

Water Management Areas

19 water management areas were established by, and their boundaries defined in Government Notice No. 1160 on 1st October 1999, as follows -

Table E.1: Boundary descriptions of water management areas as Gazetted in October 1999

Water Management Area (Number and Current Name)	Boundary Description
1. Limpopo: Major rivers include the Limpopo, Matlabas, Mokolo, Lephhalala, Mogalakwena, Sand and Nzhelele	Tertiary drainage regions A41, A42, A50, A61 to A63, A71, A72 and A80.
2. Luvuvhu and Letaba: Major rivers include the Mutale, Luvuvhu and Letaba	Tertiary drainage regions A91, A92, B81 to B83 and B90.
3. Crocodile (West) and Marico: Major rivers include the Crocodile (West) and Marico	Tertiary drainage regions A10, A21 to A24, A31, A32 and quaternary drainage region D41A.
4. Olifants: Major rivers include the Elands, Wilge, Steelpoort and Olifants	Tertiary drainage regions B11, B12, B20, B31, B32, B41, B42, B51, B52, B60 and B71 to B73.
5. Inkomati: Major rivers include the Nwanedzi, Sabie, Crocodile (East) and Komati	Primary drainage region X.
6. Usutu to Mhlatuze: Major rivers include the Usutu, Pongola, Mhlatuze, Mfolozi and Mkuze	Primary drainage region W.
7. Thukela: Major river is the Thukela	Primary drainage region V.
8. Upper Vaal: Major rivers include the Wilge, Liebenbergsvlei and Vaal	Tertiary drainage regions C11 to C13, C21 to C23, and C81 to C83.
9. Middle Vaal: Major rivers include the Mooi, Vet and Vaal	Tertiary drainage regions C24, C25, C41 to C43, C60 and C70.
10. Lower Vaal: Major rivers include the Harts, Molopa and Vaal	Tertiary drainage regions C31 to C33, C91, C92 (excluding quaternary catchment C92C), D41 (excluding quaternary catchment D41A), and quaternary catchments D73A and portions of D42C, D42D, D73B, D73C, D73D and D73E. The western boundary of this area runs from the confluence of the Kuruman River with the Molopo River along the watershed between quaternary catchments D42C and D42D until it meets the boundary of the Kalahari East Water Board. The Water Management Area boundary then follows this Water Board boundary to a point, west of the Langberge, 19 kilometres west of Beeshoek, near Postmasburg. The Water Management Area boundary then runs South East to meet the watershed between quaternary catchments D73A and D73B. The boundary then follows this watershed, and that between D73A and D71B, until it meets the watershed of tertiary catchment C92.
11. Mvoti to Umzimkulu: Major rivers include the Mvoti, Umgeni, Umkomazi and Umzimkulu	Primary drainage region U and tertiary drainage regions T40, T51 and T52.
12. Mzimvubu to Keiskamma: Major rivers include the Mzimvubu, Mtata, Mbashe, Buffalo, Nahoon, Groot Kei and Keiskamma	Primary drainage regions R and S, and also tertiary drainage regions T11 to T13, T20, T31 to T36, T60, T70, T80 and T90.
13. Upper Orange: Major rivers include the Modder, Riet, Caledon and Orange	Tertiary drainage regions C51, C52, D11 to D18, D21 to D24, D31, D32, D34 and D35.
14. Lower Orange: Major rivers include the Ongers, Hartbees and Orange	Primary drainage region F (excluding tertiary drainage region F60), tertiary drainage regions D33, D42 (excluding portions of quaternary catchments D42C and D42D), D51 to D58, D61, D62, D71 to D73 (excluding quaternary catchment D73A and portions of D73B, D73C, D73D and D73E), D81, D82, and quaternary catchment C92C.
15. Fish to Tsitsikamma: Major rivers include the Fish, Kowie, Boesmans, Sundays, Gamtoos, Kromme, Tsitsikamma and Groot	Primary drainage regions L, M, N, P, Q and tertiary drainage regions K80 and K90.
16. Gouritz: Major rivers include the Gouritz, Olifants, Kamanassie, Gamka, Buffels, Touws, Goukou and Duiwenhoks	Primary drainage region J and tertiary drainage regions H80, H90, K10 to K70.
17. Olifants/Doorn: Major rivers include the Olifants, Doorn, Krom, Sand, and Sout	Primary drainage region E and tertiary drainage regions G30 and F60.
18. Breede: Major rivers include the Breede, Sonderend, Sout, Bot and Palmiet	Tertiary drainage regions G40 (excluding quaternary catchment G40A), G50, and H10 to H70.
19. Berg: Major rivers include the Berg, Diep and Steenbras	Tertiary drainage regions G10, G21, and G22 and quaternary catchment G40A with the northern boundary following the watershed between tertiary drainage regions G10 and G30 up to the town of Aurora. From Aurora the boundary runs directly to the coast in a westerly direction.

Some minor changes to the water management areas have been proposed to facilitate effective management of water resources - see Part 5 of Chapter 3. The proposed new boundary descriptions are shown in Table E.2. Details of the changes, which are in the Upper Orange, Lower Orange, Lower Vaal and Olifants/Doorn water management areas, are described in Table E.3. The amended boundaries will be established when the NWRS is established.

Table E.2: Revised water management area boundary descriptions

Water Management Area (number and current name)	Boundary Description
1. Limpopo: Major rivers include the Limpopo, Matlabas, Mokolo, Lephakala, Mogalakwena, Sand and Nzehele	Tertiary drainage regions A41, A42, A50, A61 to A63, A71, A72 and A80.
2. Luvuvhu and Letaba: Major rivers include the Mutale, Luvuvhu and Letaba	Tertiary drainage regions A91, A92, B81 to B83 and B90.
3. Crocodile (West) and Marico: Major rivers include the Crocodile (West) and Marico	Tertiary drainage regions A10, A21 to A24, A31, A32 and quaternary drainage region D41A.
4. Olifants: Major rivers include the Elands, Wilge, Steelpoort and Olifants	Tertiary drainage regions B11, B12, B20, B31, B32, B41, B42, B51, B52, B60 and B71 to B73.
5. Inkomati: Major rivers include the Nwanedzi, Sabie, Crocodile (East) and Komati	Primary drainage region X.
6. Usutu to Mhlatuze: Major rivers include the Usutu, Pongola, Mhlatuze, Mfolozi and Mkuze	Primary drainage region W.
7. Thukela: Major river is the Thukela	Primary drainage region V.
8. Upper Vaal: Major rivers include the Wilge, Liebenbergsvlei and Vaal	Tertiary drainage regions C11 to C13, C21 to C23, and C81 to C83.
9. Middle Vaal: Major rivers include the Mooi, Vet and Vaal	Tertiary drainage regions C24, C25, C41 to C43, C60 and C70.
10. Lower Vaal: Major rivers include the Harts, Molopo and Vaal	Tertiary drainage regions C31 to C33, C91, C92 (excluding the lower portions of quaternary catchments C92B and C92C), D41 (excluding quaternary catchment D41A), and quaternary catchments D73A and portions of D42C, D42D, D73B, D73C, D73D and D73E. The western boundary runs from the border between South Africa and Botswana along the boundary of the Kalahari East Water User Association (WUA). It follows the boundary of the mentioned WUA in a westerly direction to a point, west of the Langberge, 19 kilometres west of Beeshoek, near Postmasburg. The Water Management Area boundary then runs South East to meet the watershed between quaternary catchments D73A and D73B. The boundary then follows this watershed and that between D73A and D71B, until it meets the boundary of the Hay district. It follows this boundary until it meets the watershed between D71B and C92C. The Water Management Area boundary continues along this watershed until it meets the boundary of the Orange Vaal Water User Association. It continues south-easterly on this boundary until it meets the watershed between C92B and C51M where it follows this watershed and that between C92B and C51L. Thereafter it follows the watershed between C51L and C91E. It continues on this watershed until it reaches the farm boundary of Wolwe Dam 87. The Water Management Area boundary then follows the mentioned farm boundary up to the farm boundary of Vaalboschhoek 85. It follows successive farm boundaries as they meet, progressively moving in a westerly direction, namely: Weltevrede 117, Vaalpan 118, Koppiesdam 119, Spijt Fontein 122, Kareebosch 130, Osfontein 121, Benaauwheidsfontein 442, Olifantskop 196, Sussana 197, and Olifantsdam 170. The Water Management Area boundary then follows the eastern boundary of Olifantsdam 170 in a northerly direction to include the farm Olifantsrug 293 until it meets the watershed between C91E and C52L. Hereafter, the Water Management Area boundary follows the boundaries of the drainage regions as mentioned initially in this description.
11. Mvoti to Umzimkulu: Major rivers include the Mvoti, Umgeni, Umkomazi and Umzimkulu	Primary drainage region U and tertiary drainage regions T40, T51 and T52.
12. Mzimvubu to Keiskamma: Major rivers include the Mzimvubu, Mtata, Mbashe, Buffalo, Nahoon, Groot Kei and Keiskamma	Primary drainage regions R and S, and also tertiary drainage regions T11 to T13, T20, T31 to T36, T60, T70, T80 and T90.
13. Upper Orange: Major rivers include the Modder, Riet, Caledon and Orange	Tertiary drainage regions C51, C52, D11 to D18, D21 to D24, D31, D32, D33 (noting that the lower portion of quaternary catchment D33K is excluded where the Water Management Area boundary follows the boundary of the Orange Vaal WUA), D34 and D35.

Table E.2 continued: Revised water management area boundary descriptions

Water Management Area (number and current name)	Boundary Description
14. Lower Orange: Major rivers include the Ongers, Hartbees and Orange	Primary drainage region F (excluding quaternary catchments F50D, F60B, F60C, F60D and F60E), tertiary drainage region D42 (excluding portions of quaternary catchments D42C and D42D), D51 to D58, D61, D62, D71 to D73 (excluding quaternary catchment D73A and portions of D73B, D73C, D73D and D73E), D81, D82. In the area of the confluence of the Vaal and Orange Rivers the Water Management Area boundary follows the boundary of the Orange Vaal Water User Association until it meets the boundary of Water Management Area 10. Hence, the lower portions of quaternary catchments C92B and C92C are included in this Water Management Area.
15. Fish to Tsitsikamma: Major rivers include the Fish, Kowie, Boesmans, Sundays, Gamtoos, Kromme, Tsitsikamma and Groot	Primary drainage regions L, M, N, P, Q and tertiary drainage regions K80 and K90.
16. Gouritz: Major rivers include the Gouritz, Olifants, Kamanassie, Gamka, Buffels, Touws, Goukou and Duiwenhoks	Primary drainage region J and tertiary drainage regions H80, H90, K10 to K70.
17. Olifants/Doorn: Major rivers include the Olifants, Doorn, Krom, Sand, and Sout	Primary drainage region E and tertiary drainage regions G30 and F60 (excluding quaternary catchment F60A) and quaternary catchment F50D.
18. Breede: Major rivers include the Breede, Sonderend, Sout, Bot and Palmiet	Tertiary drainage regions G40 (excluding quaternary catchment G40A), G50, and H10 to H70.
19. Berg: Major rivers include the Berg, Diep and Steenbras	Tertiary drainage regions G10, G21, and G22 and quaternary catchment G40A with the northern boundary following the watershed between tertiary drainage regions G10 and G30 up to the town of Aurora. From Aurora the boundary runs directly to the coast in a westerly direction.

Table E.3: Details of amendments to water management area boundaries

Water Management Area Boundary	Proposed Boundary Amendment
Lower Orange and Olifants /Doorn	Quaternary catchment F50D is moved from Lower Orange to Olifants/Doorn, and F60A is moved from Olifants/Doorn to Lower Orange.
Lower Orange and Upper Orange	Tertiary catchment D33 moves from the Lower Orange to the Upper Orange.
Lower Orange and Lower Vaal	The boundary of the Lower Orange moves to incorporate the entire area of the Orange Vaal Water User Association.
Lower Orange and Lower Vaal	Following from the Orange Vaal Water User Association boundary, the large part of quaternary catchment C92C moves into the Lower Vaal. The boundary follows the Water User Association boundary, the quaternary catchment boundary and the Vaal Gamagara supply boundary.
Lower Orange and Lower Vaal	The boundary follows the Kalahari East Water User Association boundary until it meets with the northern border of South Africa with Botswana, and then follows this border west.
Lower Vaal and Upper Orange	The boundary follows a combination of drainage region boundaries, the boundaries of groundwater aquifers and farm boundaries.

Note: The boundary changes described above were made after the balances between water availability and water requirements for water management areas and sub-divisions of water management areas, described in Chapter 2 and Appendix D, were calculated. The boundary changes have insignificant impact on the statistics presented, and any discrepancies will be corrected at the first revision of the NWRS.