs.

From a management perspective, the dashboard shows the average time it takes to upload and quality assure data in the Hydstra database for different WMA areas in South Africa. This data can be used to identify areas where improvement can be made to avoid potential delays in the availability of hydrological information.

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

The dashboard aims to answer the following questions:

- What are the trends in surface water monitoring by DWS in relation to the number of open versus closed sites?
 - The number of active monitoring sites in South Africa peaked during the 1970s and 80s when many large water resources infrastructure development projects were completed. Since then, the number of monitoring locations has been fairly constant, but with no further expansion in the network. It is important for managers to be aware of the number of monitoring locations, especially due to the importance of water related data being required for effective water resources management.
- Where are the surface water monitoring sites in South Africa, differentiated by type?
 - The dashboard shows in map and table format the location and type of sites in the different regions of South Africa. The user is also able to access more details of the site by clicking the 'view' link in the table. Details shown per site include the record length, or period of data, that is available at the different sites, and what percentage of the data is considered reliable by DWS.
- **Data / Information discussion:**
 - **What data is used?**

All hydrological data collected by DWS is stored in a commercial hydro-informatics database called Hydstra. The data is collected by automatic systems in the field, which is maintained and operated by DWS regional office staff. The

dataset that is available is over 100 years for certain monitoring locations. The information collected is critical for the effective and sustainable management of water resources in South Africa.

- **How is it extracted and from where?**

NIWIS is extracting data directly from Hydstra.

- **How often is it extracted?**

The dashboard is updated weekly.

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

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

The following link is for the hydrology website at DWS, with further links to relevant information about hydrological monitoring done by DWS.

<http://www.dwa.gov.za/hydrology/>

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

Yes, please refer to the below:

There are no limitations / cautions associated with using the information on this dashboard. However, when it comes to the actual data supplied by DWS from Hydstra, the correct understanding and data analysis techniques should be applied when using the data. More details can be requested from the contact person above.

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