

## Positive report from Knysna Action Pollution Committee

Effluent leaving the Knysna Water Treatment Works (WWTW) is now compliant according to the town's Estuary Authorities Pollution Committee. The South African National Parks (SANParks) has led the committee since 2019 in partnership with the Knysna Municipality, Garden Route District Municipality, the Breede-Gouritz Catchment Management Agency (BGCMA) and the Knysna Basin Project. *E.coli* water samples taken at the Waste Water Treatment plant and its outlet showed a steady decline since a reported incident in February 2019.

Park Manager for Knysna, Megan Taplin says 'we are pleased with this progress at the WWTW where *E.coli* levels are compliant according to the Department of Water Affairs and Sanitation standards. According to this guideline, recreational areas must have an *E.coli* bacteria level lower than the 500 cfu/100ml mark.'

Cfu stands for colony-forming unit, an estimate of viable bacteria or fungal cells in a single sample. Results are thus reported as CFU/milliliter for liquids.

Multiple interventions by partners led to this positive outcome. The Municipality replaced screens at the WWTW to monitor inflow into the plant. This is important to retain solids that could have caused blockages in the system and further improved its functioning. All clarifiers were also recently restored to operation. Further upgrades which include civil work are planned for September.

Knysna Municipality in partnership with the District Municipality traced sources of 'new pollutants' such as oil/grease, solvents, dyes and animal products into the WWTW. Oil and grease samples are now being taken at different times of the day at the WWTW in order to try to pinpoint the businesses that might be contributing pollution loads. The municipality introduced an oil-eating enzyme as well as loads of beneficial bacteria to relieve the system. While oil and grease disposed into the system was the cause of the February contamination of the WWTW and this still has an influence at times, there are also other pollutants that play a role. The committee partners are conducting a pilot survey of the Industrial Area to gain a better understanding of potentially harmful substances which are being discharged into stormwater which may affect the health of the estuary.

Of the 30 samples collected by the Municipality and the District Municipality since 2009, the number of times the Bongani stream was non-compliant was 83%, while the Ashmead channel was non-complaint 55% of the sample time. Valuable information is being provided by the Knysna Basin Project which is conducting an ongoing survey into the Bongani and Bigai catchments feeding into the Knysna estuary. Water samples conducted are tested for *E.coli*, ammonia, phosphates and nitrates, high levels of which can negatively influence estuary health. This information will assist in determining problems with pollution arising higher up in the catchment.

Partners are working at various solutions including a rehabilitation project in the Bongani catchment with the Municipality. A digital survey is set to commence shortly to boost an educational drive to get residents to work with the Municipality on reducing pollution of the estuary.

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