

# HYBACS®

## Upgrade at Tsakane WwTW



Project Name:	<b>Tsakane WwTW</b>
Client:	<b>Ekurhuleni Water Care Company (ERWAT)</b>
Capacity:	<b>20,000 m<sup>3</sup>/day</b>
Project Scope:	<b>12 SMART™ units</b>

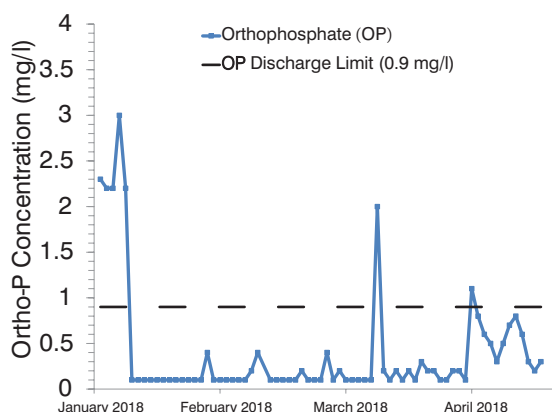
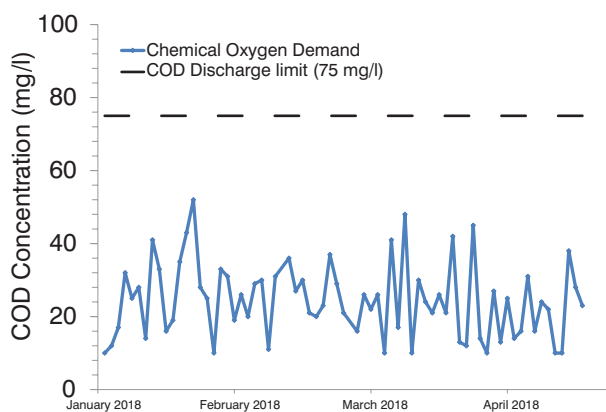


### Project Scope

- Upgrade existing BNR plant from 10 MLD to 20 MLD
- Supply and install 12 SMART units
- Commissioning and post-commissioning support services

### Project Background

Following rapid catchment growth, Ekurhuleni Water Care Company (ERWAT) required an upgrade from 10 MLD to 20 MLD at its Tsakane WwTW. The existing works comprised a single biological nutrient removal (BNR) reactor which could not be taken out of service for long periods of time. Bluewater Bio supplied 12 SMART units to enable the upgrade. The SMART units were arranged with stainless steel inlet and outlet channels, all of which were pre-assembled and tested in the factory prior to delivery. Design for Manufacture and Assembly (DfMA) reduced the time on site and project risks and ensured a high quality of manufacturing. Installation of the SMART units took just 3 weeks. The HYBACS upgrade was commissioned in early 2018 and, in April 2018, the works achieved Green Drop status by demonstrating consistent compliance with the regulatory standard.



Process Details	Design Value	Actual
Average Flow	20,000 m <sup>3</sup> /d	17,200 m <sup>3</sup> /d
Peak Flow	40,000 m <sup>3</sup> /d	28,000 m <sup>3</sup> /d
Population equivalent	77,000 PE	-
COD concentration	75 mg/l 90%ile	27.8 mg/l
TSS concentration	30 mg/l 90%ile	<10.6 mg/l
Amm-N concentration	7 mg/l 90%ile	0.47 mg/l
NO <sub>3</sub> -N concentration	9 mg/l 90%ile	3.5 mg/l
OP concentration	0.9 mg/l 90%ile	0.24 mg/l



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