



Authorities show commitment but **Green Drops** still elusive

Heidi Spynman

For the first time since the introduction of the Green Drop certification programme by the Department of Water Affairs (DWA) three years ago, all 821 municipal wastewater treatment works across the country have been assessed. Lani van Vuuren reports on the results of the latest Green Drop report.

South Africa has more than 800 wastewater treatment facilities dotting the national landscape managed by 156 municipalities and treating on average around 5 258 Mℓ/day of sewage. Of these plants, more than 70% are micro, small and medium-sized works.

The latest report of the Department of Water Affairs' (DWA's) Green Drop certification programme, published earlier this year, once again highlighted the

challenges most municipalities face in terms of achieving excellence in sewage treatment and management. Only 40 sewage treatment works achieved Green Drop awards, with 20 of the previous 33 recipients 'falling off the wagon' and losing their Green Drop status. It must be noted, though, that Green Drop requirements become more stringent (and detailed) with every assessment cycle.

Still, the most encouraging result of this year's round of assessments is the fact that 100% of the country's municipal works participated, indicating at least a willingness by local and district authorities to start addressing the state of affairs of municipal wastewater treatment in South Africa. This is an increase of 83% of systems assessed (only 449 systems were assessed in 2009). This

means that DWA now has a complete database of the exact strengths and gaps per municipality and per wastewater system from where gradual and sustainable improvement can be facilitated and measured on a continuous basis.

"We take cognisance of the fact that the improvement of wastewater services cannot be facilitated by means of regulation alone," said Minister of Water & Environmental Affairs Edna Molewa. "It is for this reason that DWA will go forward in its attempt to intensify its involvement in the multi-department sector support, and capacity building initiatives."

One of the biggest interventions to ensure that dilapidated infrastructure is improved would be the regional bulk infrastructure grant by government. Another would be



Tlokwe Municipality

PROVINCIAL SUPERSTARS

Western Cape municipalities proved themselves to be the national superstars when it came to sewage treatment. The province achieved an overall score of 83,1% placing it firmly in the number one spot nationally. The Western Cape has 155 wastewater treatment plants of various sizes, of which a staggering 117 systems achieved scores of more than 50% (compared to 61 systems in 2009). The province earned almost half (19) of the total number of Green Drops in the country. A further 26 systems achieved ‘good’ scores of between 80% and 90%.

Even more surprising is the fact that the top performing municipality in the Western Cape is not a metro as one would expect, but rather the small Bitou Local Municipality, in Plettenberg Bay. The municipality scored 96,4% overall, achieving Green Drop status for both its sewage plants. The assessors were particularly impressed with the enthusiasm, dedication and eagerness to learn of the small wastewater operations and management team, and attributed the success of the local authority to its team ‘praiseworthy commitment’. “Bitou serves as a benchmark to all the country’s smaller municipalities that are endeavouring towards the same feat.” The other Green Drop scorers were the City of Cape Town (11 Green Drop awards), Mossel Bay (two), with one Green Drop each for Overstrand, Witzenberg, Beaufort West and George.

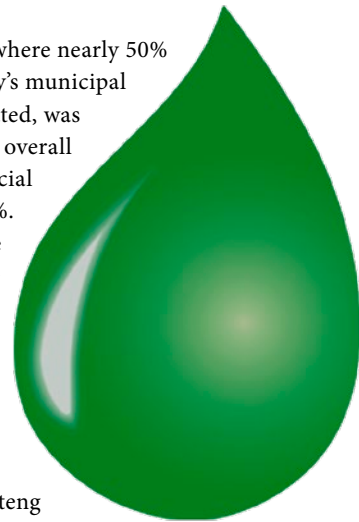
“The province has been very successful in containing and turning around their risk position, without sliding into a declined risk space as evident with most other provinces,” the assessors noted. Only five plants remain critical and are under regulatory surveillance. “The municipalities are commended for their individual contributions to ensure a

remarkable turnaround in Green Drop performance.”

Following shortly on the heels of the Western Cape are the municipalities of KwaZulu-Natal, who together managed a provincial Green Drop score of 82%. eThekweni Metro achieved the best provincial performance with a score of 90,6%. The municipality received nine of the eleven Green Drops awarded in the province, with Ilembe municipality snatching the other two. A total of 95 systems out of the 143 wastewater treatment plants assessed in the province achieved scores higher than 50%.

Gauteng, where nearly 50% of the country’s municipal sewage is treated, was in third place overall with a provincial score of 78,8%. This province features some of the largest sewage treatment works in the country – 25 out of the 56 plants in Gauteng treat more than 25 Ml/day of sewage. Johannesburg Metro achieved the best provincial performance with a score of 90,5% and four Green Drop awards. The fifth award in the province went to the Dekama Wastewater Treatment Works in Ekurhuleni.

A worrying trend in Gauteng is the fact that 99% of the provincial sewage works’ design capacity is already taken up by current operational flows, which average 2 579 Ml/day. However, the report points out that infrastructure is usually oversized by design, which allows for additional treatment capacity that can handle flows beyond design capacity without compromising the effluent quality. “Gauteng municipalities have some of the best wastewater practitioners in South Africa, and these plants



Above: Tlokwe Municipality was the only Green Drop achiever in the North West performance and the highest scoring municipality in the country. According to assessors the municipality’s excellent performance was the result of premeditated and meticulous planning, implementation and preparation.

the rollout of the accelerated community infrastructure programme that ensures the rectification of wastewater mechanical and civil infrastructure. “I have also called an infrastructure indaba with provincial stakeholders as well as water boards, and following this I have now instructed my department to draft a comprehensive investment network to address the critical challenges we are facing as a country due to the lack of sufficient water infrastructure,” Molewa noted. She added that DWA would not shy away from intensifying conventional regulation in terms of issuing directives and following all possible legal avenues where it is found that commitment towards improvement is lacking.

are managed to consistently produce high-quality effluent, where organic and hydraulic loads exceed the theoretical design capacities.

Only one system in Gauteng achieved less than 30%, with six systems scoring between 30% and 50%.

HOPEFUL IMPROVEMENT

There is a marked difference in scores between the top three performing provinces and the other provincial scores. Interestingly, however, a previous under-performer, the Eastern Cape, now managed a fourth place nationally with a score of 67,2%. The province produced three Green Drops (the first ever), with the assessment of all 123 sewage treatment systems proving a significant improvement over the mere five assessed in 2009. According to DWA, this at least showed the province's commitment to raising its service standard and performance.

The best performing municipality in the Eastern Cape was Buffalo City which managed a score of 86,7% along with two Green Drop awards. The other Green Drop in the province was awarded to Nelson Mandela Bay municipality. In total, 32 systems in the province scored more than 50%, and the assessors were left with the overall impression that municipalities in the province are moving towards improving the quality of their wastewater treatment.

In turn, the overall Green Drop score for Mpumalanga was 56%, with Mbombela municipality's Kingstonsvale Wastewater Treatment Works managing the only Green Drop for the province. Of the 77 sewage treatment plants in the province, 31 obtained scores of more than 50%, 17 systems scored between 30% and 50% and 29 systems scored below 30%. The last figure was particularly disquieting to assessors. Apart from the high percentage of plants in this high-risk space, another worrying trend was the movement to employ treatment technologies that require

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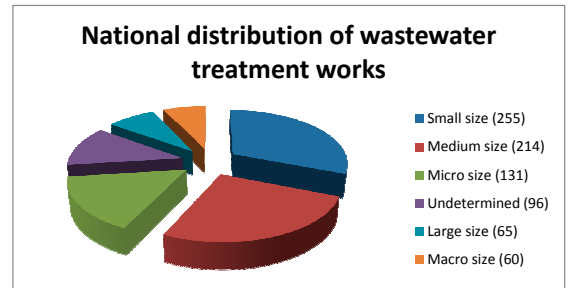
higher skill and operational funds, which may not be sustainable in the long term.

The only other province who managed to achieve a pass score was North West, which scored 50%. Tlokwe Local Municipality, in Potchefstroom, obtained a score of 97% and a Green Drop for its wastewater treatment plant. Unfortunately the other municipal scores left a lot to be desired, with 83% of the province's 35 sewage treatment plants lying in the scoring bracket of less than 50%. Eight plants are currently considered in a critical state and have been placed under regulatory surveillance, with statistics indicating an overall digress in average performance.

WORRYING TRENDS

The assessors expressed serious concern over the bottom-three provinces, Free State, Limpopo and Northern Cape. 'Atrocious,' 'disquieting,' 'critical' and 'alarming' were but some of the words used to describe the state of wastewater treatment in these areas. Many of the municipalities in these provinces were assessed for the first time, however, the average scores did not paint a pretty picture of wastewater management in those regions and serious attention and resources are required to rectify the situation. There were no Green Drops awarded in any of these provinces. Close to a 100 municipal treatment plants are in a high-risk to critical state, posing serious risk to the environment and the populations they serve.

According to Molewa, DWA would now further investigate means of facilitating ways to improve



Source: Green Drop Report 2011

wastewater treatment, especially in these critical areas. "We will seek to partner local government in this endeavour to ensure the sustainable enhancement of their business." The next Green Drop assessment will take place in June next year.

- To view the Green Drop results for your area, Visit: http://www.dwa.gov.za/dir_ws/GDS/Default.aspx

Provincial Green Drop performances

Province	Provincial Green Drop Score
Western Cape	83,1%
KwaZulu-Natal	82%
Gauteng	78,8%
Eastern Cape	67,2%
Mpumalanga	56%
North West	50%
Free State	31,5%
Limpopo	24%
Northern Cape	23%

Source: Green Drop Report 2011

THE GREEN DROP TOP TEN MUNICIPALITIES

- Tlokwe Local Municipality (97%)
- Bitou Local Municipality (96,4%)
- George Local Municipality (91%)
- eThekweni Metro (90,6%)
- City of Johannesburg (90,5%)
- Witzenburg Local Municipality (89,7%)
- Beaufort West Local Municipality (89,5%)
- Overstrand Local Municipality (88,8%)
- Mossel Bay Local Municipality (88,6%)
- City of Cape Town (86,8%)

Source: DWA