


**water & sanitation**  
 Department of Water and Sanitation  
 REPUBLIC OF SOUTH AFRICA



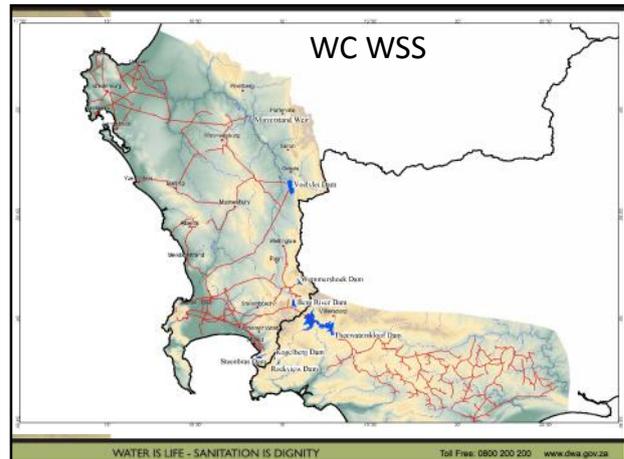

## Western Cape Water Supply System Reconciliation Strategy

Presented by:  
 Dr K Riemann  
 Umvoto Africa

Administrative and Technical Support Group  
 Meeting #7

2 February 2015

WATER IS LIFE - SANITATION IS DIGNITY



### “Are we comparing apples with pears?”

- **Total System Yield:** **596.0 million m<sup>3</sup>/a**
  - Berg WAAS (2009)
- **Total Allocations:** **584.1 million m<sup>3</sup>/a**
  - Several legal agreements
  - Possible double-counting
- **2013/2014 Water use:** **508.1 million m<sup>3</sup>/a**
  - Domestic water use: **338.1 million m<sup>3</sup>/a**
  - Agricultural water use: **~ 160.0 million m<sup>3</sup>/a**
  - Agriculture capped: **170.0 million m<sup>3</sup>/a**

WATER IS LIFE - SANITATION IS DIGNITY      Toll Free: 0800 200 200      www.dwa.gov.za

### “Apples and Pears”

- **Total Allocations:** **584.1 million m<sup>3</sup>/a**
  - Domestic use allocation **410.5 million m<sup>3</sup>/a**
  - Agricultural use allocation **173.6 million m<sup>3</sup>/a**

WATER IS LIFE - SANITATION IS DIGNITY      Toll Free: 0800 200 200      www.dwa.gov.za

### Report: Allocations from WCWSS

- City of Cape Town: **385.9 million m<sup>3</sup>/a**
- West Coast DM
  - Withoogte Misverstand: **17.44 million m<sup>3</sup>/a**
  - Swartland Voëlvlei: **4.20 million m<sup>3</sup>/a**
- Stellenbosch LM: **3.00 million m<sup>3</sup>/a**
- Agriculture: **173.6 million m<sup>3</sup>/a**
- **Total Allocation: 584.1 million m<sup>3</sup>/a**

WATER IS LIFE - SANITATION IS DIGNITY      Toll Free: 0800 200 200      www.dwa.gov.za

### Agricultural Allocation

- Voëlvlei & Misverstand
  - Lower Berg IB: **18.1 million m<sup>3</sup>/a**
- Theewaterskloof Dam
  - Riviersonderend part: **46.2 million m<sup>3</sup>/a**
  - Overberg Water: **4.0 million m<sup>3</sup>/a**
  - Upper Berg River IB: **58.6 million m<sup>3</sup>/a**
  - Tunnel and pipeline: **30.2 million m<sup>3</sup>/a**
  - Summer streamflow: **16.5 million m<sup>3</sup>/a**
- **Total capped: 173.6 million m<sup>3</sup>/a**
- **Total excl. Overberg: 169.6 million m<sup>3</sup>/a**

WATER IS LIFE - SANITATION IS DIGNITY      Toll Free: 0800 200 200      www.dwa.gov.za

## Queries

- Compensation from Eerste River to “lei-vore”: recorded?
- How is summer streamflow compensation recorded?
- How is split of releases between Zonderend IB and Overberg Water calculated?
- How is split of releases between Lower Berg IB and West Coast DM calculated?



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

## Allocations from WCWSS

- City of Cape Town: 385.9 million m<sup>3</sup>/a
  - Incl. Berg River Dam
- West Coast DM
  - Withoogte Misverstand: 18.60 million m<sup>3</sup>/a
  - Swartland Voëlvlei: 4.20 million m<sup>3</sup>/a
- Stellenbosch LM: 3.00 million m<sup>3</sup>/a
- Overberg Water: 4.00 million m<sup>3</sup>/a
- Piketberg and PPC: 1.50 million m<sup>3</sup>/a
- **Agriculture: 169.6 million m<sup>3</sup>/a**
- **Total Allocation: 586.8 million m<sup>3</sup>/a**



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

## Other Allocations to consider

- Allocations to consider, as they impact on water availability in the WCWSS
  - Paarl from Berg River (run-of-river)
  - Agriculture from Klein Berg River
  - Tulbagh and Wolseley from Klein Berg River
  - 24-Rivers IB from 24-Rivers and Leeu River



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

## Additional requests

- Licence applications for
  - CCT full allocation of Berg River Dam yield
  - CCT temporary allocation from Theewaterskloof Dam
  - WC DM increase in allocation from Voëlvlei Dam
- Licence applications for agricultural use above capped volume
- Request for additional releases from Voëlvlei Dam for Lower Berg IB



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

## Cape Flats Aquifer

- Departments met:
  - Bulk Water Supply (Paul Rhode and Barry Wood)
  - Spatial Planning (Marco Geretto)
  - Stormwater and Sustainability (Rod Arnold and Franz von Moltke)
  - Parks Planning and Development (Bradley Burger)
  - City Parks Gugulethu (Mzwandile Peter)
  - Cape Flats District (Margot Muller)
  - Khayelitsha and Mitchell's Plain District (Charles Rudman and Gerhard Hanekom)
  - Coastal Zone Management (Darryl Colenbrander)
  - Solid Waste (Peter Novella and Stephan Morkel)



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

## Cape Flats Aquifer

- Departments still to meet:
  - Water Conservation and Demand Management (Collin Mubadiro)
  - Community Services (Susan Brice)



WATER IS LIFE - SANITATION IS DIGNITY

Toll Free: 0800 200 200 www.dwa.gov.za

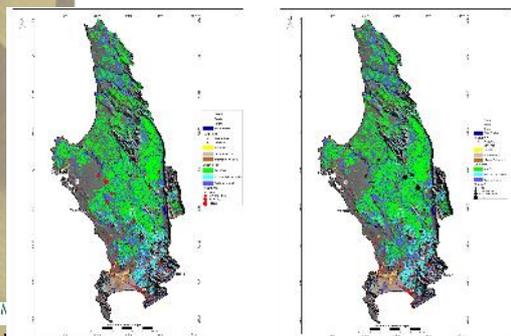
## Cape Flats Aquifer

- General remarks:
  - See the huge potential of the CFA
  - Main use for irrigating parks, school fields and community vegetable gardens
  - Possible use to help with dune management and nodal development along the coastline
  - To succeed it needs to be in partnership with the local communities – champions to run it and prevent theft and vandalism
  - Pilot study – school in Khayelitsha that hosted a matriculate student with 100% for maths, ornamental gardens in Gugulethu, community vegetable gardens in Gugulthu, Khayelitsha and Mitchell's Plain.




WATER IS LIFE - SANITATION IS DIGNITY
Toll Free: 0800 200 200 www.dwa.gov.za

## Berg River Geospatial Water Quality






WATER IS LIFE - SANITATION IS DIGNITY
Toll Free: 0800 200 200 www.dwa.gov.za

## Berg River Geospatial Water Quality

- Requirements:
  - Water quality data
    - Trace metals (Cd, Pb, Cr, Mo, Cu, Zn, V, Ni, Se, As, Co)
    - Ecoli
    - Organics (chlorpyrifos and endosulfan)
- Contacts tried:
  - Zayed Brown
  - Jason Mingo
  - Marle Kunneke
  - Joy Leaner
  - Amina Sulaiman
  - Hadjira Peck




WATER IS LIFE - SANITATION IS DIGNITY
Toll Free: 0800 200 200 www.dwa.gov.za