

SASTEP WORLD TOILET DAY LAUNCH

Informal settlements remain one of the locations in South Africa where access to adequate and improved sanitation remains a challenge. The WRC through SASTEP (South African Sanitation Technology Enterprise Programme) is working with its municipal and innovation partners to introduce next generation sanitation solutions to provide improved, hygienic, and dignified solutions to address sanitation service delivery backlogs, sanitation related - water scarcity issues and new sanitation innovations.

A SASTEP initiative involving JW and two commercial partners Enviro Options and WEC Projects was launched during the 2021 World Toilet Day at two informal settlements in Soweto. The Clear Recirculating Toilet System, installed at the Mofolo North informal settlement, uses a full water cycling process for treatment of the sewage. An advanced unique “Biofilm-MBR” treatment process is employed as the core technology for treatment, producing a stable and clean effluent that is further disinfected to ensure safety of the effluent for reuse. The system has been licensed from Clear (Suzhou) Environmental Technologies Co. Ltd and will be manufactured locally by Enviro Options, a leading South African dry sanitation company with over 26 years of experience in manufacturing and supplying safe, off-the-grid, non-sewered sanitation. Enviro Options has successfully completed the transfer of technology and have started local manufacture of units. The installation at Mofolo North informal settlement will service 75 households.

The NEWgenerator, installed at Time-house Informal Settlement, Soweto, is a compact, portable, and modular resource recovery machine that eliminates waste while recovering fertilizer nutrients, renewable energy, and clean water. The system uses an anaerobic baffled reactor design followed by a nanomembrane filter operated at subcritical water flux to extend the longevity of the membrane. Permeate from the filter is treated for reuse as flush water by electrochemical chlorine production from table salt. The unit is equipped with solar panels to generate sustainable energy for the operation of the NEWgenerator system. The NEWGenerator is an off-grid sanitation system developed by the University of South Florida (USF) which has been licensed and will be manufactured locally by WEC Projects, a leading provider of engineered solutions in the water and wastewater treatment industry. The installation at Time-house Informal Settlement, Soweto will service 25 households. Through funding from the Bill and Melinda Gates Foundation (BMGF), SASTEP has supported the capex cost of these 2 installations as well as the operation and maintenance during the 12-month demonstration period. Post demonstration Johannesburg Water will take over the management of the facilities for the informal settlements.

Pictures from Mafolo North



Slovoville Pictures

