

CURRENT RESEARCH, DEVELOPMENTS, PROJECTS AND PROGRAMMES FOR NATIONAL GROUNDWATER RESOURCE ASSESMENT AND MONITORING (GRAM)

Title	Aim	Contact	Role-Players	Time Frames	Comments / Notes
Acid Mine Drainage and Impacts on the Surrounding Dolomitic Water Areas.	Establish a groundwater level and quality monitoring network on 3 Witwatersrand Gold Mining Basins (Eastern, Central and Western).	<p>N de Meillon demeillonN@dwa.gov.za</p> <p>T Mokgatle S Khumalo F Manamela T Moolman</p>	<p>Department Water Affairs (DWA)</p> <p>(National Office; Directorate: Hydrological Services and Gauteng Regional Office).</p>	2011/2012-2013/2014	<ul style="list-style-type: none"> • Deep mine void monitoring requires high-end technical apparatus. Very dangerous operations and complex to verify results. Will probably require a special deep drilling operation to intersect mine voids at different elevations; • Monitoring stations in basins are equipped with data loggers and plans to upgrade to real-time data acquisition being implemented.
Assessing Water Use License Applications and Integrated Water Use License Applications.	Supporting the hydrogeological evaluation of water uses and setting standards for water use monitoring and auditing.	<p>N A Mabasa MabasaA@dwa.gov.za</p> <p>T Chetty K Nkumanda A Mamphwe</p>	<p>Department Water Affairs (DWA)</p> <p>(National Office; Directorate: Hydrological Services and Regional Office).</p>	2012/2013-2013/2014	<ul style="list-style-type: none"> • High-level assessments of hydrogeological reports and monitoring information submitted by licensees; and • Recommendations for extended research and implementing of dedicated monitoring programs for water use activities.

<p>Groundwater Management Plan for the Cradle of Humankind-World Heritage Site</p>	<p>Implementation of a groundwater monitor programme to support management of a dolomitic resource impacted by mining and agricultural impacts</p>	<p>K Nkumanda NkumandaK@dwa.gov.za</p> <p>T Chetty T Moolman CSIR (Mr. P Hobbs)</p>	<p>Department Water Affairs (DWA) (National Office; Directorate: Hydrological Services and in collaboration with external institutions (CSIR and GDACE)).</p>	<p>2009/2010-2012/2013</p>	<ul style="list-style-type: none"> • Twelve Gwater monitoring sites equipped with real time hourly water level, temperature and conductance logging; • Final monitoring/ management report submitted by CSIR; • Updating surface and groundwater monitoring along the Tweelopies Spruit.
<p>National Groundwater Level Monitoring Programme</p>	<p>Tracking of groundwater level responses to recharge and abstraction.</p>	<p>W Nyalungu nyalunw@dwa.gov.za</p> <p>N de Meillon T Moolman L Kotosi</p>	<p>Department Water Affairs (DWA) (National Office; Directorate: Hydrological Services and Regional Offices)</p>	<p>2000/01 – 2014/2015</p>	<ul style="list-style-type: none"> • Maintaining current groundwater level monitoring networks for national level programs; • In-Time upgrades to quazi-real time logging in progress.

<p>National Groundwater Quality Monitoring Programme (NGwQMP). Consisting of: Hydro-chemistry (bi-annually), environmental isotopes (2006 and 2011 and, radioactivity (2007), and toxicity (2008) uploaded to DWA's WMS</p>	<p>Building a long-term Groundwater Hydro-chemistry information data base for future determination of national reference conditions for groundwater resources assessment and management. Maintenance and special additional developments of CHART linked to WMS for interpretation and presentation of NGwQMP data.</p>	<p>E Bertram (assessment) bertrame@dwa.gov.za T Moolman (sampling) O de Beer (CHART). C Erasmus (IT)</p>	<p>Department Water Affairs (DWA) (National Office; Directorate: Hydrological Services and Regional Offices) and IT System's Project Manager and Analyst/Developer</p>	<p>1993 – 2013 (To include One Full 20 year climatological cycle).</p>	<ul style="list-style-type: none"> • All hydrochemical data is available on the CHART platform. • Web-Enabled Chart platform completed • Development and implementation of the hydrogeochemical (isotopic signature) components in conjunction with the Isotope Hydrology Project of the WRC.
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