**MEDIA STATEMENT**

**Deputy Minister Mahlobo lauds the WRC for its innovative solution**

For immediate release

**13 June 2025**

Deputy Minister David Mahlobo commended the Water Research Commission’s (WRC) ongoing investment and efforts to provide innovative technological solutions to water issues in the country. This follows the launch of the Vortex Settling Basin (VSB) Demonstration in Madungela, Nkandla, KwaZulu-Natal, on Thursday, 12 June 2025.

Deputy Minister Mahlobo was joined by WRC Chief Executive Dr. Jennifer Molwantwa, Umngeni-Uthukela Chief Executive Sandile Mkhize, the Executive Mayor of King Cetshwayo District Municipality, Sikhumbuzo Dlamini, and members of the Nkwanxamalala Tribal Council.

The Deputy Minister was invited to participate in the handover event, marking the official start of the demonstration period for the VSB technology at the Thukela River abstraction works in Middledrift.

A Vortex Settling Basin (VSB) is a type of water treatment system that utilizes a vortex flow pattern to remove sediments, suspended solids, and other pollutants from water. It operates on the principle of centrifugal force, allowing heavier particles to settle at the bottom of the basin while cleaner water is discharged from the top. The VSB effectively removes heavy sediment particles through its vortex action, causing the sediments to settle in a cone shape. These particles can then be extracted by gravity, while the clearer water flows out over a discharge weir.

The VSB has a pump capacity of 8.6 mega-litres per day and will benefit a wide range of stakeholders, particularly those reliant on surface water abstraction for agricultural, municipal, and industrial purposes.

In his keynote address to residents of Madungela, Deputy Minister Mahlobo highlighted the advantages of this technology and how the community would benefit from it.

“This technology will help the municipality with an energy-efficient solution for sediment removal, ensuring a reliable water supply with minimal maintenance. The vortex is at 90% efficiency, which means there will be more water to treat, thus increasing water security in the area. The technology will also ensure good water quality because the turbidity of water will be addressed,” the Deputy Minister announced.

Furthermore, the Deputy Minister assured community members that the municipality has gained a cost-effective technology, to be used also to facilitate more desilting by removing sedimentation in the dams.

The Deputy Minister explained that Madungela was chosen for the demonstration for several reasons, including the large contributing catchment downstream of the existing Spioenkop Dam, resulting in high sediment concentrations; the pump station abstracts raw water directly from the Thukela River and has no gravel trap, and current sediment extrusion is by hydro-cyclones; therefore, a good comparison with VSB performance will be possible.

In concluding his speech, Deputy Minister Mahlobo urged the community to protect the VSB as it will be beneficial to them.

WRC Chief Executive, Dr. Jennifer Molwantwa, remarked that the work done by the commission has important implications, especially for rural communities who will now have access to reliable potable water.

"This kind of work is critically important for the WRC, as it demonstrates our ability to translate theoretical scientific innovations into practical applications—not just at laboratory scale, but also in real-world settings. We are hopeful that this innovation will culminate in an economy where all municipalities and bulk water suppliers recognise and adopt it as a groundbreaking technology that has the potential to significantly improve the efficiency and capacity of water treatment systems across the country—particularly benefiting rural communities, where access to reliable and sustainable water services is often limited,” Dr. Molwantwa pronounced.

**END**

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