



**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA



# **REVIEW, EVALUATION AND OPTIMISATION OF THE SOUTH AFRICAN WATER RESOURCES MONITORING NETWORK**

## **Network Inventory**

## **VOLUME 2: MAP BOOK**

## **DRAFT**

**MARCH 2015**



Obtainable from

Chief Directorate: Water Information Management

Department: Water and Sanitation

Private Bag X313

PRETORIA

0001

## PREFACE

*The Department of Water and Sanitation (DWS) is the custodian of ten national monitoring programmes. The overall aim of this project is to undertake an evaluation of each monitoring network, in its present condition, and to redesign and realign the network based on scientific analysis and the strategic and management objectives of DWS and of the country as a whole. The water resources monitoring network will be optimised to ensure sustainable, relevant and up-to-date data of an acceptable quality*

*This Network Inventory Task focussed on the production of maps to illustrate the spatial distribution of the existing monitoring stations for these ten monitoring programmes. The deliverable from this Network Inventory task, together the User Requirements Task will be used to identify shortcomings in the current networks.*

*The metadata from each of the ten monitoring networks was analysed and descriptive labels were developed for each station to describe the temporal information (record period), open/closed, completeness, etc.*

*This task was undertaken by a team of specialists, one for each of the following categories of data:*

- Surface water quantity.*
- Surface water quality.*
- Groundwater levels and quality.*
- Biophysical Data*
- Hydro-meteorology*

*This was followed by the development of five thematic maps with information on the spatial distribution of these ten monitoring points per new Water Management Area (WMA) have been compiled. Even though other institutions in South Africa are also collecting surface water, groundwater, Hydro-meteorological, water quality, eco-health, mostly for their own interests and applications, only the Hydro-meteorological networks of ARC and SAWS data were included on these maps since these data are used daily by DWS. Due to an abundance of groundwater stations in a number of WMA's, station numbers, rather than the detailed developed labels, were adopted for labelling the groundwater maps. The detailed groundwater labels are included as Appendix A.*

*The thematic Maps produced per nine WMA's are as follows:*

*A2-size maps were developed for the nine new WMAs per data category, as follows:*

- 1) Limpopo WMA*
- 2) Olifants WMA*
- 3) Inkomati-Usuthu WMA*
- 4) Pongola-Mtamvuna WMA*
- 5) Vaal WMA*
- 6) Orange WMA*
- 7) Mzimvubu-Tsitskamma WMA*
- 8) Breede-Gouritz WMA*
- 9) Berg-Olifants WMA.*

*Other products developed as part of this Task are data catalogues and Google Earth KMZ-coverages which are very useful to the DWS, external users and to the project team during the new network design.*

*Subsequent to the completion of the Network Inventory and User Requirements tasks, the Data integrity assessment task will continue to determine the quality of the available data.*

## Table of Contents

### **WMA 1 Limpopo**

- Figure 1.1: WMA 1 - Limpopo: Surface Water Quantity Monitoring Stations
- Figure 1.2: WMA 1 - Limpopo: Surface Water Quality Monitoring Stations
- Figure 1.3: WMA 1 - Limpopo: Groundwater Level and Quality Monitoring Stations
- Figure 1.4: WMA 1 - Limpopo: Biophysical Monitoring Stations
- Figure 1.5: WMA 1 - Limpopo: Hydro-meteorological Monitoring Stations

### **WMA 2 Olifants**

- Figure 2.1: WMA 2 - Olifants: Surface Water Quantity Monitoring Stations
- Figure 2.2: WMA 2 - Olifants: Surface Water Quality Monitoring Stations
- Figure 2.3: WMA 2 - Olifants: Groundwater Level and Quality Monitoring Stations
- Figure 2.4: WMA 2 - Olifants: Biophysical Monitoring Stations
- Figure 2.5: WMA 2 - Olifants: Hydro-meteorological Monitoring Stations

### **WMA 3 Inkomati-Usuthu**

- Figure 3.1: WMA 3 - Inkomati-Usuthu: Surface Water Quantity Monitoring Stations
- Figure 3.2: WMA 3 - Inkomati-Usuthu: Surface Water Quality Monitoring Stations
- Figure 3.3: WMA 3 - Inkomati-Usuthu: Groundwater Level and Quality Monitoring Stations
- Figure 3.4: WMA 3 - Inkomati-Usuthu: Biophysical Monitoring Stations
- Figure 3.5: WMA 3 - Inkomati-Usuthu: Hydro-meteorological Monitoring Stations

### **WMA 4 Pongola-Mtamvuna**

- Figure 4.1: WMA 4 - Pongola-Mtamvuna: Surface Water Quantity Monitoring Stations
- Figure 4.2: WMA 4 - Pongola-Mtamvuna: Surface Water Quality Monitoring Stations
- Figure 4.3: WMA 4 - Pongola-Mtamvuna: Groundwater Level and Quality Monitoring Stations
- Figure 4.4: WMA 4 - Pongola-Mtamvuna: Biophysical Monitoring Stations
- Figure 4.5: WMA 4 - Pongola-Mtamvuna: Hydro-meteorological Monitoring Stations

### **WMA 5 Vaal**

- Figure 5.1: WMA 5 - Vaal: Surface Water Quantity Monitoring Stations
- Figure 5.2: WMA 5 - Vaal: Surface Water Quality Monitoring Stations
- Figure 5.3a: WMA 5 - Vaal: Groundwater Level and Quality Monitoring Stations

Figure 5.3b: WMA 5 - Vaal: Groundwater Level and Quality Monitoring Stations

Figure 5.4: WMA 5 - Vaal: Biophysical Monitoring Stations

Figure 5.5: WMA 5 - Vaal: Hydro-meteorological Monitoring Stations

#### **WMA 6 Orange**

Figure 6.1: WMA 6 - Orange: Surface Water Quantity Monitoring Stations

Figure 6.2: WMA 6 - Orange: Surface Water Quality Monitoring Stations

Figure 6.3a: WMA 6 - Orange: Groundwater Level and Quality Monitoring Stations

Figure 6.3b: WMA 6 - Orange: Groundwater Level and Quality Monitoring Stations

Figure 6.4: WMA 6 - Orange: Biophysical Monitoring Stations

Figure 6.5: WMA 6 - Orange: Hydro-meteorological Monitoring Stations

#### **WMA 7 Mzimvubu-Tsitsikamma**

Figure 7.1: WMA 7 - Mzimvubu-Tsitsikamma: Surface Water Quantity Monitoring Stations

Figure 7.2: WMA 7 - Mzimvubu-Tsitsikamma: Surface Water Quality Monitoring Stations

Figure 7.3: WMA 7 - Mzimvubu-Tsitsikamma: Groundwater Level and Quality Monitoring Stations

Figure 7.4: WMA 7 - Mzimvubu-Tsitsikamma: Biophysical Monitoring Stations

Figure 7.5: WMA 7 - Mzimvubu-Tsitsikamma: Hydro-meteorological Monitoring Stations

#### **WMA 8 Breede-Gouritz**

Figure 8.1: WMA 8 - Breede-Gouritz: Surface Water Quantity Monitoring Stations

Figure 8.2: WMA 8 - Breede-Gouritz: Surface Water Quality Monitoring Stations

Figure 8.3: WMA 8 - Breede-Gouritz: Groundwater Level and Quality Monitoring Stations

Figure 8.4: WMA 8 - Breede-Gouritz: Biophysical Monitoring Stations

Figure 8.5: WMA 8 - Breede-Gouritz: Hydro-meteorological Monitoring Stations

#### **WMA 9 Berg-Olifants**

Figure 9.1: WMA 9 - Berg-Olifants: Surface Water Quantity Monitoring Stations

Figure 9.2: WMA 9 - Berg-Olifants: Surface Water Quality Monitoring Stations

Figure 9.3: WMA 9 - Berg-Olifants: Groundwater Level and Quality Monitoring Stations

Figure 9.4: WMA 9 - Berg-Olifants: Biophysical Monitoring Stations

Figure 9.5: WMA 9 - Berg-Olifants: Hydro-meteorological Monitoring Stations

## **Appendix A**

Detailed Groundwater Level and Quality Monitoring Station Labels

**WMA 8:**  
**Breede-Gouritz**

**Legend**

**Surface Water Quantity Stations**

- River Flow
- Dam Volume
- Groundwater Eyes
- Tidal
- Closed
- Rivers
- Dams
- Primary Catchment Boundaries
- Secondary Catchment Boundaries
- Quaternary Catchment Boundaries
- Water Management Area

**Mean Annual Runoff New**

- 0 - 2.5 mm
- 2.5 - 5 mm
- 5 - 10 mm
- 10 - 20 mm
- 20 - 50 mm
- 50 - 100 mm
- 100 - 200 mm
- 200 - 500 mm
- > 500 mm

**LABEL KEY**

Status: O = Open  
C996 = Closed (since 1996)

Station Number: A2H083-Rf-O-34yr-0%-1945

Parameter measured: Rf = River flow (DT Present)

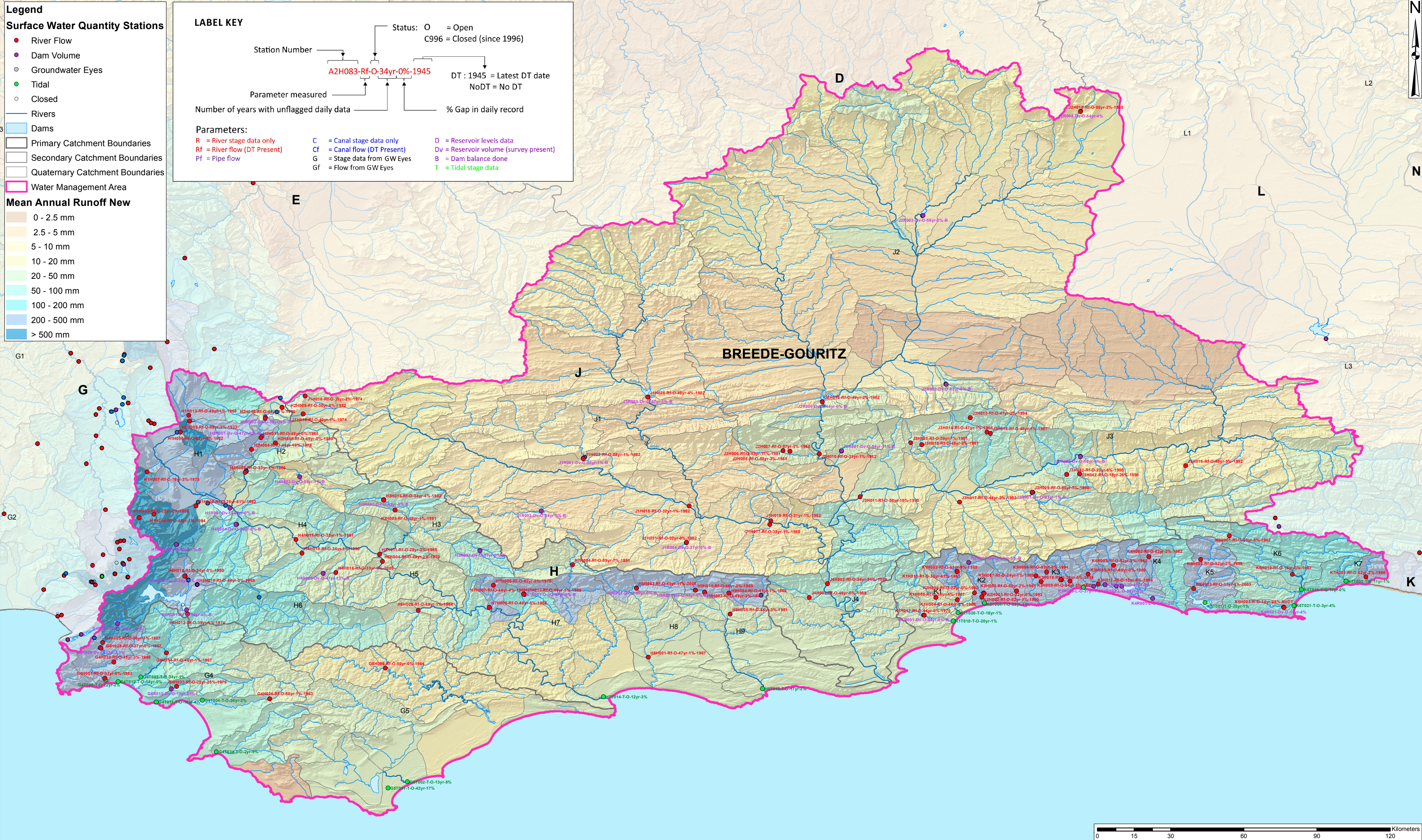
Number of years with unflagged daily data: 34yr

% Gap in daily record: 0%

DT: 1945 = Latest DT date  
NoDT = No DT

**Parameters:**

- R = River stage data only
- Rf = River flow (DT Present)
- Pf = Pipe flow
- C = Canal stage data only
- Cf = Canal flow (DT Present)
- G = Stage data from GW Eyes
- Gf = Flow from GW Eyes
- D = Reservoir levels data
- Dv = Reservoir volume (survey present)
- B = Dam balance done
- T = Tidal stage data



**Project Title: Review, Evaluation and Optimisation of the South African Water Resources Monitoring Network**

**Map Title: WMA 8 - Breede-Gouritz: Surface Water Quantity Monitoring Stations**

Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies.

**Scale 1:1 000 000**  
(When page size is: A2 landscape)

Projection: Geographic  
Datum: Hartbeesthoek 1994

Compiled By: LC Gallagher  
GIS QC By: M Storie - PGP 0124  
Approved By: E van Niekerk  
Date Saved: 2015/03/16

Project Number: 60326707  
Map Ref: SW\_Quantity\_Breede\_Gouritz\_A2L.mxd  
Revision: 01

**Sources:**  
DWS: Water Information Management  
Water Resources of South Africa 2005 (WRC)

**Legend**

- River Flow
- Dam Volume
- Canal Flows
- Groundwater Eyes
- Tidal
- Closed
- Rivers
- Dams
- Primary Catchment Boundaries
- Secondary Catchment Boundaries
- Quaternary Catchment Boundaries
- Water Management Area

**Mean Annual Runoff**

- 0 - 2.5 mm
- 2.5 - 5 mm
- 5 - 10 mm
- 10 - 20 mm
- 20 - 50 mm
- 50 - 100 mm
- 100 - 200 mm
- 200 - 500 mm
- > 500 mm

**LABEL KEY**

Station Number (HYDSTRA or WMS) | CPO-V15-F4W|EuC|MO-V4-FW

Maximum number of samples

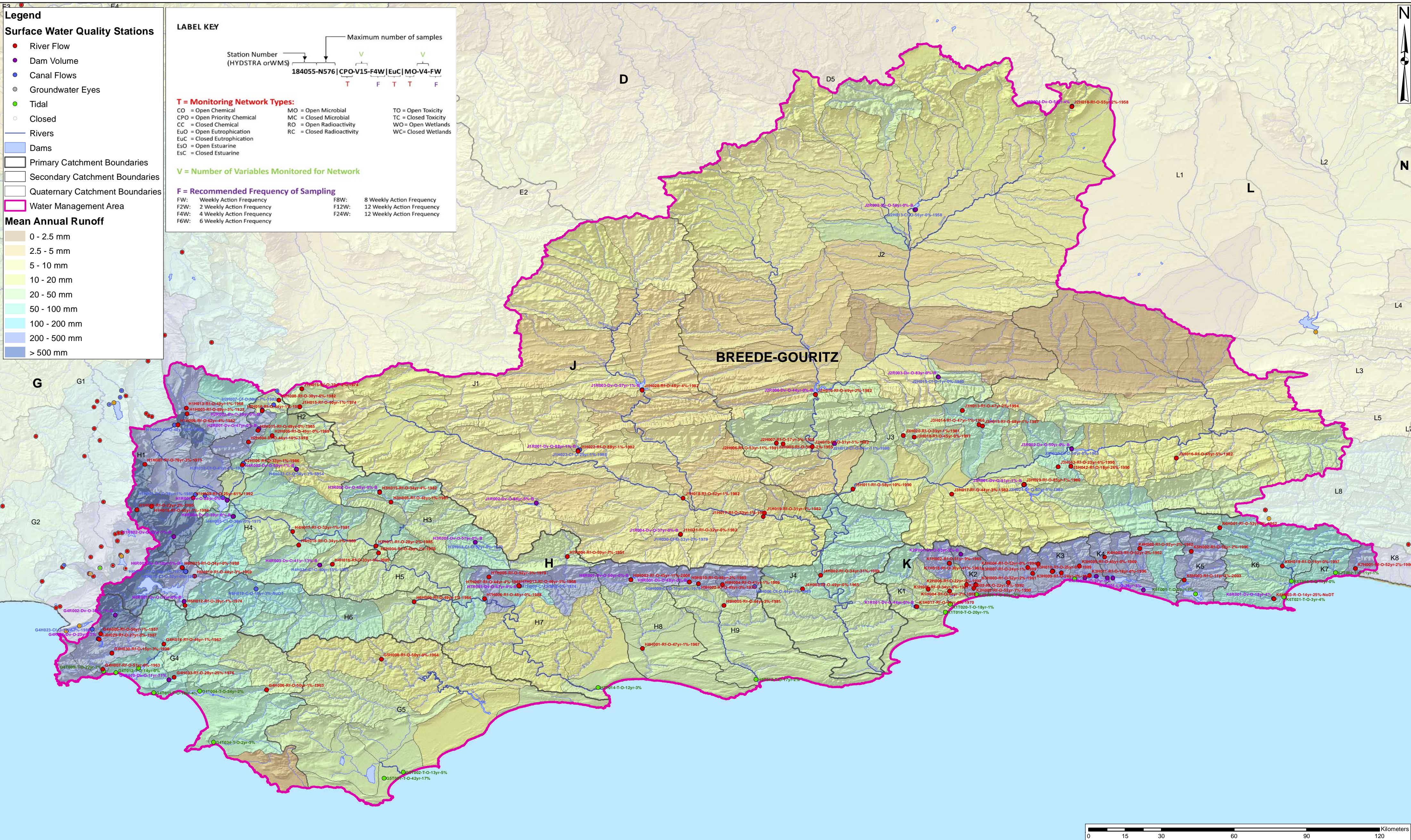
**T = Monitoring Network Types:**

- CO = Open Chemical
- CPO = Open Priority Chemical
- CC = Closed Chemical
- EuO = Open Eutrophication
- EuC = Closed Eutrophication
- EsO = Open Estuarine
- EsC = Closed Estuarine
- MO = Open Microbial
- MC = Closed Microbial
- RO = Open Radioactivity
- RC = Closed Radioactivity
- TO = Open Toxicity
- TC = Closed Toxicity
- WO = Open Wetlands
- WC = Closed Wetlands

**V = Number of Variables Monitored for Network**

**F = Recommended Frequency of Sampling**

- FW: Weekly Action Frequency
- F2W: 2 Weekly Action Frequency
- F4W: 4 Weekly Action Frequency
- F6W: 6 Weekly Action Frequency
- F8W: 8 Weekly Action Frequency
- F12W: 12 Weekly Action Frequency
- F24W: 12 Weekly Action Frequency



Project Title: <b>Review, Evaluation and Optimisation of the South African Water Resources Monitoring Network</b>		Scale 1:1 000 000 (When page size is: A2 landscape)	<b>Figure 8.2</b>
Map Title: <b>WMA 8 - Breede-Gouritz: Surface Water Quality Monitoring Stations</b>		Projection: Geographic Datum: Hartbeesthoek 1994	
Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies.		Compiled By: LC Gallagher GIS QC By: M Storie - PGP 0124 Approved By: E Van Niekerk Date Saved: 2015/03/16 Project Number: 60326707 Map Ref: SW_Quality_Breede_Gouritz_A2L.mxd Revision: 01	Sources: DWS: Water Information Management Water Resources of South Africa 2005 (WRC)



© Copyright





L4

L3

L5

L7

L8

K8

K7

K6

K5

K4

K3

K2

K1

J4

J3

J2

J1

H9

H8

H7

H6

H5

H4

H3

H2

H1

G5

G4

G2

D5

L1

L2

L3

L5

L7

L8

L9

L10

L11

L12

L13

L14

L15

L16

L17

L18

L19

L20

L21

L22

L23

L24

L25

L26

L27

L28

L29

L30

L31

L32

L33

L34

L35

L36

L37

L38

L39

L40

L41

L42

L43

L44

L45

L46

L47

L48

L49

L50

L51

L52

L53

L54

L55

L56

L57

L58

L59

L60

L61

L62

L63

L64

L65

L66

L67

L68

L69

L70

L71

L72

L73

L74

L75

L76

L77

L78

L79

L80

L81

L82

L83

L84

L85

L86

L87

L88

L89

L90

L91

L92

L93

L94

L95

L96

L97

L98

L99

L100

L101

L102

L103

L104

L105

L106

L107

L108

L109

L110

L111

L112

L113

L114

L115

L116

L117

L118

L119

L120

L121

L122

L123

L124

L125

L126

L127

L128

L129

L130

L131

L132

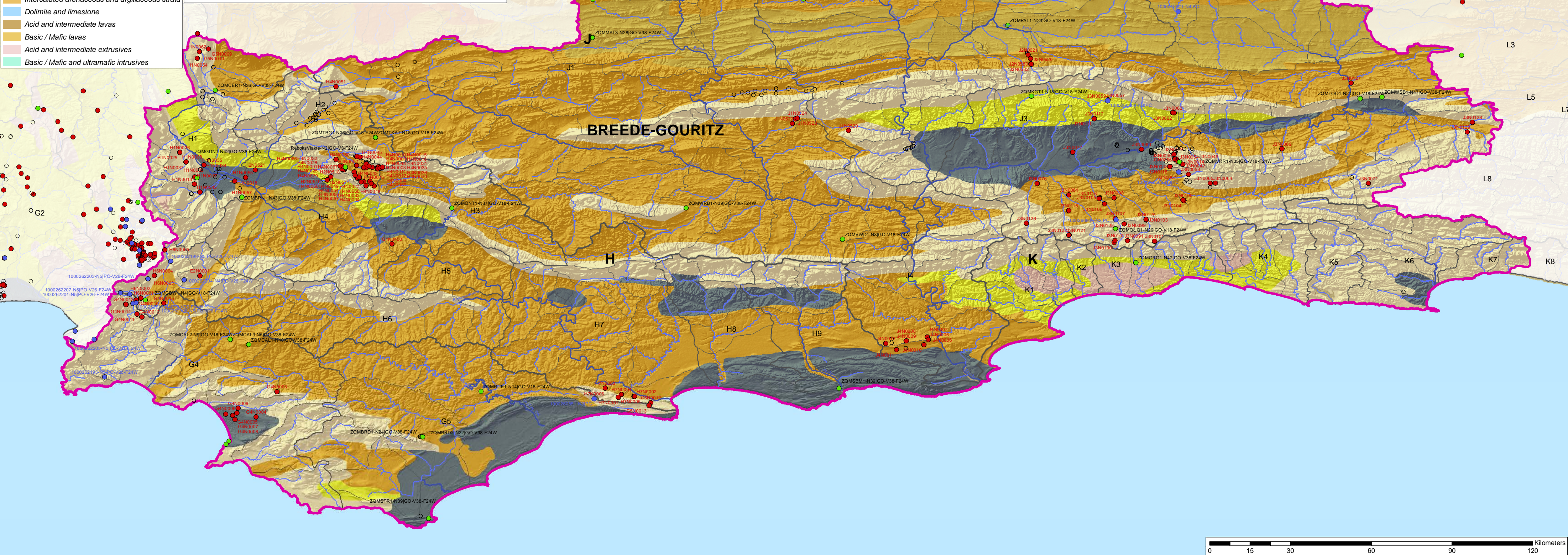
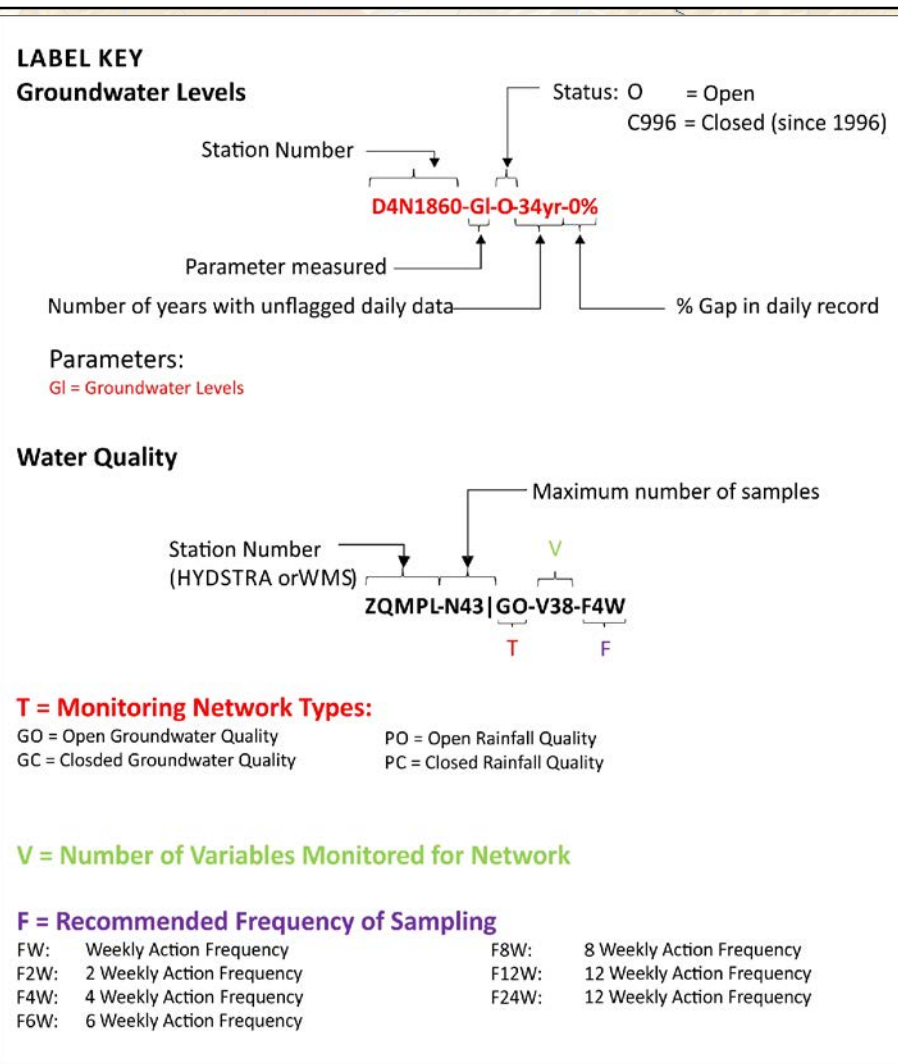
L133

L134

L135

- Legend**
- Quality Stations
    - Rainfall Open
    - Rainfall Closed
    - Groundwater
  - Groundwater Levels Stations
    - Open
    - Closed
  - Rivers
  - Primary Catchment Boundaries
  - Secondary Catchment Boundaries
  - Quaternary Catchment Boundaries
  - Water Management Area

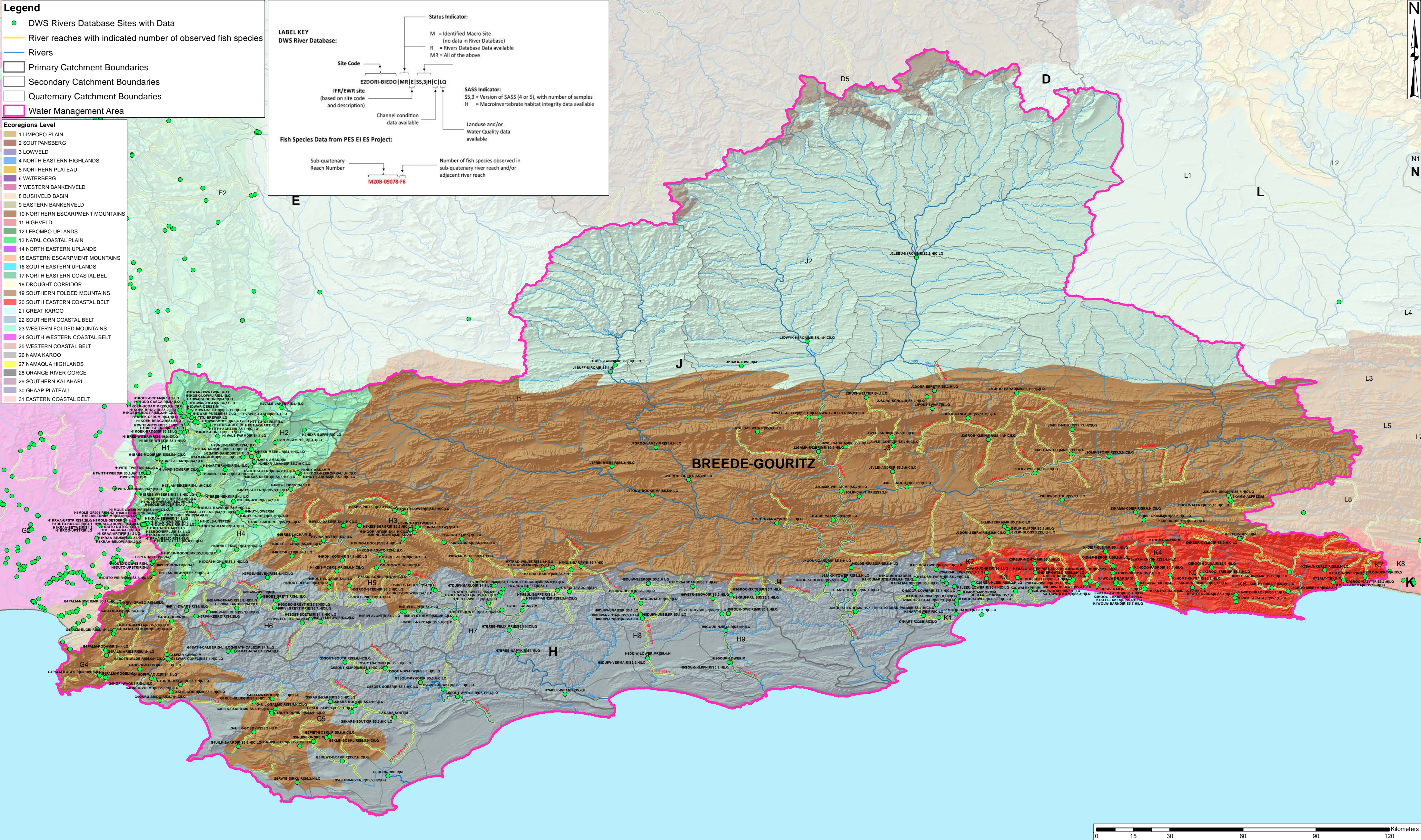
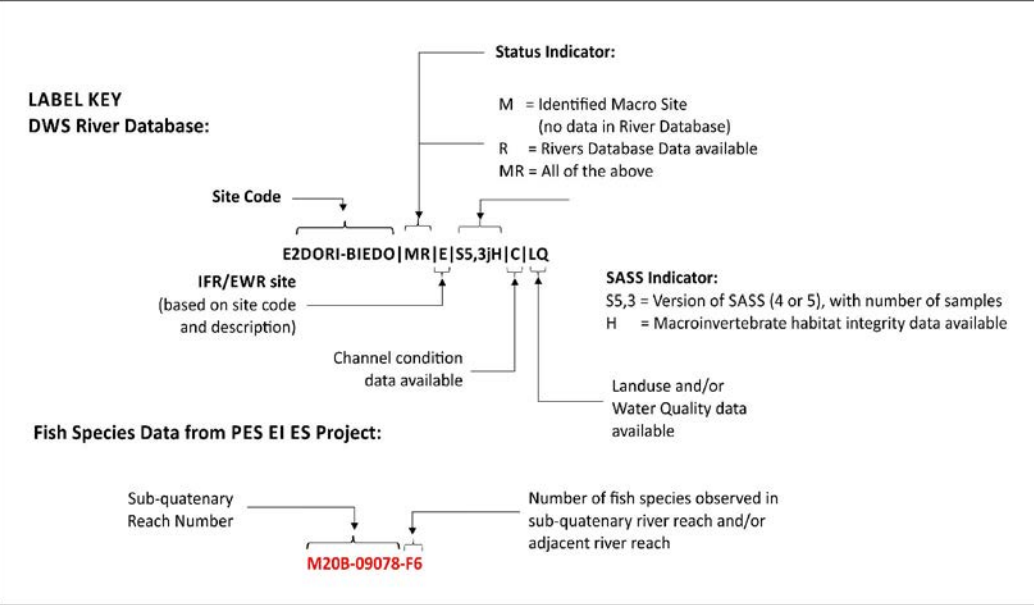
- Simplified Geology (WR90)**
- Undifferentiated assemblage of compact sedimentary extrusive and intrusive rocks
  - Intercalated assemblage of compact sedimentary and extrusive rocks
  - Compact sedimentary strata
  - Porous unconsolidated and consolidated sedimentary strata
  - Tillite
  - Assemblage of tillite and shale
  - Assemblage of tillite, shale and sandstone
  - Principally arenaceous strata
  - Principally argillaceous strata
  - Intercalated arenaceous and argillaceous strata
  - Dolomite and limestone
  - Acid and intermediate lavas
  - Basic / Mafic lavas
  - Acid and intermediate extrusives
  - Basic / Mafic and ultramafic intrusives



Project Title:	<b>Review, Evaluation and Optimisation of the South African Water Resources Monitoring Network</b>		Scale 1:1 000 000 (When page size is: A2 landscape)	<b>Figure 8.3</b>
Map Title:	<b>WMA 8 - Breede-Gouritz: Groundwater Quality and Water Level Monitoring Stations</b>		Projection: Geographic Datum: Hartebeesthoek 1994	Sources: DWS: Water Information Management Water Resources of South Africa 2005 (WRC)
			Compiled By: LC Gallagher GIS QC By: M Storie - PGP 0124 Approved By: E Van Niekerk Date Saved: 2015/03/16 Project Number: 60326707 Map Ref: GWQuality_Breede_Gourits_A2P.mxd Revision: 01	
Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies.			© Copyright	



- Legend**
- DWS Rivers Database Sites with Data
  - River reaches with indicated number of observed fish species
  - Rivers
  - Primary Catchment Boundaries
  - Secondary Catchment Boundaries
  - Quaternary Catchment Boundaries
  - Water Management Area
- Ecoregions Level**
- LIMPOPO PLAIN
  - SOUTPANSBERG
  - LOWVELD
  - NORTH EASTERN HIGHLANDS
  - NORTHERN PLATEAU
  - WATERBERG
  - WESTERN BANKENVELD
  - BUSHVELD BASIN
  - EASTERN BANKENVELD
  - NORTHERN ESCARPMENT MOUNTAINS
  - HIGHVELD
  - LEBOMBO UPLANDS
  - NATAL COASTAL PLAIN
  - NORTH EASTERN UPLANDS
  - EASTERN ESCARPMENT MOUNTAINS
  - SOUTH EASTERN UPLANDS
  - NORTH EASTERN COASTAL BELT
  - DROUGHT CORRIDOR
  - SOUTHERN FOLDED MOUNTAINS
  - SOUTH EASTERN COASTAL BELT
  - GREAT KAROO
  - SOUTHERN COASTAL BELT
  - WESTERN FOLDED MOUNTAINS
  - SOUTH WESTERN COASTAL BELT
  - WESTERN COASTAL BELT
  - NAMA KAROO
  - NAMAQUA HIGHLANDS
  - ORANGE RIVER GORGE
  - SOUTHERN KALAHARI
  - GHAAP PLATEAU
  - EASTERN COASTAL BELT



Project Title: **Review, Evaluation and Optimisation of the South African Water Resources Monitoring Network**

Scale 1:1 000 000  
(When page size is: A2 landscape)

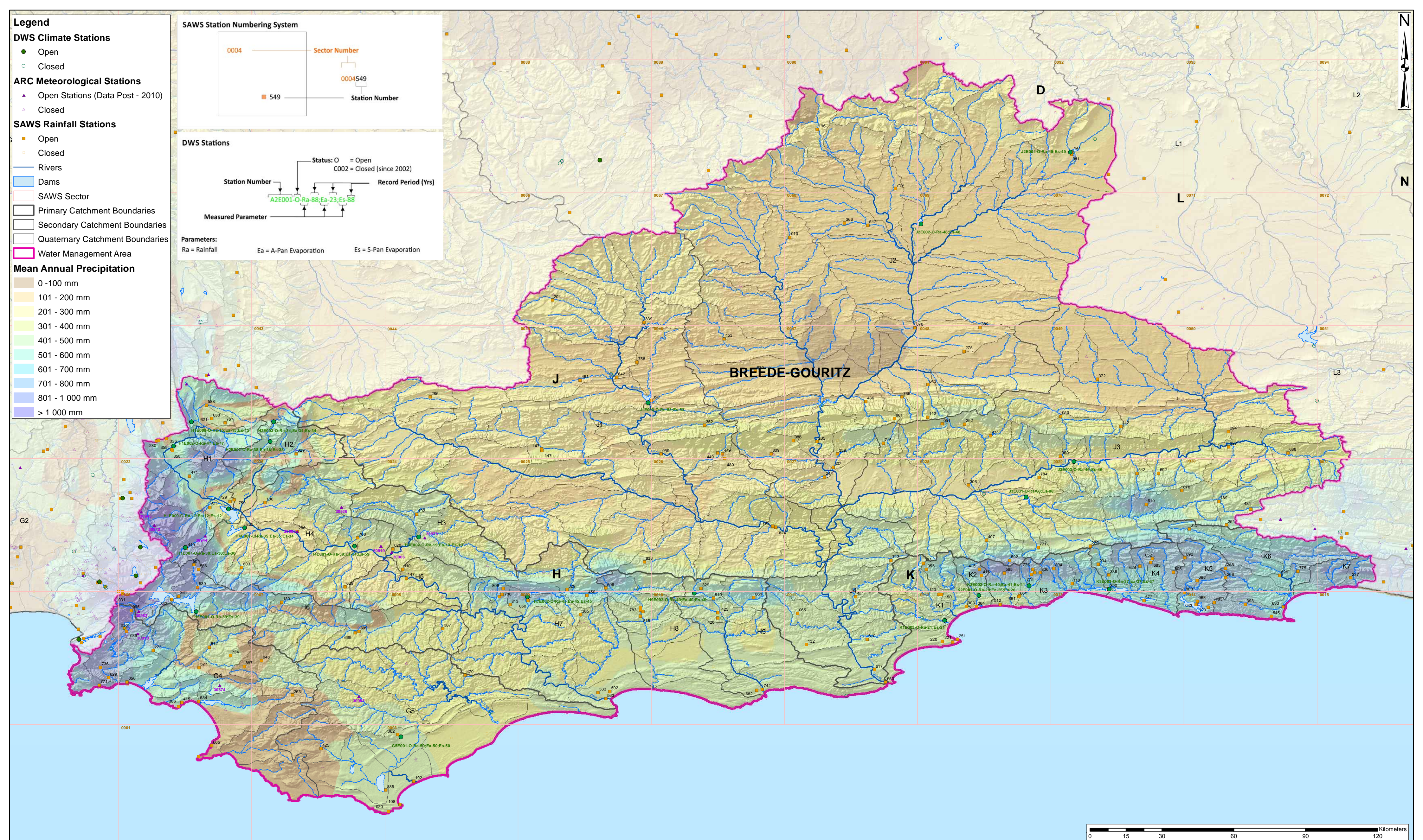
**Figure 8.4**

Map Title: **WMA 8 - Breede-Gouritz: Biophysical Monitoring Stations**

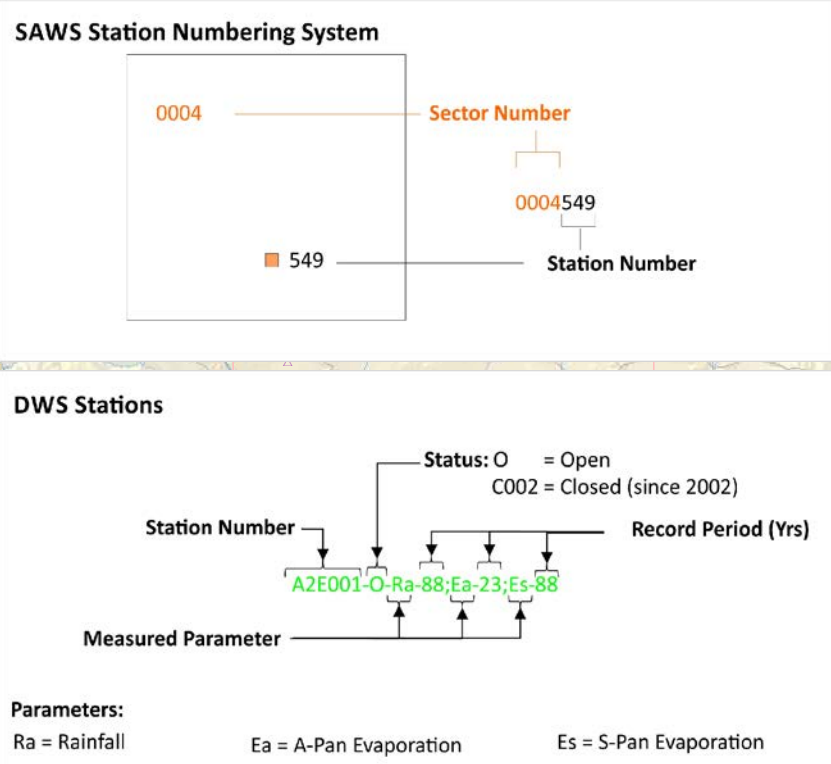
Projection: Geographic	Sources: DWS: Water Information Management Water Resources of South Africa 2005 (WRC) Desktop PES, EI + ES (DWS, 2014)
Datum: Hartebeesthoek 1994	
Compiled By: LC Gallagher	© Copyright
GIS QC By: M Storie - PGP 0124	
Approved By: E van Niekerk	
Date Saved: 2015/03/17	
Project Number: 60326707	
Map Ref: Biophysical_Breede_Gouritz_A2L.mxd	
Revision: 01	

Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies.





- Legend**
- DWS Climate Stations**
- Open
  - Closed
- ARC Meteorological Stations**
- ▲ Open Stations (Data Post - 2010)
  - △ Closed
- SAWS Rainfall Stations**
- Open
  - Closed
- Rivers
  - Dams
  - SAWS Sector
  - Primary Catchment Boundaries
  - Secondary Catchment Boundaries
  - Quaternary Catchment Boundaries
  - Water Management Area
- Mean Annual Precipitation**
- 0 - 100 mm
  - 101 - 200 mm
  - 201 - 300 mm
  - 301 - 400 mm
  - 401 - 500 mm
  - 501 - 600 mm
  - 601 - 700 mm
  - 701 - 800 mm
  - 801 - 1 000 mm
  - > 1 000 mm



Project Title: **Review, Evaluation and Optimisation of the South African Water Resources Monitoring Network**

Map Title: **WMA 8 - Breede-Gouritz: Hydro-meteorological Monitoring Stations**

Whilst every care has been taken in compiling the information on this map, AECOM cannot accept responsibility for any inaccuracies.

© Copyright

**Scale 1:1 000 000**  
(When page size is: A2 landscape)

Projection: Geographic  
Datum: Hartbeesthoek 1994

Compiled By: LC Gallagher  
GIS QC By: M Storie - PGP 0124  
Approved By: E Van Niekerk  
Date Saved: 2015/03/16  
Project Number: 60326707  
Map Ref: CMN\_Breede\_Gouritz\_A2L.mxd  
Revision: 02

**Figure 8.5**

**Sources:**  
DWS: Water Information Management  
Water Resources of South Africa 2005 (WRC)  
Agricultural Research Council (ARC)



**APPENDIX A:**  
**Detailed Groundwater Level and Quality**  
**Monitoring Station Labels**

**WMA 8: Breede-Gouritz**

**WMA 8 - Breede-Gouritz: Groundwater Level and Quality Monitoring Stations**

Station	Name	Catchment	Province	Label
J2N0550	Slagters Kop Ged Tweeling	J21A	WC	J2N0550-GI-O-39yrs-0%
J2N0596	South Lemoenfontein	J21A	WC	J2N0596-GI-O-9yrs-0%
J2N0618	Beaufort West Allotment	J21A	WC	J2N0618-GI-O-9yrs-4%
J2N0623	Hans Rivier	J21A	WC	J2N0623-GI-O-6yrs-0%
J2N0572	Stinkfontein 7 Ptn Oslaagte	J22K	WC	J2N0572-GI-O-9yrs-0%
J2N0591	Stinkfontein	J22K	WC	J2N0591-GI-O-9yrs-0%
J2N0592	Stinkfontein	J22K	WC	J2N0592-GI-O-9yrs-0%
J2N0557	De Molen 5	J24A	WC	J2N0557-GI-O-9yrs-0%
J2N0563	Plaatdoorns 262	J24A	WC	J2N0563-GI-O-10yrs-0%
J2N0552	Mooileegte	J24B	WC	J2N0552-GI-O-9yrs-0%
J2N0553	Merweville	J24B	WC	J2N0553-GI-O-9yrs-0%
J2N0574	Bitterwater Outspan	J23A	WC	J2N0574-GI-O-9yrs-8%
J2N0575	Groot Kruid Fontein 33	J23A	WC	J2N0575-GI-O-10yrs-3%
J2N0576	Groot Kruid Fontein 33	J23A	WC	J2N0576-GI-O-9yrs-15%
J2N0577	Rietfontein 56	J23A	WC	J2N0577-GI-O-9yrs-0%
J2N0593	Veldmans River 9	J23A	WC	J2N0593-GI-O-9yrs-0%
J2N0594	Veldmans River 9	J23A	WC	J2N0594-GI-O-9yrs-0%
J2N0580	Prince Albert Allotment	J23F	WC	J2N0580-GI-O-9yrs-0%
J2N0582	Prince Albert Municipality Area	J23F	WC	J2N0582-GI-O-9yrs-0%
J2N0620	Prince Albert Municipality Area	J23F	WC	J2N0620-GI-O-7yrs-0%
J2N0621	Prince Albert Allotment Area	J23F	WC	J2N0621-GI-O-7yrs-3%
G5N0009	Witzenberg Modder Riviers Kloof	H10C	WC	G5N0009-GI-O-20yrs-0%
G5N0010	De Vlake	H70K	WC	G5N0010-GI-O-20yrs-0%
H1N0054	Paardekloof	H10C	WC	H1N0054-GI-O-22yrs-0%
H1N0062	SLAGBOOM	H10C	WC	H1N0062-GI-O-2yrs-0%
J3N0127	Vondeling	J32E	EC	J3N0127-GI-O-1yrs-14%
H4N0051	Rheboks Vlake Portion Of Simonskloof	J12A	WC	H4N0051-GI-O-10yrs-0%
J3N0057	De Cango 26	J35A	WC	J3N0057-GI-O-9yrs-0%
J3N0059	De Cango 26	J35A	WC	J3N0059-GI-O-9yrs-0%
J3N0077	Oudtshoorn Commonage	J35A	WC	J3N0077-GI-O-9yrs-0%
J3N0111	Roode Wal Ptn Blommetjieskloof	J35A	WC	J3N0111-GI-O-8yrs-0%
J3N0112	Roode Wal Ptn Blommetjieskloof	J35A	WC	J3N0112-GI-O-9yrs-0%
J1N0520	Zoar	J25B	WC	J1N0520-GI-O-9yrs-0%
J3N0048	Wagenpadsnek 130	J33E	WC	J3N0048-GI-O-12yrs-0%
J3N0090	Dysselsdorp	J33F	WC	J3N0090-GI-O-11yrs-7%
J3N0118	Wagenpadsnek	J33F	WC	J3N0118-GI-O-8yrs-0%
J3N0014	Vermaakrivier 125	J33	WC	J3N0014-GI-O-6yrs-19%
J3N0040	Voorzorg 124	J33E	WC	J3N0040-GI-O-13yrs-9%
J3N0042	Voorzorg 124	J33	WC	J3N0042-GI-O-14yrs-53%
J3N0049	Voorzorg 124	J33E	WC	J3N0049-GI-O-18yrs-6%
J3N0054	Voorzorg	J33E	WC	J3N0054-GI-O-11yrs-10%
J3N0056	Voorzorg Ptn Vermaakrivier	J33E	WC	J3N0056-GI-O-11yrs-6%
J3N0062	Welgevonden	J33E	WC	J3N0062-GI-O-9yrs-0%
J3N0063	Welgevonden	J33E	WC	J3N0063-GI-O-9yrs-0%
J3N0124	Voorzorg	J33E	WC	J3N0124-GI-O-6yrs-16%
J3N0069	Buffels Klip	J33A	WC	J3N0069-GI-O-9yrs-0%
J1N0522	Ylands Valley	J11J	WC	J1N0522-GI-O-7yrs-0%
J1N0523	Ylands Valley	J11J	WC	J1N0523-GI-O-8yrs-0%
J1N0524	Ylands Valley	J11J	WC	J1N0524-GI-O-8yrs-0%
J3N0128	Willowmore	J31A	EC	J3N0128-GI-O-1yrs-19%
J3N0129	Willowmore	J31A	EC	J3N0129-GI-O-1yrs-51%
H4N0044	Dwars In De Weg	H40A	WC	H4N0044-GI-O-10yrs-0%
H1N0018	Lilleplaas	H10H	WC	H1N0018-GI-O-33yrs-0%
H1N0055	Worcester Toekennings Gebiet (Allotment Area)	H10H	WC	H1N0055-GI-O-36yrs-0%
H1N0013	Degrootvlakte	H10G	WC	H1N0013-GI-O-33yrs-0%
H1N0017	Wysdrift	H10G	WC	H1N0017-GI-O-33yrs-0%
H1N0025	De Hoop	H10G	WC	H1N0025-GI-O-33yrs-0%
H1N0026	De Hoop	H10G	WC	H1N0026-GI-O-33yrs-0%
H1N0033	Wysdrift	H10G	WC	H1N0033-GI-O-33yrs-0%
H1N0034	Wysdrift	H10G	WC	H1N0034-GI-O-13yrs-0%
H1N0035	Wysdrift	H10G	WC	H1N0035-GI-O-31yrs-0%
H1N0037	Wysersdrift	H10G	WC	H1N0037-GI-O-33yrs-0%
H1N0038	Wysersdrift	H10G	WC	H1N0038-GI-O-13yrs-0%
H4N0001	Biesiespol Portion Of Heinzberg	H40B	WC	H4N0001-GI-O-10yrs-0%

**WMA 8 - Breede-Gouritz: Groundwater Level and Quality Monitoring Stations**

Station	Name	Catchment	Province	Label
H4N0002	Bessiespol 42	H40B	WC	H4N0002-GI-O-10yrs-0%
H4N0003	Donkerkloof	H40B	WC	H4N0003-GI-O-7yrs-0%
H4N0009	Eendracht	H40B	WC	H4N0009-GI-O-7yrs-0%
H4N0010	Eendracht Spring	H40B	WC	H4N0010-GI-O-7yrs-0%
H4N0011	Eendracht	H40B	WC	H4N0011-GI-O-3yrs-0%
H4N0012	Eendracht	H40B	WC	H4N0012-GI-O-10yrs-0%
H4N0015	Eendracht	H40B	WC	H4N0015-GI-O-10yrs-0%
H4N0016	Eendracht	H40B	WC	H4N0016-GI-O-10yrs-0%
H4N0025	Rheboks Vlake Portion Of Heinzberg	H40B	WC	H4N0025-GI-O-10yrs-0%
H4N0027	The Coo Portion Of Jakkalsvlei	H40B	WC	H4N0027-GI-O-6yrs-0%
H4N0028	Rheboks Vlake Portion Of Heinzberg	H40B	WC	H4N0028-GI-O-2yrs-0%
H4N0029	Rheboks Vlake Portion Of Heinzberg	H40B	WC	H4N0029-GI-O-2yrs-0%
H4N0031	Eendracht Portion Of Rooihoogetpas	H40B	WC	H4N0031-GI-O-10yrs-0%
H4N0032	Rheboks Vlake Portion Of Heinzberg	H40B	WC	H4N0032-GI-O-2yrs-0%
H4N0033	The Coo Portion Of Laatsrivier	H40B	WC	H4N0033-GI-O-11yrs-0%
H4N0034	The Coo Portion Of Jakkalsvlei	H40B	WC	H4N0034-GI-O-10yrs-0%
H4N0035	Leeuwhoek 54	H40B	WC	H4N0035-GI-O-4yrs-0%
H4N0036	Eendracht	H40B	WC	H4N0036-GI-O-5yrs-0%
H4N0043	Eendracht	H40B	WC	H4N0043-GI-O-6yrs-0%
H4N0045	Dwars In De Weg	H40B	WC	H4N0045-GI-O-6yrs-0%
H4N0046	The Vineyard Portion Of Versamling	H40B	WC	H4N0046-GI-O-9yrs-0%
H4N0048	Eendracht	H40B	WC	H4N0048-GI-O-7yrs-0%
H4N0049	The Coo Portion Of Laatsrivier	H40B	WC	H4N0049-GI-O-11yrs-0%
H4N0050	Rheboks Vlake Portion Of Simonskloof	H40B	WC	H4N0050-GI-O-10yrs-0%
H4N0054	The Coo 51 Portion Of Langdam Private	H40B	WC	H4N0054-GI-O-7yrs-0%
H4N0056	The Coo 51 Portion Of Langdam Private	H40B	WC	H4N0056-GI-O-10yrs-0%
H4N0057	The Coo 51 Portion Of Langdam Private	H40B	WC	H4N0057-GI-O-5yrs-0%
H4N0058	The Coo 51 Portion Of Laatsrivier	H40B	WC	H4N0058-GI-O-10yrs-0%
H4N0060	The Coo 51 Portion Of Laatsrivier	H40B	WC	H4N0060-GI-O-10yrs-0%
H4N0066	Rheboks Vlake Portion Of Nooitgedacht	H40B	WC	H4N0066-GI-O-11yrs-0%
H4N0067	Rheboks Vlake Portion Of Nooitgedacht	H40B	WC	H4N0067-GI-O-11yrs-0%
H4N0068	Die Koo	H40B	WC	H4N0068-GI-O-9yrs-0%
H4N0069	Plaas Portion Of Prima Vera	H40B	WC	H4N0069-GI-O-10yrs-0%
H4N0070	Donkerkloof Ontspanning Portion Of Rooihooget	H40B	WC	H4N0070-GI-O-10yrs-0%
H4N0076	Die Koo Portion Of Brookhill	H40B	WC	H4N0076-GI-O-10yrs-0%
J3N0061	De Hoek	J35B	WC	J3N0061-GI-O-9yrs-0%
J3N0091	Smuts Kloof Ptn Waboonskraal	J35B	WC	J3N0091-GI-O-9yrs-15%
J3N0099	Palmiet Drift	J35B	WC	J3N0099-GI-O-9yrs-15%
J3N0100	Kouwdouw Ptn Waboonskraal	J35B	WC	J3N0100-GI-O-9yrs-14%
J3N0102	Kouwdouw Ptn Waboonskraal	J35B	WC	J3N0102-GI-O-9yrs-18%
J3N0105	Klein Fontein	J35B	WC	J3N0105-GI-O-8yrs-0%
J3N0106	Welbedag Ptn Onverwag	J35B	WC	J3N0106-GI-O-9yrs-3%
J3N0107	Klipdrif Ptn Klipdrif	J35B	WC	J3N0107-GI-O-9yrs-1%
J3N0108	Klipdrif Ptn Klipdrif	J35B	WC	J3N0108-GI-O-9yrs-12%
J3N0115	GOODE HOOP	J35B	WC	J3N0115-GI-O-8yrs-0%
J3N0116	Klein Fontein	J35B	WC	J3N0116-GI-O-8yrs-15%
J3N0121	Kandelaars And Doorn Riviers Spruiten	J35B	WC	J3N0121-GI-O-7yrs-7%
J3N0122	Kandelaars And Doorn Riviers Spruiten	J35B	WC	J3N0122-GI-O-7yrs-0%
H2N0517	Boven Klopperbosch	H40C	WC	H2N0517-GI-O-12yrs-0%
H2N0518	Boven Klopperbosch	H40C	WC	H2N0518-GI-O-12yrs-0%
H2N0519	Boven Klopperbosch	H40C	WC	H2N0519-GI-O-12yrs-0%
J3N0071	Golddigging Ptn Uniondale Poort	J34A	WC	J3N0071-GI-O-9yrs-0%
H2N0521	Worcester Regional Office-Dwaf	H20H	WC	H2N0521-GI-O-10yrs-0%
J3N0098	Annex Welbedacht Ptn Zout Kloof	J34F	WC	J3N0098-GI-O-9yrs-3%
J3N0101	Afgunst Rivier	J34F	WC	J3N0101-GI-O-9yrs-12%
J3N0103	Paarde Poort	J34F	WC	J3N0103-GI-O-8yrs-0%
J3N0125	DE POORT 77	J34F	WC	J3N0125-GI-O-5yrs-17%
J3N0053	Leeuwen Blad Ptn Leeublad	J34D	WC	J3N0053-GI-O-11yrs-0%
J3N0064	Ylands Rivier	J34D	WC	J3N0064-GI-O-10yrs-2%
J3N0065	Ylands Rivier	J34D	WC	J3N0065-GI-O-12yrs-2%
J3N0067	Leeuwen Blad	J34D	WC	J3N0067-GI-O-12yrs-2%
J3N0104	Quarry Gaten	J34D	WC	J3N0104-GI-O-8yrs-0%
J3N0109	Quarry Gaten	J34D	WC	J3N0109-GI-O-9yrs-6%
J3N0076	Armoed Estate Ptn Kliplokasie	J35C	WC	J3N0076-GI-O-9yrs-0%

**WMA 8 - Breede-Gouritz: Groundwater Level and Quality Monitoring Stations**

Station	Name	Catchment	Province	Label
J3N0126	Moeras Rivier	J35C	WC	J3N0126-GI-O-4yrs-5%
H1N0057	Brandvlei Prison	H10L	WC	H1N0057-GI-O-6yrs-0%
H1N0045	Swastika	H10J	WC	H1N0045-GI-O-33yrs-0%
G1N0450	Goede Rust Ptn Goodings Grove	H40L	WC	G1N0450-GI-O-9yrs-0%
H6N0003	Aan De Palmiet Valley	H60B	WC	H6N0003-GI-O-6yrs-0%
H6N0004	Aan de Palmiet Valley	H60B	WC	H6N0004-GI-O-6yrs-0%
H6N0005	Franschhoek Pass erf 23	H60B	WC	H6N0005-GI-O-5yrs-0%
E2N0001	Rosendal	H60C	WC	E2N0001-GI-O-22yrs-0%
J4N0006	Bergsig Ptn Dikberg	J40D	WC	J4N0006-GI-O-7yrs-0%
J4N0007	Bergsig Ptn Dikberg	J40D	WC	J4N0007-GI-O-7yrs-7%
J4N0008	Welgelegen Ptn Wolwekraal	J40D	WC	J4N0008-GI-O-8yrs-0%
J4N0009	Welgelegen Ptn Wolwekraal	J40D	WC	J4N0009-GI-O-7yrs-0%
J4N0012	Aasvogelberg	J40D	WC	J4N0012-GI-O-7yrs-0%
G4N0010	Swarte Water ptn Hottentots Holland Nature Reserve	G40C	WC	G4N0010-GI-O-6yrs-0%
H6N0001	De Versoek ptn Versoek	H60A	WC	H6N0001-GI-O-6yrs-0%
H6N0002	De Versoek ptn Versoek	H60A	WC	H6N0002-GI-O-6yrs-0%
G4N0015	Bot Rivier ptn Twaalfontein	G40E	WC	G4N0015-GI-O-6yrs-0%
J4N0005	Bergsig Ptn Dikberg	J40E	WC	J4N0005-GI-O-7yrs-4%
J4N0010	Snipfontein	J40E	WC	J4N0010-GI-O-7yrs-7%
J4N0011	De Grootte Fontein Ptn Ryksdalersplaas	J40E	WC	J4N0011-GI-O-8yrs-0%
H7N0003	Melk Hout Rivier	H70K	WC	H7N0003-GI-O-7yrs-0%
H7N0004	Melk Hout Rivier	H70K	WC	H7N0004-GI-O-7yrs-0%
H7N0005	Potteberg Estate	H70K	WC	H7N0005-GI-O-5yrs-0%
G4N0003	Hartebeeste Rivier 607(Gedeelte Teslaarsdal)	G40J	WC	G4N0003-GI-O-18yrs-0%
G5N0012	Potteberg Estates	H70K	WC	G5N0012-GI-O-7yrs-0%
H7N0001	Potteberg Estates	H70K	WC	H7N0001-GI-O-7yrs-0%
H7N0002	Potteberg Estate	H70K	WC	H7N0002-GI-O-7yrs-0%
G4N0004	Breede	G40L	WC	G4N0004-GI-O-6yrs-0%
G4N0005	BREEDE	G40L	WC	G4N0005-GI-O-6yrs-0%
G4N0006	BREEDE	G40L	WC	G4N0006-GI-O-6yrs-0%
G4N0007	BREEDE	G40L	WC	G4N0007-GI-O-6yrs-0%
G4N0008	BREEDE	G40L	WC	G4N0008-GI-O-6yrs-0%
G4N0009	BREEDE	G40L	WC	G4N0009-GI-O-6yrs-0%
G5N0013	Potteberg Estates	G50K	WC	G5N0013-GI-O-7yrs-0%
H7N0006	Potteberg Estate	H70K	WC	H7N0006-GI-O-7yrs-0%
G4N0011	Eikenhof ptn Wessels gat	G40C	WC	G4N0011-GI-O-6yrs-0%
G4N0012	Palmiet Valley ptn Oak Valley	G40C	WC	G4N0012-GI-O-5yrs-0%
G4N0013	Nieuwe Berg	G40C	WC	G4N0013-GI-O-6yrs-0%
G4N0014	Vergelegen ptn Grabouw MTO Forestry	G40C	WC	G4N0014-GI-O-5yrs-0%