

Fact Sheet 8: Drought Mitigation Actions in eThekweni

Due to the severe drought in 2015/2016 eThekweni Water and Sanitation have implemented a drought mitigation plan to address the water shortages.

Figure 1 shows the areas most affected by the drought, together with Dam levels and water restrictions that have been implemented as of February 2016.

Short term initiatives that have been implemented include:

- Installation of flow restricting disks to domestic meters.
- Pressure reduction to minimum 150kpa at the critical point
- Interdepartmental and coordination meetings taking place to integrate internal processes around the drought
- Engagement with the Chamber of Commerce
- Water conservation notices placed on all utility bills. Non Compliance will be addressed individually
- Extensive community awareness campaigns is being done to reduce consumption. Regular meetings with Ward Councillors, street pole adverts & radio communications
- Consumers with above average consumption are being identified and addressed individually.
- Industries with high usage have been personally advised to reduce consumption and alternate supply method are being formulated. Some have volunteered to haul in water from other supply areas via tankers
- Short term solution, to provide water through tanker service, Jojo tanks and sachets for areas with prolonged water outage.
- The EWS sachet plant is being replaced with 2 new units to service areas with high losses.
- Reuse of grey water for the Waste Water treatment Plants is being investigated for industrial, commercial and firefighting uses.
- Penalties and fines have been approved by Exco. These have been set at R500 for domestic consumers and R10 000 for commercial and industrial consumers.

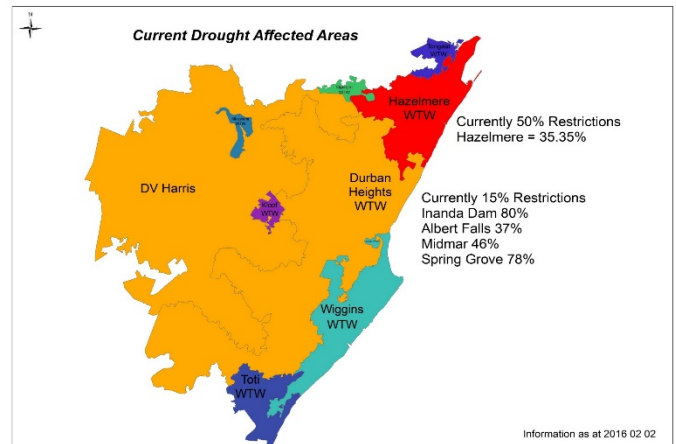


Figure 1: Drought affected areas (February 2016)

Flow restrictors

Flow restrictors (see FIG 2) are devices fitted to the main water supply to reduce the amount of water that flows to the consumer. In eThekweni this has been reduced to 30% of the original flow. As of February 2016 approximately 47 000 devices has been installed in 10 areas of the municipality most affected by the drought including Verulam, Tongaat and KwaMashu.



FIG 2: Flow restrictor devices



Pressure reduction

EWS has reduced the pressure at the majority of the existing Pressure Reducing Valves (PRVs) located within the municipality. Table 1 shows the status of this programme as of February 2016.

The effect of pressure reduction within the areas is varied and properties located at a higher elevations within the pressure management zone have been impacted more than those at lower elevation. The location of the PRVs are scattered throughout the municipal area and not all valves have been adjusted due to design limitations.

Table 1: Status of PRV installation (Feb 2016)

	PRV DESIGN SETTING PRESSURE REDUCTION				TOTAL IN EWS	%age Completed
	05/02/2016	12/02/2016	19/02/2016	Total to Date		
No. of PRV's investigated	93	198	111	402	3 100	13%
No. of PRV's with new proposed Design Settings	49	60	54	163		
No of Reservoir Zones Covered	10	21	3	34	274	12%

Improved response times

In order to reduced losses due to leaks and pipe bursts, EWS have reduced the response time to receiving a report to the repair taking place. This has been achieved by implementing the following actions:

- Plumbing Contractors (Category A) are tasked to provide their own small plant to improve productivity, efficiency and accountability.
- Vehicle Tracking units have been installed into Contractors vehicle to verify work done.
- Additional Small Plant is now available for Municipal repair teams
- Additional Staff have been employed in the last 5 Months. More staff are required as we have a 59% staff vacancy rate at the Water Network (Operations) Department
- Internal Training and Development Plan has been formulated and is being implemented
- Additional suitable vehicles are being hired.
- Additional Excavators (Tlb's) have been engaged.
- In-house training and evaluation of staff & contractors to ensure higher standards and quality is maintained.
- Use of Electronic Data Capturing Units (Juno Devices) to record and verify work done by field staff
- Modification of Fault Capturing System (Faultman) to generate history of previously captured faults and automatic escalation.

Education and awareness

Some of the education and awareness drives that have been carried out include

- **Train ride** – senior management of EWS visited train stations at 6am in the mornings to create awareness on the drought and the need to conserve water. This was carried out in conjunction with Spoonet.
- **Beach walk awareness** – distribution of leaflets to the public on the beach front to create awareness of the drought and the need to conserve water
- **Taxi rank awareness** – street theatre drama
- **Radio programmes** – various radio stations
- **Other:** Bumper stickers, magnetic posters for cars and building posters were prepared by EWS together with the communications department.

