

## CURRENT GROUNDWATER RESEARCH, DEVELOPMENTS, PROJECTS AND PROGRAMMES OF THE WESTERN CAPE REGIONAL OFFICE

Title	Aim	Contact	Role-Players	Time Frames	Comments / Notes
Table Mountain Group (TMG) Aquifer Feasibility Study and Pilot Project	Feasibility of bulk water supply from TMG	<p style="text-align: center;">M Smart <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a></p> <p style="text-align: center;">N Vermaak <a href="mailto:vermaakn2@dwa.gov.za">vermaakn2@dwa.gov.za</a></p>	<p>City of Cape Town in collaboration with</p> <p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office</p>	2002/03 - Ongoing	<p>Baseline monitoring in place.</p> <p>Exploration phase complete.</p> <p>Awaiting approval of pilot wellfield development phase.</p>
Spring survey for the City of Cape Town	A planned additional water supply for the City	<p>Geohydrological and Spatial Solutions (GEOSS) Consultants <a href="mailto:Julian@geoss.co.za">Julian@geoss.co.za</a></p> <p>DWA (Western Cape Region)</p> <p style="text-align: center;">N Vermaak <a href="mailto:vermaakn2@dwa.gov.za">vermaakn2@dwa.gov.za</a></p>	<p>Geohydrological and Spatial Solutions (GEOSS) Consultants in collaboration with</p> <p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office</p>	Ongoing	

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Feasibility Study for Augmentation for Western Cape Water Supply System by means of the Langebaan Road Artificial Recharge Development	Refer to Current Research, Developments, Projects and Programmes for Directorate: Water Resource Planning Systems, Sub-Directorate: Integrated Hydrological Planning (IHP)	Fanus Fourie (Sub-Dir: WRPS) ( <a href="mailto:fourief@dwa.gov.za">fourief@dwa.gov.za</a> )  N Vermaak ( <a href="mailto:vermaakn2@dwa.gov.za">vermaakn2@dwa.gov.za</a> )	Department Water Affairs DWA  (National Office, Directorate: Water Resource Planning Systems and Western Cape: Directorate: Water Sector Support, Bellville Regional Office)  in collaboration with Consultants	Jan 2014 – Jun 2016	Project to <b>start</b> in Jan2014  Description: <ul style="list-style-type: none"> <li>• Delineating the recharge area(s);</li> <li>• Yield assessment of the aquifer</li> <li>• Potential ingress of saline water</li> <li>• Cost and cost benefit analyses</li> <li>• Implementation plan</li> </ul>
Greater Cederberg Biodiversity Corridor	To establish linkage of biodiversity from the coast to the mountains in the Western Cape	J. Burger ( <a href="mailto:jburger@capenature.co.za">jburger@capenature.co.za</a> )  B. Dyason ( <a href="mailto:Dyasonb@dwa.gov.za">Dyasonb@dwa.gov.za</a> )	Cape Nature in collaboration with  Department Water Affairs (DWA)  Western Cape: Directorate: Water Sector Support, Bellville Regional Office	2009/10 –Ongoing	Sandveld Task team ended with a Ministerial action plan.  Two actions resulted with Best Practise projects for Rooibos and Potato cultivation.  Also to address unlawful agricultural development.  An Inter Departmental task team was established to take further.
Raising of the Clanwilliam Dam	For the additional supply of water North of the Clanwilliam Dam	F. Van Heerden ( <a href="mailto:vanheerdenf@dwa.gov.za">vanheerdenf@dwa.gov.za</a> )  B. Dyason ( <a href="mailto:Dyasonb@dwa.gov.za">Dyasonb@dwa.gov.za</a> )	Department Water Affairs (DWA) Western Cape: Bellville Regional Office in collaboration with  Western Cape: Clanwilliam Dam Office and Ninham Shand Consulting Engineers	2007/11 - Ongoing	Ongoing -  Awaiting for Minister's approval for the project to proceed  No Geohydrology regional involvement at this stage

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Sandveld Water Management Plan	<p>To consolidate all studies done in the Sandveld after 1998</p> <p>To produce management plan</p>	<p>M. Murovhi (<a href="mailto:murovhim@dwa.gov.za">murovhim@dwa.gov.za</a>)</p> <p>B. Dyason (<a href="mailto:Dyasonb@dwa.gov.za">Dyasonb@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Institutional Operations, Bellville Regional Office</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with</p> <p>Stakeholders and Geohydrological and Spatial Solutions (GEOSS) Consultants</p>	2007/08 -2010/12	Phase II to continue after funds sourced by Catchment Manager Olifants/Doorn WMA
Integrated Water Resource Management project (IWRM) (IWRM2)	Capacity building of the emerging farmers within Olifants/Doorn WMA	<p>B. Dyason (<a href="mailto:Dyasonb@dwa.gov.za">Dyasonb@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Institutional Operations, Bellville Regional Office</p> <p>Directorate: Water Sector Support, Bellville Regional Office</p> <p>(funded by Danish International Development Agency (Danida))</p>	2007/08 -	<p>Project halted due to ending of donor funds/project reached</p> <p>Western Cape Region to source additional funds to implement phase 2</p>

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Roll out of the Artificial Recharge Strategy (ROARS)	Develop pilot Artificial Recharge test sites in Region	<p>F. Fourie (Sub-Dir: IHP)  <a href="mailto:fourief@dwa.gov.za">fourief@dwa.gov.za</a></p> <p>M Smart  <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a></p> <p>R Murray (Groundwater Africa)  <a href="mailto:ricky@groundwaterafrica.co.za">ricky@groundwaterafrica.co.za</a></p>	<p>Department Water Affairs (DWA)</p> <p>Directorate: Integrated Hydrological Planning (D: IHP)  Sub-Dir: Water Resource Planning Systems (Sub-Dir: WRPS)  in collaboration with</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office and</p> <p>Consultants:  Groundwater Africa</p>	2009- ongoing	Awaiting approval of funding of limited feasibility studies and in some cases implementation.
Drought Operating Rules for Stand Alone Dams and Schemes	Management of drought in Rural / Municipal setups.	<p>M Smart (WMA: Breede &amp; Gouritz)  <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a></p> <p>N Vermaak (WMA: Berg)  <a href="mailto:vermaakn2@dwa.gov.za">vermaakn2@dwa.gov.za</a></p> <p>B Dyason (WMA: Olifants/ Doorn)  <a href="mailto:dyasonb@dwa.gov.za">dyasonb@dwa.gov.za</a></p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office  in collaboration with</p> <p>Consultants:  Golder and Associates</p>	2011 - Current	Development of operating rules for Municipal wellfields.

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Preventing production borehole clogging by in situ iron removal in South African aquifer systems	Management of iron bio-fouling in production boreholes	Kate Robey (Council for Geoscience)  M Smart ( <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a> )	Department Water Affairs (DWA)  Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with  Water Research Commission (WRC) and Council for Geoscience	2013 Complete	Researching techniques to prevent iron biofouling of production boreholes – Atlantis wellfield
Water Source Development and Management Plan for Greater Hermanus Area and Stanford	Groundwater supply development	M Smart ( <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a> )  R Hay ( <a href="mailto:Rowena@umvoto.co.za">Rowena@umvoto.co.za</a> )	Department Water Affairs (DWA)  Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with  Overstrand Municipality and  Umvoto Africa	Current	Hermanus: Gateway well field in production.  Camphill and Stanford well fields coming on line soon.
Feasibility and Implementation Ready Study for the Regional Bulk Infrastructure Programme for Ladismith.	Develop conjunctive supply.	M Smart ( <a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a> )  S Mashicila ( <a href="mailto:mashicilas@dwa.gov.za">mashicilas@dwa.gov.za</a> )	Department Water Affairs (DWA)  Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with  Kannaland Municipality	2011- Current	Groundwater feasibility study in Progress.  Exploration drilling still programme to commence.

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Deep Artesian Groundwater Exploration Oudtshoorn Supply. (DAGEOS)	Develop artesian aquifer for groundwater supply to Oudtshoorn district.	<p>M Smart (<a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a>)</p> <p>R Hay (<a href="mailto:Rowena@umvoto.co.za">Rowena@umvoto.co.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with</p> <p>Oudtshoorn Municipality.</p> <p>Water Research Commission (WRC)</p>	2000 - Current	<p>Initial exploration complete.</p> <p>Well field establishment currently in progress.</p>
Development and application of global navigational satellite systems (GNSS) methodology for groundwater resource assessment.	Assessment of the value of GNSS in TMG aquifer resource assessment.	<p>C Hartnady (Umvoto) (<a href="mailto:chris@umvoto.com">chris@umvoto.com</a>)</p> <p>Dr. S. Adams (WRC) (<a href="mailto:shaficka@wrc.org.za">shaficka@wrc.org.za</a>)</p> <p>+27 12 330 9071</p> <p>M Smart (<a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with</p> <p>Water Research Commission (WRC), Umvoto and Overstrand Municipality</p>	2009 - Current	To demonstrate GNNS measurement of natural or induced surface deformation to derive elastic properties of confined aquifers – Hermanus.
Vanrhynsdorp project		<p>B. Dyason (<a href="mailto:Dyasonb@dwa.gov.za">Dyasonb@dwa.gov.za</a>)</p> <p>J Brits (<a href="mailto:britsj2@dwa.gov.za">britsj2@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office in collaboration with</p> <p>Vanrhynsdorp Water user Association (WUA)</p>	1993-ongoing	<p>Project geohydrological report due 2013</p> <p>Ongoing establishment of functional WUA (groundwater)</p>

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Water Research Commission (WRC) Project Unconventional Gas Exploration and Production and its impact on South Africa's Water Resources	Investigate risks to water resources associated with Gas Exploration.	<p>Dr. S. Adams (WRC) (<a href="mailto:shaficka@wrc.org.za">shaficka@wrc.org.za</a>)</p> <p>K Pietersen (SLR Consulting) (<a href="mailto:kpietersen@slrconsulting.com">kpietersen@slrconsulting.com</a>)</p> <p>M Smart (<a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a>)</p>	<p>Water Research Commission (WRC) and SLR Consulting in collaboration with</p> <p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office</p>	2014 - Current	Early stages.
Feasibility Study of the Regional Integration of the Bulk Water Supply Systems of the Knysna and Bitou Municipalities	Integrated supply options being explored.	<p>Mr Patrick Killick (<a href="mailto:Patrick.killick@aurecongroup.com">Patrick.killick@aurecongroup.com</a>)</p> <p>Isa Thompson (NWRP) (<a href="mailto:ThompsonI@dwa.gov.za">ThompsonI@dwa.gov.za</a>)</p> <p>M Smart (<a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>National Office: Water Resources Planning in collaboration with</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office and</p> <p>Knysna and Bitou Municipalities</p>	2013- Current	
Reserve Determination Studies for the Selected Surface Water, Groundwater Estuaries and Wetlands in the Gouritz Water Management Area.	Reserve Determination	<p>N Motebe (GWRR) (<a href="mailto:moteben@dwa.gov.za">moteben@dwa.gov.za</a>)</p> <p>M Smart (<a href="mailto:smartm@dwa.gov.za">smartm@dwa.gov.za</a>)</p>	<p>Department Water Affairs (DWA)</p> <p>National Office: Groundwater Reserve Requirements (GWRR)</p> <p>in collaboration with</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office</p>	2014 - Current	

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Support to the Continuation of the Water Reconciliation Strategy for the Western Cape Water Supply System: Cape Flats Aquifer	Situation assessment & Potential for Successful Urban Groundwater Development and Management	<p>R Hay  <a href="mailto:Rowena@umvoto.co.za">(<a href="mailto:Rowena@umvoto.co.za">Rowena@umvoto.co.za</a>)</a></p> <p>N Vermaak  <a href="mailto:vermaakn2@dwa.gov.za">(<a href="mailto:vermaakn2@dwa.gov.za">vermaakn2@dwa.gov.za</a>)</a></p>	<p>UMVOTO Africa in collaboration with</p> <p>Department Water Affairs (DWA)</p> <p>Western Cape: Directorate: Water Sector Support, Bellville Regional Office and CCT</p>	2014 - Current	Draft report completed