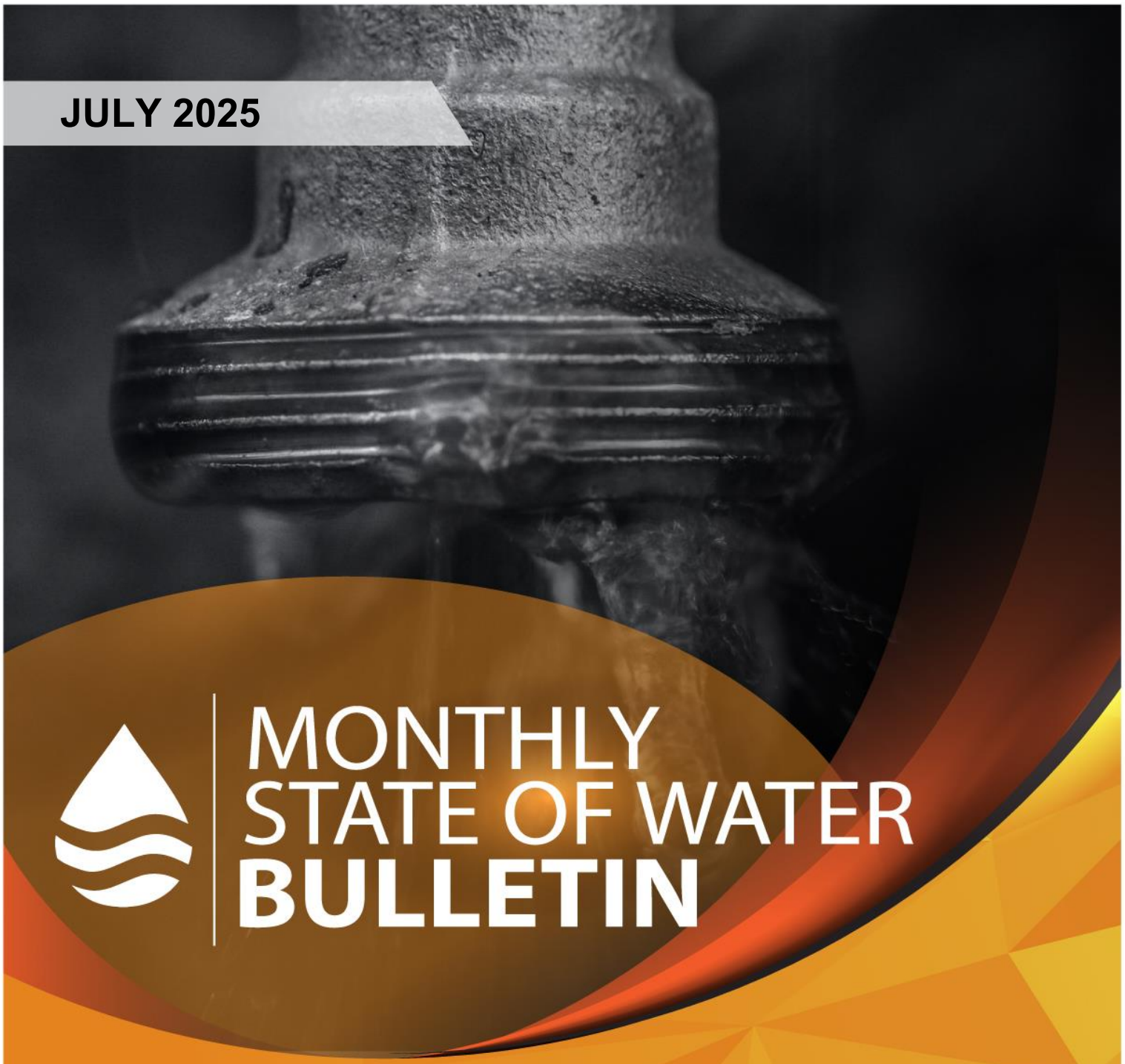
JULY 2025



MONTHLY STATE OF WATER BULLETIN

WATER IS LIFE - SANITATION IS DIGNITY

water & sanitation

Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

2030 NDP

Overview

South Africa experiences significant weather variations between winter and summer owing to its diverse geography and subtropical location. The country exhibits a combination of summer and winter rainfall zones, with the Western Cape predominantly receiving rainfall during winter, while the remainder of the country experiences summer rainfall. Temperatures also vary significantly, with the interior experiencing cold, arid winters and hot, humid summers, whereas coastal areas exhibit more temperate conditions.

SAWS has reported that the El Niño-Southern Oscillation (ENSO) is currently in a neutral state and is predicted to be in a neutral state for the foreseeable future. However, ENSO is known to have limited influence in South Africa during the winter seasons. The most recent climate report from SAWS indicates below-normal rainfall during winter and early spring in the south-western regions of the country, whereas the eastern coastal areas are anticipated to experience above-normal rainfall. The expected above-normal rainfall in early and mid-spring is unlikely to improve surface water storage in the eastern coastal region due to the forecasted above-average temperatures.

At the end of July 2025, the national dam levels were at 96.7% of FSC, reflecting a 12.2% increase compared to the same period last year, when overall storage was at 84.5% of FSC. At least 88 of the 222 national dams were above 100%, and only one dam was below 10% of FSC. The SPI drought indicator assessed at the end of July 2025 indicates that parts of the Eastern Cape and Mpumalanga provinces experienced severe drought, while moderate drought was observed in parts of Thabo Mofutsanyana DM in North West, ZF Mgcawu in the Northern Cape, City of Cape Town in Western Cape, Ehlanzeni DM in Mpumalanga, Sekhukhune and Capricorn DMs in Limpopo, and Sarah Baartman, Chris Hani, and Alfred Nzo DMs in the Eastern Cape.

The water quality in Crocodile-West River Catchment of North West Province has long been indicative of the impact of human activities. The macroinvertebrate conditions in the majority of the upper sub-catchments of the Crocodile-West River are classified as either largely modified (D) or critically modified (F), particularly in areas that are highly developed and located in urban areas. The ecological status trends from 2017 to 2023 suggest that the majority of sites are undergoing improvement, a success that is primarily attributed to improved catchment management strategies and enforcement practices. These strategies involve the implementation of citizen science activities, particularly in the upper parts of the catchment.

Rainfall

In winter and early spring, the areas that receive significant rainfall are limited to the southwestern parts of the country and the southern and eastern coastal areas. The weekly rainfall for July 2025 is presented in Figure 1. Significant rainfall was recorded in some parts of the country during the first to fourth week of July, with parts of the KwaZulu Natal and Western Cape provinces receiving over 100 mm.

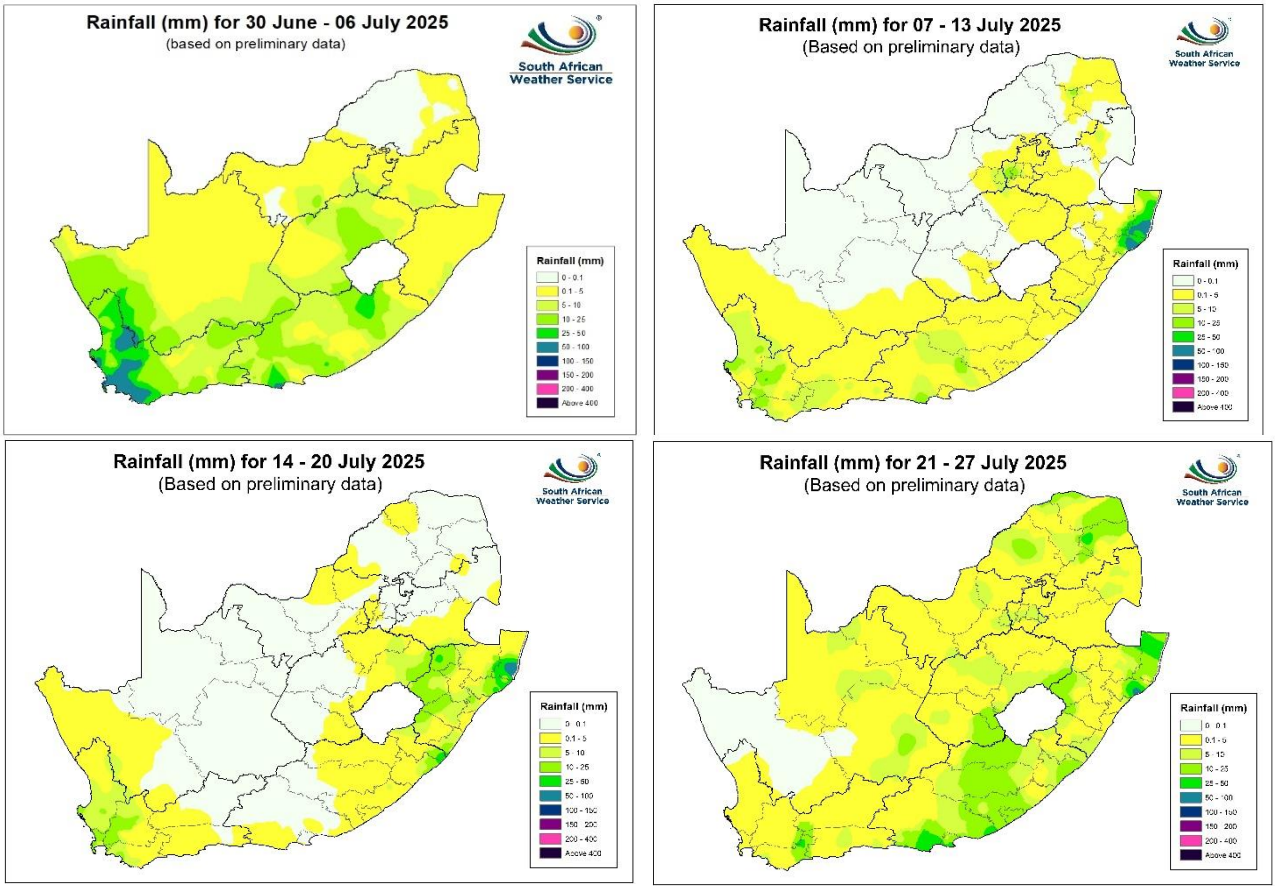


Figure 1: Weekly rainfall distribution for July 2025

Weather Forecast and Early Warning

The weather has a significant impact on water resources. Rising temperatures increase evaporation and reduces water availability, while extreme weather events, such as droughts and floods, exacerbate water scarcity and pollution, respectively. Changes in precipitation patterns also affect water availability.

SAWS (2025) indicated that El Niño-Southern Oscillation (ENSO) is firmly in a neutral state and is predicted to be in a neutral state for the foreseeable future. ENSO, however, has limited influence on South Africa during the winter seasons.

During winter and early spring, the areas that receive significant seasonal rainfall are limited to the southwestern parts of the country and the southern and eastern coastal areas. SAWS (2025) rainfall forecast showed that during mid-winter, the southwest and eastern coastal areas are expected to

receive above-normal rainfall; however, during late winter and early spring, only the eastern coastal areas expected rainfall remains above-normal, with the southwest's outlook changing to below-normal rainfall (Figure 2).

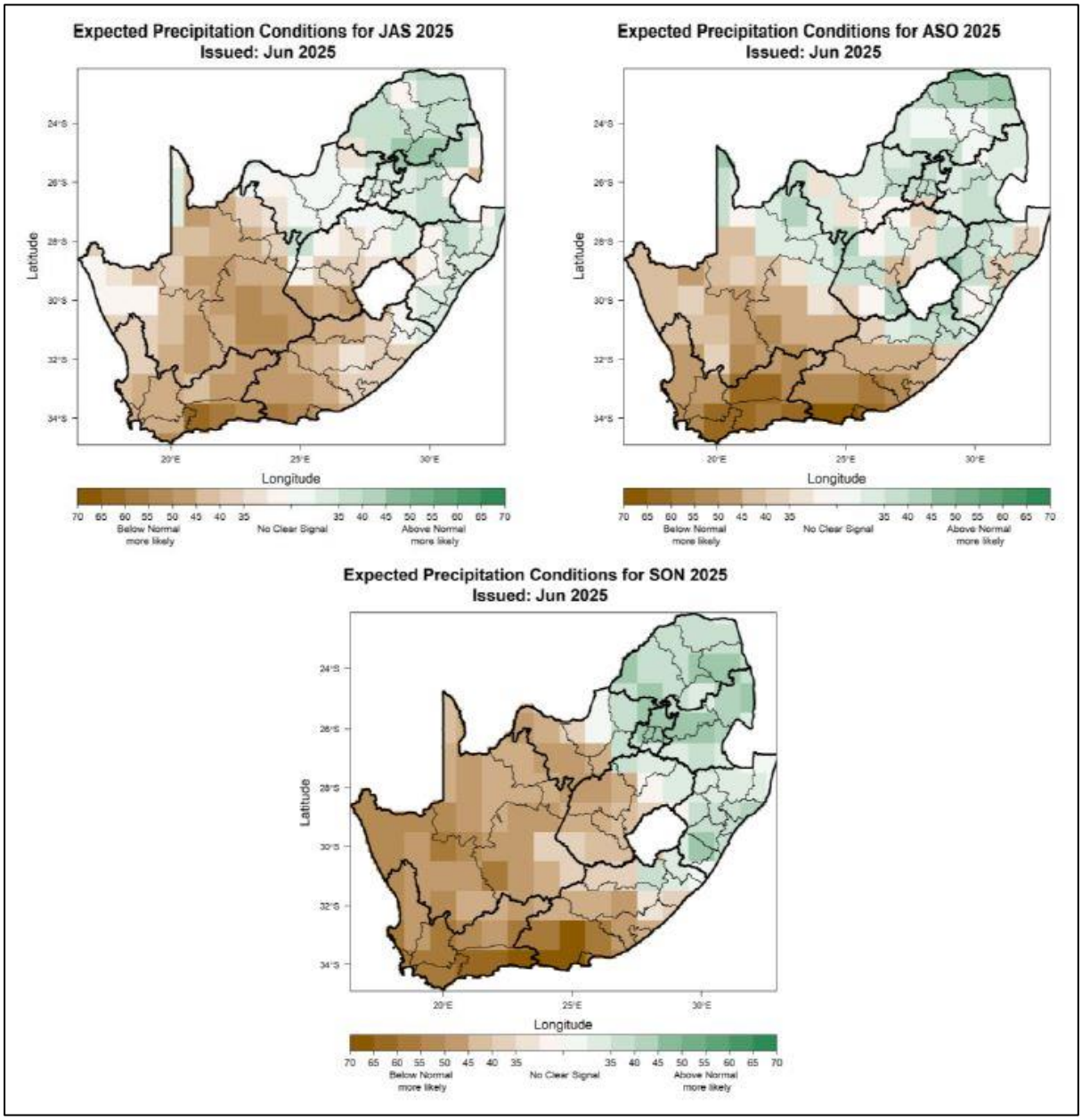


Figure 2: July-August-September 2025 (top-left), August-September-October 2025 (Top right), September-October-November 2025 (bottom) seasonal precipitation prediction (Source: SAWS, 2025).

The latest climate report (SAWS,2025), also stated that the minimum and maximum temperatures are expected to remain predominantly above-normal for most parts of the country during the late winter and spring seasons (Figure 3).

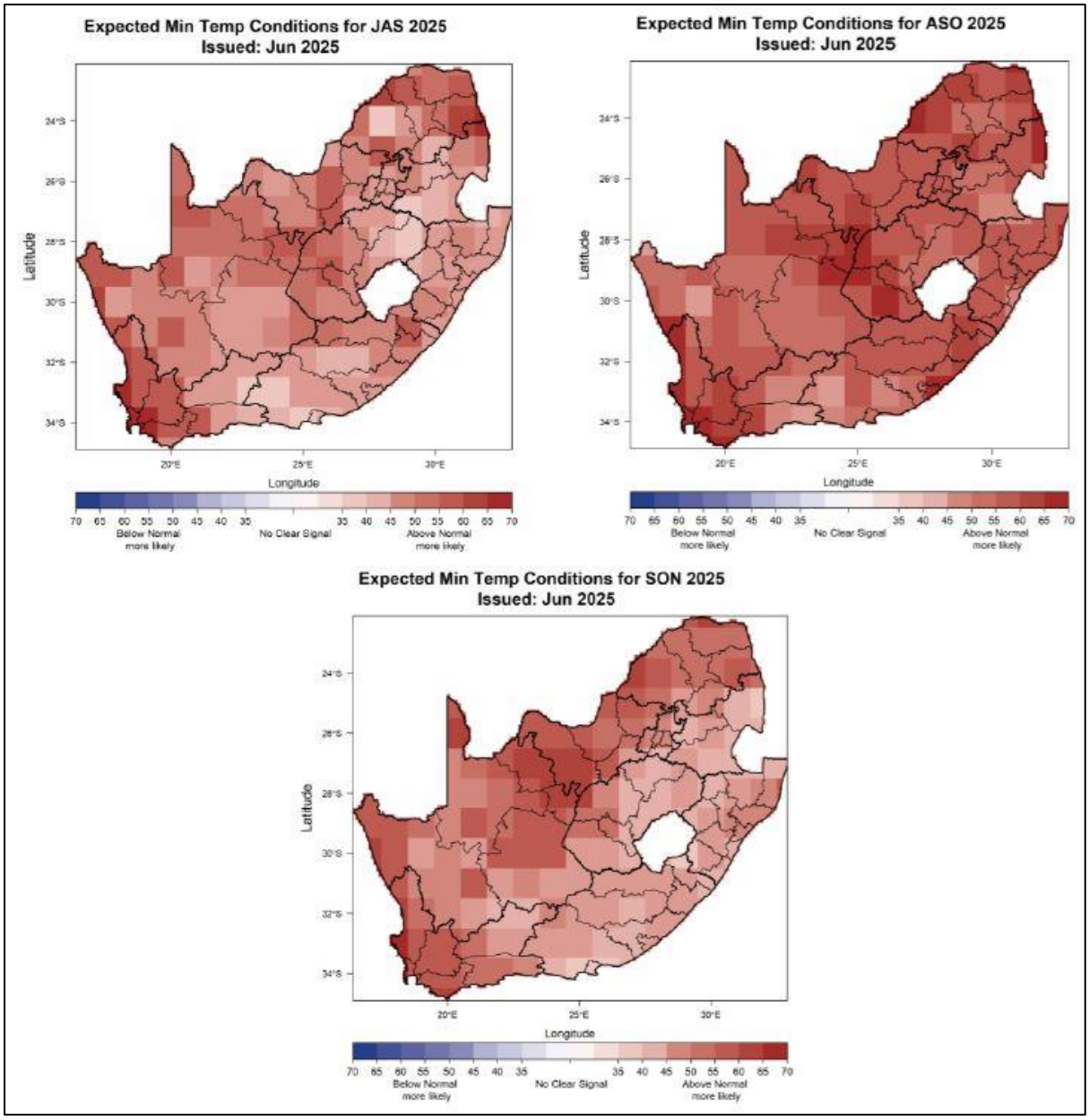


Figure 3: July-August-September 2025 (top-left), August-September-October 2025 (Top right), September-October-November 2025 (bottom) seasonal minimum temperature prediction (Source: SAWS, 2025).

"The anticipated above-normal rainfall during the early- and mid-spring seasons is unlikely to benefit water reservoirs in the eastern coastal areas due to, among others, the expected above-normal minimum and maximum temperatures, which can result in water loses through evapotranspiration processes. Furthermore, the expected mostly above normal minimum and maximum temperatures across the country are likely to result in increased demand for cooling during the spring season." SAWS (2025)

National Dam Storage

The national water storage trends for the current hydrological year (2024/25) against the past four hydrological years are graphically presented in Figure 4. The graph shows that at the end of July 2025, the national dam levels were 96.7% of Full Supply Capacity (FSC). The current levels have been stable over the last seven weeks. Moreover, this level is 12.2% higher than last year same time, when the overall storage level was at 84.5% of FSC.

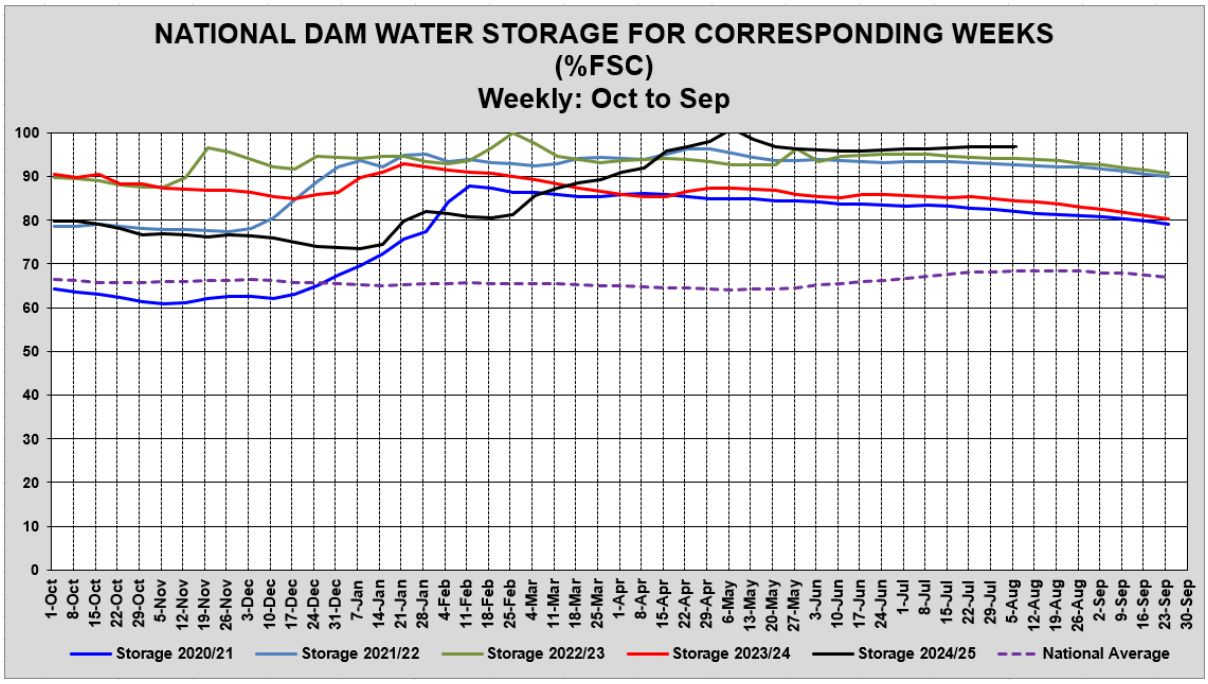


Figure 4: Weekly National Dam Storage at the end of July 2025, for five hydrological years.

Table 1 and Figure 5 show a summary of the status of **222** South African dams and the Kingdoms of Eswatini and Lesotho. Based on 28 July 2025 dam data, the Western Cape is the only province with an overall surface water storage below 80%. However, the winter rainfall region of the province was at 80.2% of FSC. Notably, at least 88 of 222 national dams were above 100% of FSC, only one (<1%) dam was below 10% of FSC (critically low). Also remarkable are the five dams from Gauteng, which are all above 100% of FSC.

Table 1: National Surface Water Storage – 28 July 2025.

Provinces/ Countries sharing Water Resources with RSA	FSC million m^3	Total Number of Dams	Number of Dams per FSC category				% of Full capacity		
			<10%	10 - <50 (% of FSC)	50 - <100 (% of FSC)	>=100 (% of FSC)	Last Year 28/07/2024	Last Week 21/07/2025	This Week 28/07/2025
Kingdom of Eswatini	333.75	1			1		95.9	97.5	97.1 ↓
Eastern Cape	1 727.7	46		4	26	16	81.6	81.9	82.0 ↑
Free State	15 656.9	21			14	7	82.7	101	101.0 =
Gauteng	128.08	5			1	4	87.1	100.1	99.0 ↓
KwaZulu-Natal	4 909.66	19			13	6	88.2	97	96.8 ↓
Kingdom of Lesotho	2 362.63	2			1	1	84	95.8	95.3 ↓
Limpopo	1 484.64	29	1	2	13	13	78.9	86.6	86.4 ↓
Mpumalanga	2 538.20	22			13	9	91.8	98.7	98.5 ↓
Northern Cape	146.33	5			3	2	83.7	96.2	95.3 ↓
North West	866.23	28			7	21	71.8	101.4	101.1 ↓
Western Cape - Other Rainfall	269.55	22		5	14	3	95.4	71.5	71.2 ↓
Western Cape - Winter Rainfall	1 596.80	22		1	15	6	91.4	79.9	80.2 ↑
Western Cape - Total	1 866.35	44	0	6	29	9	91.9	78.7	78.9 ↑
Grand Total:	**32 020.47**	**222**	**1**	**12**	**121**	**88**	**84.5**	**96.8**	**96.7 ↓**

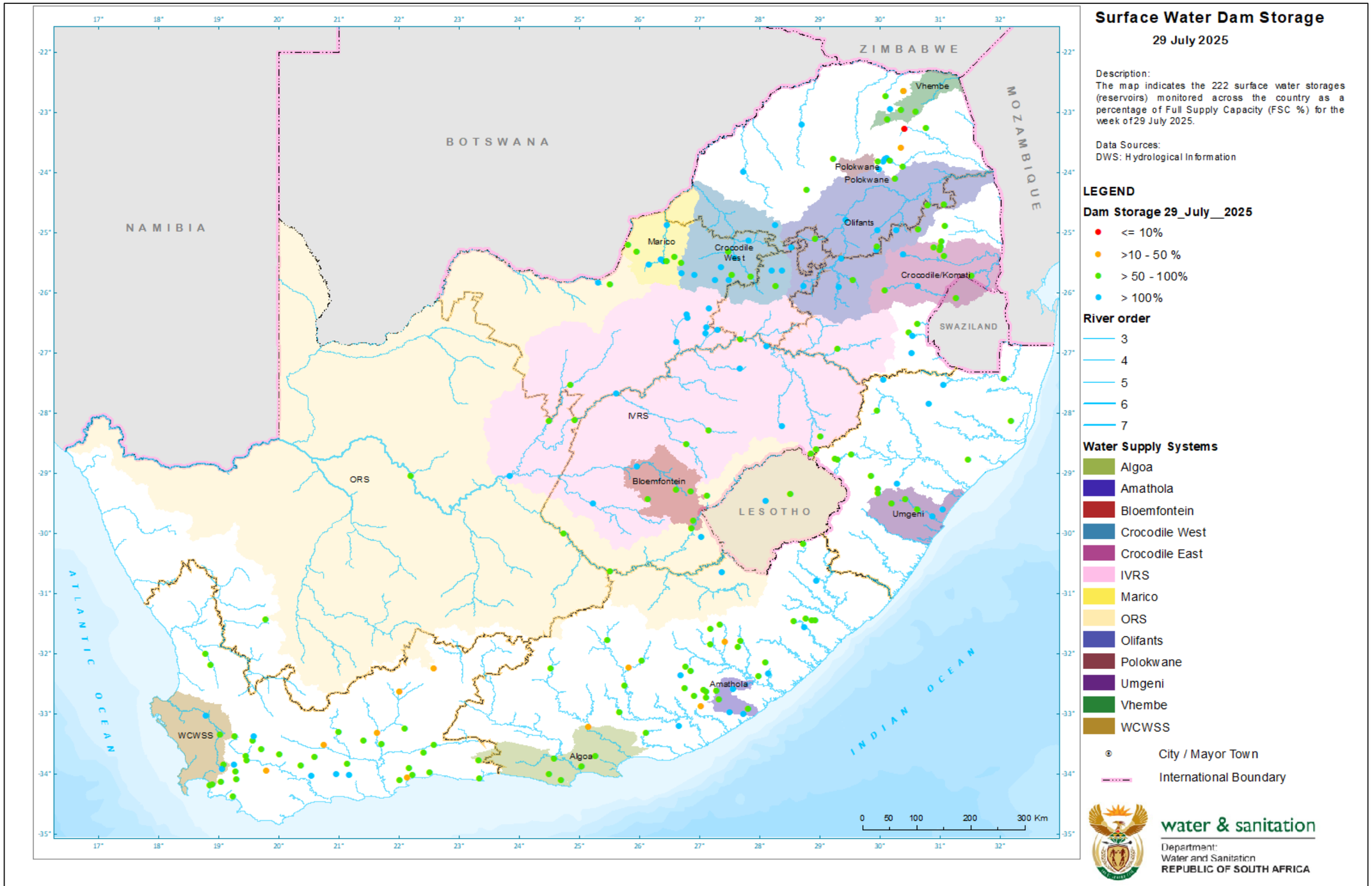


Figure 5: Surface Water Storage Levels – July 2025

The comparison of the storage levels per province (plus the Kingdoms of Eswatini and Lesotho) for July 2024 and July 2025 is graphically presented in Figure 6. Western Cape showed a decline in dam storage by -13% of FSC, while the North West is showing the most significant increase at +29.3%, year-on-year. The increase in the overall dam storage indicates higher-than-normal stream flows, as a result of above-normal rainfall received during the past months. The other notable increases were observed in Free State (+18.3%), Northern Cape (+11.6%), and Gauteng (+11.9%). The Kingdoms of Eswatini and Lesotho experienced increases of 1.2% and 11.9%, respectively, compared to the previous year.

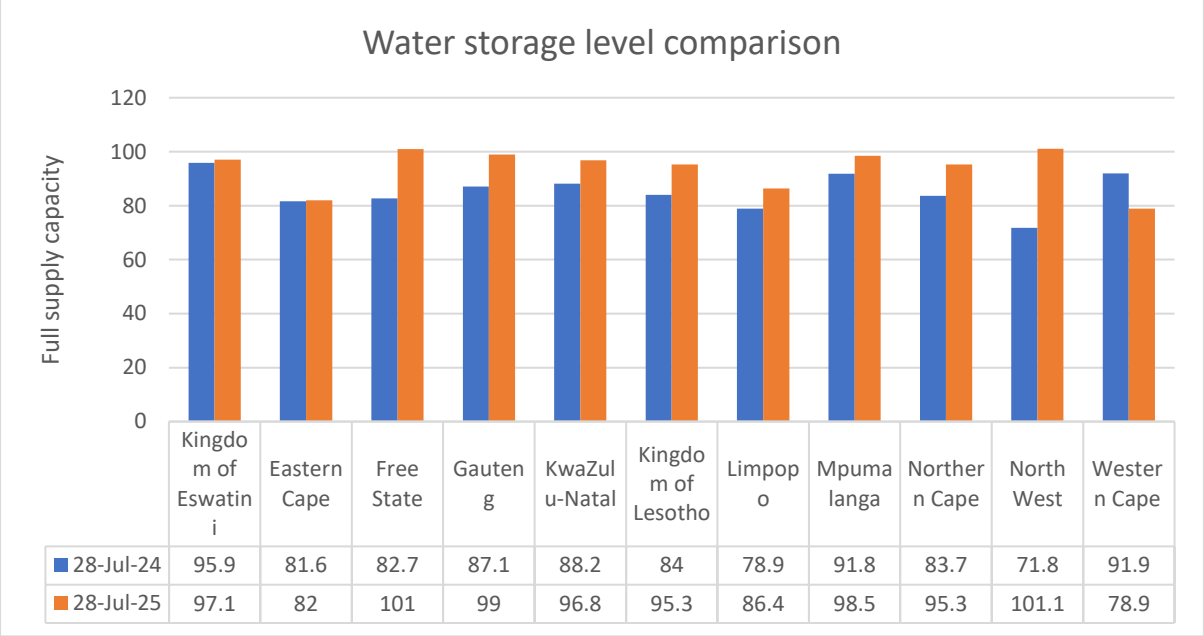


Figure 6: Water Storage Levels July 2024 vs. July 2025

The comparison between July 2024 and July 2025 of the country's five largest dam storage is presented in Table 2.

Table 2: Storage Levels comparison for the Five Largest storage dams (by volume).

Reservoir	River	Province	Full Supply Capacity (Mm^3)	28 July 2024 (% FSC)	28 July 2025 (% FSC)	Difference (%)
Gariep Dam	Orange River	Free State	4 903.45	79.3	99.4	+20.1
Vanderkloof Dam	Orange River	Free State & Northern Cape	3 136.93	99.2	99.3	+0.1
Sterkfontein Dam	Nuwejaarspruit River	Free State	2 616.90	98.3	99.4	+1.1
Vaal Dam	Vaal River	Free State	2 560.97	48.9	106.5	+57.6
Pongolapoort Dam	Phongolo River	KwaZulu-Natal	2 395.24	85.1	95.7	+10.6

The Vaal Dam, one of the country's largest dams, located between Gauteng and the Free State, dropped to 24.1% in January 2025, nearing 18% critical levels, compelling water release from Sterkfontein Dam. At the end of July 2025, the Vaal dam was at 106.5% FSC, which is over 50% higher than last year.

Another year-on-year storage improvement was observed in the critical level at the Middle-Letaba Dam in Limpopo, which rose 5.3% to reach 6.5% of FSC at the end of July 2025, when compared to the previous year (Table 3).

Table 3: Dam currently below 10% of FSC compared to last year

Reservoir	River	Province	Full Supply Capacity (Mm^3)	28 July 2024 % FSC)	28 July 2025 (% FSC)	Difference (%)
Middel-Letaba Dam	Middel-Letaba River	Limpopo	171.93	1.2	6.5	+5.3

Figure 7 presents the 24-month Standardised Precipitation Index (SPI) analysed at the end of July 2025. The map shows that some parts of Eastern Cape (Sarah Baartman DM) and Mpumalanga (Ehlanzeni DM) provinces experienced severe drought in the last 24 months. Moreover, a few District Municipalities (DMs) indicated a moderate drought status. These include parts of Thabo Mofutsanyana DM in North West, ZF Mgcawu in the Northern Cape, City of Cape Town in Western Cape, Ehlanzeni DM in Mpumalanga, Sekhukhune and Capricorn DMs in Limpopo, and Sarah Baartman, Chris Hani, and Alfred Nzo DMs in the Eastern Cape.

District Municipalities

The year-on-year comparison of water storage levels per district municipality is presented in Figure 8. Capricon DM and Ngaka Modiri Molema DM experienced the largest increase (>60%) in dam storage levels in July 2025 compared to the same time last year. Two other district municipalities indicated a significant increase (>40%) in dam storage over the last year. The Dr Ruth Segomotsi Mompati and Overberg Coast district municipalities experienced significant declines (>-20%) in dam levels.

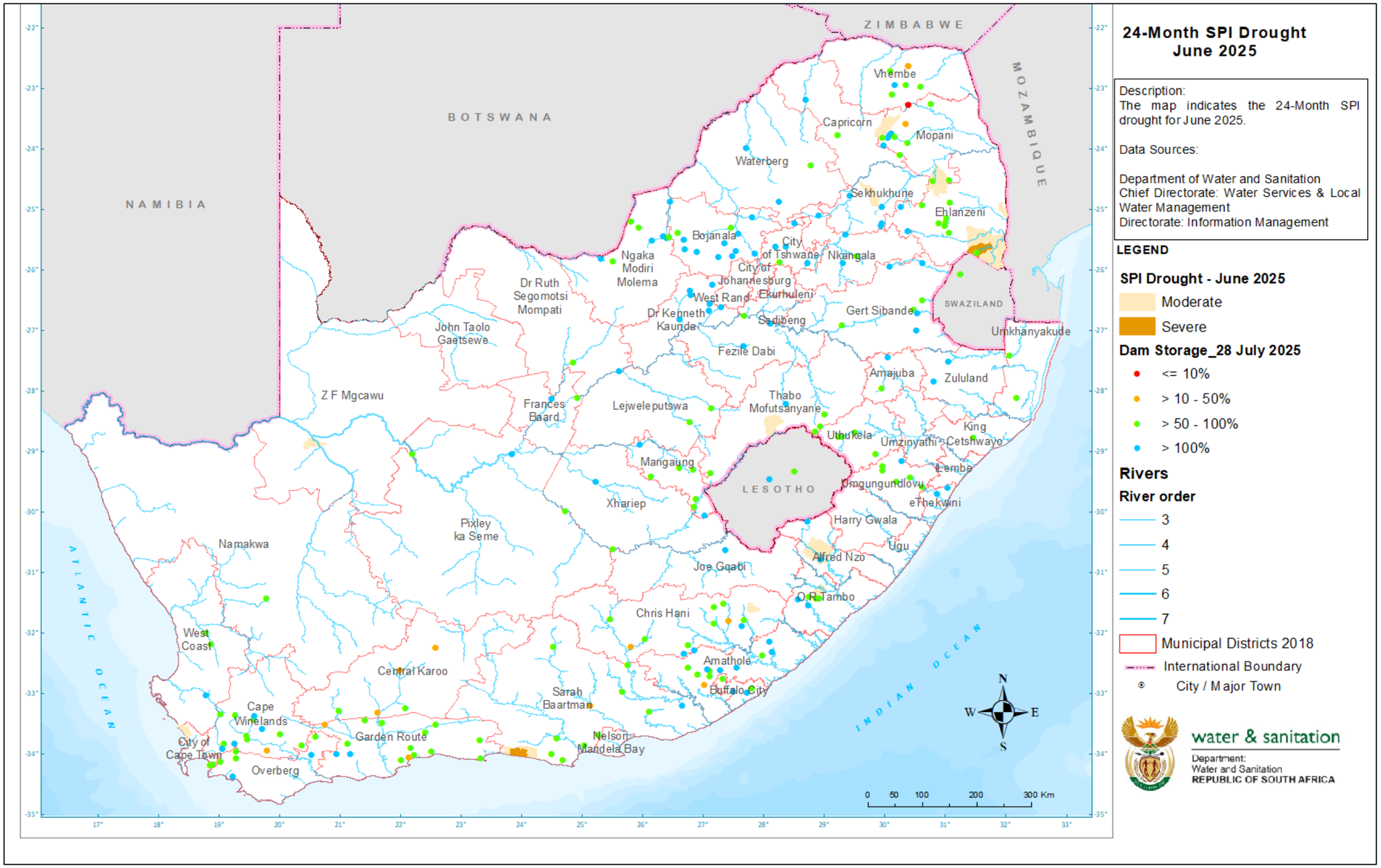


Figure 7: 24-Month Standardised Precipitation Index (SPI) – June 2025, including dam levels - July 2025.

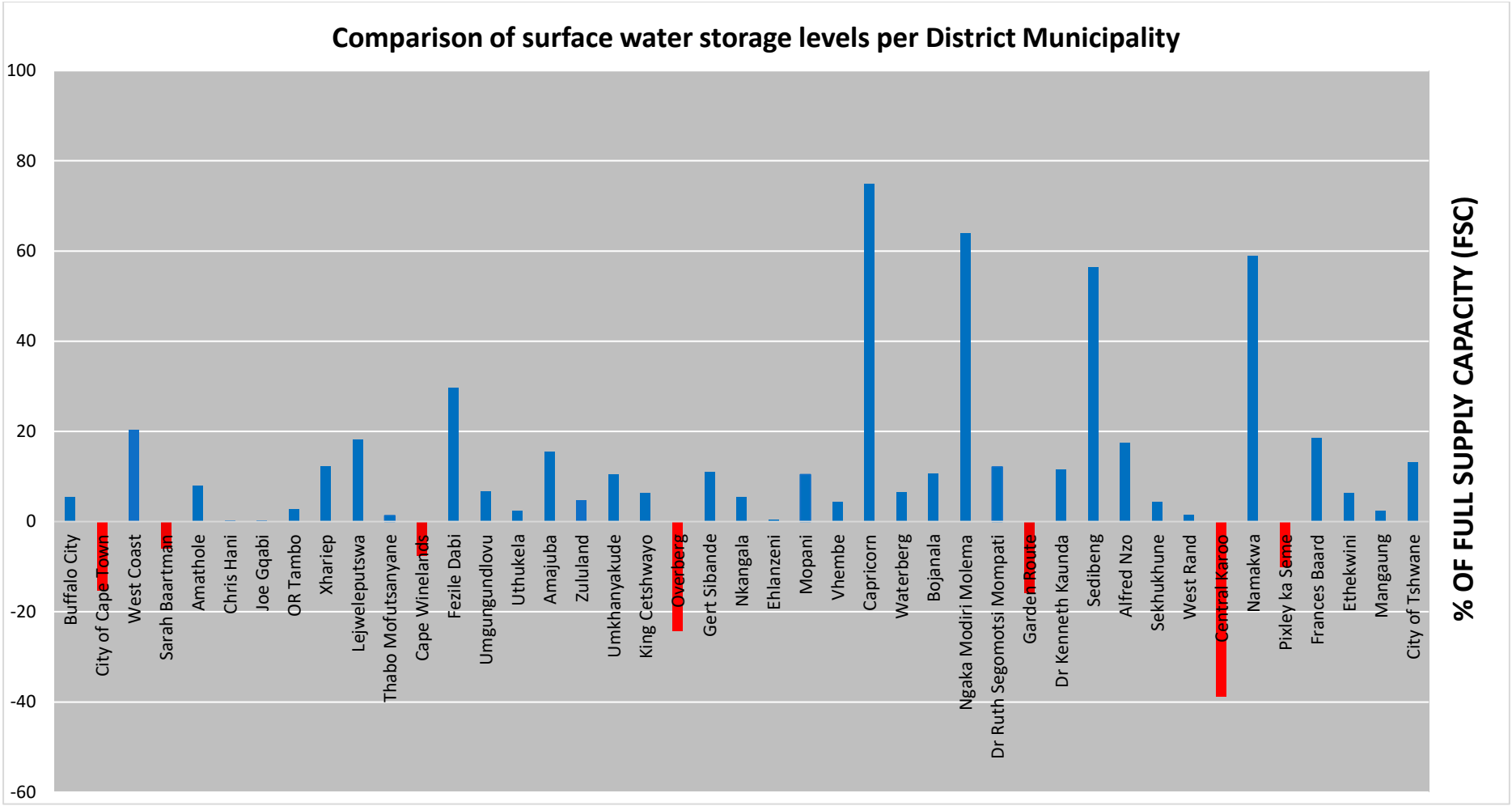


Figure 8: Comparison of water storage levels per District Municipality July 2024 vs July 2025

Water Supply Restrictions

The water supply systems and their respective restrictions are given in Table 4. Due to infrastructure limitations, permanent restrictions are applicable for the Polokwane and Bloemfontein Water Supply Systems. The National Water Supply Systems' dam storage levels are presented in Table 5. The Integrated Vaal River System (IVRS) is the largest and most economically significant system, with over 14 dams totalling over 10 546 Mm^3. The second biggest system is the Orange with only two big dams, totalling over 7 996 Mm^3.

Table 4: Water Supply Systems with Restrictions

System Name	Areas	Water Users	% Restrictions	Gazette Information	Next Review
Algoa WSS	Kromme subsystem	NMBM & Kouga LM Irrigation	23% domestic & industrial 43% irrigation	Recommended but not gazetted	Nov' 2025
Mangaung WSS	Caledon-Modder	Mangaung Metro	25% domestic & industrial when below 95%	13 Sep' 2024 Gazette no.5200	May 2025
Liebensbergvlei River	Run-off River abstractions Free State towns and irrigation	Towns of Bethlehem, Reitz, Tweeling within Dihlabeng, Mafube and Nketoana Local Municipalities	Irrigation users to abstract water on an alternative day basis Municipalities to use water sparingly	20 Sep' 2024 Gazette no.5223	Once off until the end of the LHWP tunnel shutdown for the planned maintenance
Middle Letaba/ Nsami	Middle Letaba/ Nsami	Irrigation Mopani Municipality	100% irrigation 25% domestic	28 Jun' 2024	May 2025
Mutshedzi Dam	Mutshedzi Dam	Makhado Municipality	35% domestic		May 2025
Nzhelele	Nzhelele	Nzhelele Government Irrigation Scheme Nzhelele Regional Scheme	20% domestic 20% irrigation	28 Jun' 2024	May 2025
Nwanedi/ Luphephe	Nwanedi/ Luphephe	Mutale Local Municipality Irrigation	20% D&I 45% irrigation	28 Jun' 2024	May 2025
Polokwane Water Supply System Letaba System	Seshego, Mashashane, Houtrivier and Chuniespoort Dams Ebenezer and Groot Letaba System	Capricorn District, Polokwane Local Municipality Groot Letaba Water Users Association, Mopani Municipality	30% domestic & industrial water uses 27% agricultural use	28 Jun' 2024	May 2025

Table 5: Water Supply Systems storage levels July comparisons

Water Supply Systems/ Clusters	Capacity in 10^6m^3	28 July 2024 (% FSC)	21 July 2025 (% FSC)	28 July 2025 (% FSC)	System Description
Algoa System	282	76.9	68.4	68.2	5 dams serve the Nelson Mandela Bay Metro, Sarah Baartman (SB) DM, Kouga LM and Gamtoos Irrigation: 1. Kromrivier Dam 2. Impofu Dam 3. Kouga Dam 4. Loerie Dam 5. Groendal Dam
Amathole System	241	96.3	100.2	100	6 dams serve Bisho & Buffalo City, East London: 1. Laing Dam 2. Rooikrans Dam 3. Bridle Drift Dam 4. Nahoon Dam 5. Gubu Dam 6. Wriggleswade Dam
Klipplaat System	57	97.1	100	100.2	3 dams serve Queenstown (Chris Hani DM, Enoch Ngijima LM): 1. Boesmanskrantz Dam 2. Waterdown Dam 3. Oxkraal Dam
Butterworth System	14	84.7	100	100	Xilinxa Dam and Gcuwa weirs serve Butterworth
Integrated Vaal River System	10 546	80.7	101.3	101.2	14 dams serve Gauteng, Sasol, and ESKOM: 1. Vaal Dam 2. Grootdraai Dam 3. Sterkfontein Dam 4. Bloemhof Dam 5. Katse Dam 6. Mohale Dam 7. Woodstock Dam 8. Zaaihoek Dam 9. Jericho Dam 10. Westoe Dam 11. Morgenstond Dam 12. Heyshope Dam 13. Nooitgedacht Dam 14. Vygeboom Dam
Luvuvhu	225	96	96.2	95.9	3 dams serve Thohoyandou etc. : 1. Albasini Dam 2. Vondo Dam 3. Nandoni Dam
Bloemfontein	219	85.8	84.5	84.1	4 dams serve Bloemfontein, Botshabelo and Thaba Nchu: 1. Rustfontein Dam 2. Groothoek Dam 3. Welbedacht Dam 4. Knellpoort Dam
Polokwane	254.27	92.9	101.4	101.2	2 dams serve Polokwane 1. Flag Boshielo Dam 2. Ebenezer Dam

Water Supply Systems/ Clusters	Capacity in 10^6m^3	28 July 2024 (% FSC)	21 July 2025 (% FSC)	28 July 2025 (% FSC)	System Description
Crocodile West	444	93.7	99.6	98.7	7 dams serve Tshwane up to Rustenburg: 1. Hartbeespoort Dam 2. Rietvlei Dam 3. Bospoort Dam 4. Roodeplaat Dam 5. Klipvoor Dam 6. Vaalkop Dam 7. Roodekopjes Dam
uMgeni System	923	92.1	98.7	98.2	5 dams serve Ethekwini, iLembe & Msunduzi: 1. Midmar Dam 2. Nagle Dam 3. Albert Falls Dam 4. Inanda Dam 5. Spring Grove Dam
Cape Town System	889	100.7	83.4	83.4	6 dams serve the City of Cape Town: 1. Voelvlei Dam 2. Wemmershoek Dam 3. Berg River Dam 4. Steenbras-Lower Dam 5. Steenbras-Upper Dam 6. Theewaterskloof Dam
Crocodile East	159	95.5	100.2	100.2	Kwena Dam supplies Nelspruit, Kanyamazane, Matsulu, Malelane and Komatipoort areas & Surroundings
Orange	7 996	87.1	99.5	99.3	2 dams service parts of the Free State, Northern and Eastern Cape Provinces: 1. Gariep Dam 2. Vanderkloof Dam
uMhlathuze	301	92.2	98.8	98.5	Goedertrouw Dam supplies Richards Bay, Empangeni Towns, small towns, surrounding rural areas, industries and irrigators, supported by lakes and transfer from Thukela River

Case Study: Crocodile-West Marico Catchment: A Historical Ecological Conditions Overview

Fluctuations in the diversity of the macroinvertebrate community in the Crocodile-West River Catchment of North West Province have long indicated the impact of human activities. In most of the upper sub-catchments of the Crocodile-West River, macroinvertebrate conditions are primarily categorized between ***a largely modified (D) and a critically modified (F) state,*** particularly as they flow through cities and highly developed areas.

A study conducted by Gao *et al*. (2023) revealed an increase in pollution-resistant macroinvertebrates, such as *Chironomidae*, as urban water bodies continue to degrade. This trend signals declining water quality and a reduction in sensitive taxa. Contributing factors include discharges from wastewater treatment facilities, overflowing manholes, and return flows from various sources.

Agricultural activities and industrial effluents contribute to the deterioration of the ecological quality of water resources. This includes rivers such as the Jukskei, Pienaars, Apies, and Hennops, which all drain into the Crocodile River. Figure 9 below illustrates the trends and fluctuations in the ecological condition of macroinvertebrate populations from 2017/2018 to 2022/2023 HYs.

Most sites appear to be in stable condition, a success largely attributed to improved catchment management strategies and enforcement practices. These strategies include the implementation of citizen science activities, particularly in the upper parts of the catchment. This program encourages community involvement in river cleanups and the rehabilitation of riparian areas.

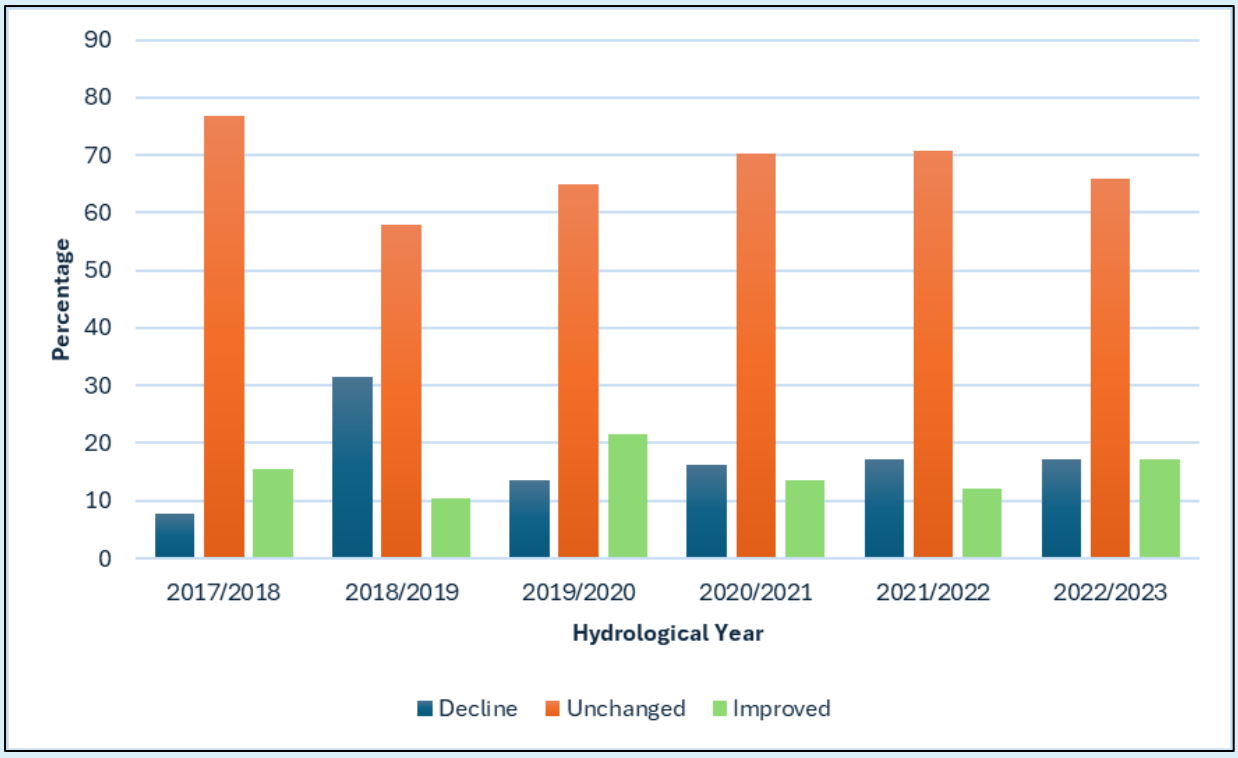


Figure 9: Crocodile-West Marico Catchment Macroinvertebrates Trends from 2017-2023

The sites located in the upper reaches of the catchment area, including the Magalies, Pienaars, Elands, Skeerpoort, and Sterkstroom rivers, generally maintain a better ecological condition. They range from close to natural (B/C) to moderately modified (C) due to limited human interference.

A study conducted by Orozco-González and Ocasio-Torres in 2023 found that river sections located in the upper reaches, within nature reserves or protected areas with minimal human interference, typically have better ecological conditions compared to river stretches that are urbanized, developed, or outside of nature reserve.

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National State of Water Reporting Web page:
https://www.dws.gov.za/Projects/National%20State%20of%20Water%20Report/MonthlyBulletin.aspx

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Glossary

Term	Definition
COL	cut-off low
DM	District Municipality
DWS	Department of Water and Sanitation
ENSO	El Niño-Southern Oscillation
FSC	Full Storage Capacity
IVRS	Integrated Vaal River System
LHDA	Lesotho Highlands Development Authority (LHDA)
SANS:241	South African National Standard for drinking water quality
SAWS	South African Weather Services
SPI	Standardized Precipitation Index. A widely used index to characterise meteorological drought on a range of timescales. On short timescales, the SPI is closely related to soil moisture, while at longer timescales, the SPI can be related to groundwater and reservoir storage
WSS	Water Supply System. A typical town/city water supply system consists of a gravity or pumping-based transmission and distribution system from a local or distant water source, with a needed water treatment system

References

SAWS, 2025. Seasonal Climate Watch: July to Nov 2025 (Issued: 04 July 2025). SAWS, Centurion, South Africa.