



WATER & SANITATION UNIT

WATER NETWORK DEPARTMENT: OPERATIONS

PLANNED DAILY RESTRICTIONS TIMETABLE FOR THE UMGENI SYSTEM

Supplied from Midmar and Albert Falls Dam System

Updated 04th March 2016

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WATER RESTRICTION IMPLEMENTATION PLAN FOR THE UMGENI SYSTEM

This water restriction plan is developed for the areas within Ethekewini Municipality that are now affected by the falling dam levels of Midmar and Albert Falls Dams.

Background:

The current drought situation has resulted in the level of the larger Midmar & Albert Falls Dams dropping to just 46% and 36% respectively as at 03rd March 2016.

Little rainfall was received in the catchment area resulting in the dam level dropping even further.

A proactive decision was taken by the Provincial Department of Water and Sanitation to impose restrictions to the greater Umgeni River System of 15% for domestic, industrial and commercial consumers and 50% for farming and irrigation.

The Ethekewini Municipality has a complex potable water supply system of 319 reservoir sites with 457 reservoir storage facility/ compartments.

For operational purposes, the area is divided into 5 regions and reservoirs are divided across different regions, districts, wards and suburbs.

In the first phase of the Umgeni System Drought Implementation plan, focus is directed around the supply being received from the two critical reservoirs being Midmar and Albert Falls dams. The average volume currently supplied to Ethekewini from this system amounts to 606 million litres per day. Our target with 15% restriction is 515 million litres per day.

The second phase would then affect areas supplied from the Inanda Dam system which supplies the Wiggins Water Works and the Central and Southern areas of Ethekewini Municipality. The current average demand here is 208 million litres per day. Restrictions will be implemented as the situation worsens.

For the purpose of this report and to avoid confusion, this report refers to phase one which is currently of utmost importance. With the help of the residents and businesses we need to reduce the demand in this area by 91 million litres per day.

The areas within Ethekewini Municipality that are supplied from Midmar and Albert Falls Dams extend from Umhlanga in the North through to Umlazi in the South.

It also extends from Reservoir Hills in the East to Cato Ridge in the West.

This area is extensive and all suburbs that lie within this area will be affected by the current drought implementation plan.

The current drought restriction on Hazelmere Dam System will remain unchanged. Only areas that were load-shifted to the Umgeni System will now be affected as well, namely Verulam Central Business District and other adjacent residential areas.

Voluntary water restrictions have been widely publicised from December 2015. Despite extensive media campaigns and other initiatives, only a 1% reduction was achieved by 08 February 2016.

Currently, water is being abstracted from the dams at a faster rate than it is filling. Umgeni Water have been tasked to also assist to optimize the production of potable water and implement contingency plans on the bulk supply systems as well. Regular Joint Operating Committee meetings are being held by all affected

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parties that are reliant on the supply from these dams namely Msunduzi Municipality, UMgungundlovu Municipalities and the Farming fraternity.

As winter approaches, it is our intention to extend the water supply from Midmar and Albert Falls Dam system, for as long as possible. It has been acknowledged by all affected parties that it is necessary to increase the restriction levels from voluntary to MANDATORY 15% CURTAILMENT to enforce the restrictions. The objective of these restrictions is to proactively extend supply and avert dam failure if at all possible. Similar methods have been implemented on the Hazelmere Dam System which has prolonged the supply for the last 8-10 months. Consumers there have made significant changes to their lifestyle and 40-50% curtailments have been achieved successfully.

Consumers should brace themselves for further restrictions should the dam levels decline further. These will be communicated when required.

Affected areas and Date of implementation:

The date of implementation is Monday 07th March 2016

Item No.	Reservoir Names	Operational Details	Planned Water Interruption Durations	Frequency	Area Supplied & Affected
NORTHERN REGION					
1	Effingham Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday and Wednesday	Avoca, Effingham, Genhills, Gen Anil, North Coast Road, Redhill, Greenwood Park,
2	Kwamashu 1 Reservoir	Shut reservoir outlet And H/L	09h00 to 18h00	Monday and Wednesday	Kwamashu Section, K, J, L, M, N, F, G, H, B5
3	Newlands 1 Reservoir	Shut reservoir outlet	09h30 to 18h30	Monday and Wednesday	Castlehill, B5, Westridge, Riverdene, Newlands West, Earlsfield, Briardale
4	Newlands 2 Reservoir	Shut reservoir outlet	10h00 to 19h00	Monday and Wednesday	Hillgrove, Briardele, Newlands East, Fossa
5	Phoenix 1 Reservoir	Shut reservoir outlet	19h00 to 04h00	Monday and Wednesday	Mount Edgecombe Hospital, Mount Edgecombe Estate,

				(Night)	Broadlands, Southgate, Stonebridge, Clayfield, Campbells Town, Greenbury
6	Phoenix 2 Reservoir	Shut reservoir outlet and H/L	09h30 to 18h30	Monday and Wednesday	Sunford, Hannaford, Phoenix Highway, Longcroft, Longbury, Plaza, Southbury, Eastbury, Grove End, Sastri Park, Caneside, Canehaven, Woodview
7.	Ambleside Reservoir	Shut reservoir outlet	09h30 to 18h30	Monday and Wednesday	La Lucia, La Lucia Mall, Glenashley
8.	Beachway Reservoir	Shut reservoir outlet	10h00 to 19h00	Monday and Wednesday	Beachway, Durban North, Glenashley
9.	Seacow Lake Reservoir	Shut reservoir outlet	19h00 to 04h00	Monday and Wednesday (Night)	Seacow Lake, Parlock, Springfield Industrial, Riverside, Kenville, Newlands East
10.	Grange Reservoir	Shut reservoir outlet	19h00 to 04h00	Monday and Wednesday (Night)	Grange Town, Temple Valley, Valden Heights, Riverview, Missionlands, Canelands Industrial
11.	Phoenix 5 Reservoir	Shut reservoir outlet	10h30 to 19h30	Monday and Wednesday	Woodview, Cornubia, Ottawa, Palmview, Trenance Park
12.	Sunningdale Reservoir and Towers Sunningdale Tower North	Shut reservoir outlet & Tower North outlet	10h30 to 19h30 19h00 to 04h00	Monday and Wednesday Monday and Wednesday (Night)	Sunningdale, La Lucia, & Mall, Genshley, Gen Anil, Somerset, Umhlanga, La Lucia Ridge
13.	Gateway Reservoir	Shut reservoir Inlet	11h00 to 20h00	Monday and Wednesday	Gateway Shopping Mall
14.	Virginia Reservoir & Tower	Shut reservoir outlet & Tower	11h00 to 20h00	Monday and Wednesday	Gen Anil, Genhills, Umhlanga
15.	Durban North Reservoir HI and Durban North LL	Shut reservoir outlet & Tower Outlet	11h30 to 20h30 and 12h00 to 20:00	Monday and Wednesday	Redhill, Durban North Area, Beachway, Athlone, Japanese Garden, Riverside
16	Ntuzuma 4 Reservoir	Shut reservoir outlet	11h00 to 20h00	Monday and Wednesday	Ntuzuma E, Ntuzuma F, Soweto, Inanda Newtown A, Lindelani A

					Section
17.	Trenance 1 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Dawncrest, Oaklands, Surya Heights, Sanna Township, Rietriver, Mountview, Parkgate, Trenance Old Phase
18.	Newlands 3 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Newlands East, V.N. Naik School, Riverhorse Valley, Ethekeeni Hospital
19.	Newlands 4 Reservoir	Shut reservoir outlet	09h30 to 18h30	Tuesday and Thursday	Riverdene, Westrich, Newlands West
20.	Phoenix 3 Reservoir	Shut reservoir outlet	19h00 to 04h00	Tuesday and Thursday (Night)	Redfern, Phoenix Industrial Park, Fernham, Whetstone, Bridge City
21.	Phoenix 4 Reservoir	Shut reservoir outlet	10h00 to 19h00	Tuesday and Thursday	Westham, Trenance Manor, Ghandi Settlement, Lenham, Ferham, Brookdale Whetstone, Bhambayi, Amaoti
22.	Mountview Reservoir	Shut reservoir outlet	10h30 to 19h30	Tuesday and Thursday	Mountview Area, Brindhaven, Southridge, Glenhaven, Parkgate, Rietriver
23.	Tafuleni Reservoir & Tower	Shut reservoir outlet & Tower outlet	10h00 to 19h00	Tuesday and Thursday	Amaoti, Ngoqokazi area
24.	Trenance 3 Reservoir & Tower	Shut reservoir outlet & Tower outlet	11h00 to 20h00	Tuesday and Thursday	Amaoti, Trenance Park New & old Phase, Reddiffe, Buffelsdraai, Groenburg Estate
25.	Umhlanga 2 Reservoir	Shut reservoir outlet	10h30 to 19h30	Tuesday and Thursday	Umhlanga Area, Umhlanga Ridge, Prestondale, Ilala Ridge, Hawaan Forest, Umhlanga Manors, Westridge, Blackburn Village
26.	Kwamashu 3 Reservoir	Shut reservoir outlet & HL outlet	11h00 to 20h00	Tuesday and Thursday	Ntuzuma F, Kwamashu L, Kwamashu N
27.	Aloes Reservoir	Shut reservoir outlet	10h00 to 19h00	Tuesday and Thursday	Avocahills, Corovoca, Khabazela, Duffs Road, Quarry Heights
28.	Umhlanga North Reservoir	Shut reservoir outlet	19h00 to 04h00	Tuesday and Thursday (Night)	Umhlanga CBD
29.	Umhlanga South Reservoir	Shut reservoir outlet	11h00 to 19h00	Tuesday and Thursday	Umhlanga CBD, La Lucia
30.	Phoenix 6 Reservoir	Shut reservoir outlet	11h30 to	Tuesday and	Mount Moriah, Corobrick

			18h00	Thursday	Industrial
31.	Kwamashu 2 Reservoir	Shut reservoir outlet & HL outlet	11h00 to 20h00	Tuesday and Thursday	Kwamashu Section A,B,C,D, E,F,G, Siyanda
CENTRAL REGION					
1.	Northdene 1, 2, 3 Reservoir	Shut reservoir outlet	08h00 to 17h00	Monday and Wednesday	Malvern, Escombe, Northdene Industrial Park, Hillary, Queensburgh, Burlington, Queensmead Industrial Park, Mount Vernon, Memorial Park
2.	Shallcross Reservoir	Shut reservoir outlet	08h00 to 17h00	Monday and Wednesday	Shallcross, Burlington Heights, Chiltern Heights
3.	Klaarwater Reservoir and H/L	Shut reservoir outlet	09h00 to 18h00	Monday and Wednesday	Klaarwater, Crossmoor, Shallcross
4	Firwood 1, 2 Reservoir and the H/L	Shut reservoir outlet	09h00 to 18h00	Monday and Wednesday	Clover Dairies, Escombe, Firwood, Northdene, Moseley Park
5.	Ridley Park Reservoir	Shut reservoir outlet	09h00 to 17h00	Monday and Wednesday	Hillary, Chatsworth Main Rd, Sarnia
6.	Hairnager Reservoir	Shut reservoir outlet	08h00 to 17h00	Tuesday and Thursday	Hairnager
7.	Westdiffe Reservoir	Shut reservoir outlet	08h00 to 17h00	Tuesday and Thursday	Bayview, Havenside, Yellowwood Park
8.	Chats2 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Woodhurst, Westdiffe, Bayview, Silverglen
9.	Chats3 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Croftdene, Silverglen, Arena Park
10.	Chats1 Reservoir	Shut reservoir outlet	08h00 to 17h00	Tuesday and Thursday	Woodhurst, Westdiffe, Havenside, Silverglen, Mobeni Heights
11.	Chats4 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Welbedacht, Montford, Risediffe, Arena Park, Moorton, Crossmoor
INNERWEST REGION					
1	KwaNdengezi Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Kwandengezi & Coffee Farm (high risk area)
2	Tshelimnyama3	Shut reservoir outlet	09h00 to	Monday &	Tshelimnyama, KwaNdengezi,

	Reservoir		18h00	Wednesday	Dassenhoek, Kwalinda, Emansenseni & Stockville (high risk area)
3	Tshelimnyama2 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Tshelimnyama, (high risk area)
	Tshelimnyama 1 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Tshelimnyama, Mpola, Thornwood, Marian Park, Pine View, Mariannridge, Nagina, Birchwood Park & Madiba valley (high risk area)
4	Intake Reservoir	Shut reservoir outlet	09h00 to 18h00		Klaarwater, Luganda, Intake, Khoselini & Welewele (high risk area)
5	Birch Road Reservoir	Shut reservoir outlet	20h00 to 04h00	Monday & Wednesday	Marian Hill Industrial Park & Nirvana Hills (high risk area)
6	Washington Heights Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Umshinini, St Wendolins Ridge, Phumuphele & Savannah Park (high risk area)
7	Berkshire Downs Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of Oermont
8	Oermont 1&2 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of Oermont
9	Oermont 3&4 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of Oermont, Oermont Clinic
10	Oermont 5 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of Oermont
11	KwaDabeka 1 Reservoir	Shut reservoir outlet	20h00 to 04h00	Monday & Wednesday	Parts of KwaDabeka & Wyebank kwaDabeka Clinic, KK hostel & Old age home
12	KwaDabeka 2 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of KwaDabeka
13	KwaDabeka 3 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Parts of KwaDabeka
14	KwaDabeka 5 Reservoir	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	KwaDabeka B
15	Emberton Reservoir 1&2	Shut reservoir outlet	09h00 to 18h00	Monday & Wednesday	Emberton, Motala Heights, Gillitts & Chelmsfordville
16	Knelsby Avenue Reservoir	Shut reservoir outlet	20h00 to 05h00	Monday & Wednesday	Chelmsfordville, Gillitts, Belvedere, Hillcrest Park, Hilldene, St Helier, Winston Park & Stockville (Hillcrest hospital)
17	Emoyeni 1 Reservoir	Shut reservoir outlet	20h00 to 05h00	Monday & Wednesday	Hillcrest, Gillitts & St Helier
18	Haygarth Road Reservoir	Shut reservoir outlet	20h00 to 05h00	Monday & Wednesday	Westmead Industrial Park
19	Clubhouse Reservoir	Shut reservoir outlet	20h00 to 05h00	Monday & Wednesday	Westmead, Tshelimnyama & St Mary's hospital

20	Dunkeld Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Reservoir hill & Westville (Reservoir hills clinic)
21	Salisbury Reservoir	Shut reservoir outlet	20h00 to 05h00	Tuesday & Thursday	Westville, Pavilion & Westway office park & Westville life hospital
22	Lea Drive Reservoir	Shut reservoir outlet	20h00 to 05h00	Tuesday & Thursday	Westville
23	Dawndiff Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Dawndiff, Beverly Hills, Grayleigh & Erin-go-Bragth
24	Westriding Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Waterfall, KwaNqetho, Embo, Hillcrest & Westriding
25	eNtumeni Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	KwaNyuswa,
26	Thandokuhle Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Maqadini & Thandokuhle
27	Mnamatha Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Mnamatha, Mabedlana
28	Intuthuko Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Intuthuko
29	Mt Moriah Reservoir	Shut reservoir outlet	20h00 to 05h00	Tuesday & Thursday	Pine Town CBD, Ashley, Caversham Glen, Cowies hill, farningham Ridge & Woodside, Dawndiff, Paradise Valley & New Germany CBD
30	Hocking Place Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Clubhouse
31	Mountain Ridge Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Westville North, Chiltern hills & Cowies Hills
32	Methvern Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Athol Heights & Dawncrest
33	KwaNqetho Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Kwanqetho, Mshazi, Ngcolosi, Wushwini & Mahlabathi (Ngcolosi clinic)
34	Pinkney Park Reservoir	Shut reservoir outlet	20h00 to 05h00	Tuesday & Thursday	Orestholme, Orestview, Forest Hills & Waterfall
35	Hoyer Road Reservoir	Shut reservoir outlet	20h00 to 05h00	Tuesday & Thursday	Parts of Molweni & Orestholme (Molweni clinic)
36	Molweni 1 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Parts of Molweni
37	Molweni 2 Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Parts of Molweni
38	Abelia Road Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Kloof, Padfield, Wybank & Motalabad
39	Wyebank Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday & Thursday	Wyebank, Molweni, Fannin Road, New Germany, Motalabad & Kwadabeka

1.	Georgedale Reservoir	Shut reservoir outlet Mophela outlet Hammersdale Estate zone meter (2 U&L)	09h00 to 18h00	Monday and Wednesday	Mophela and Sankotshe area Mlaba Village (Upper & Lower)
2.	Sankotshe Reservoir	Shut reservoir outlet	09h00 to	Monday and	Sankotshe and Thafeni
3.	Cato Ridge Reservoir	Shut reservoir outlet (BPT3,4,5,6) Shut Res outlet Fredville (BPT1-27) NB: will shut zone meters.	09h00 to 18h00	Monday and Wednesday	Ntukusweni, Noncosi, Mbovane, Sweni Skhelekehleni, Bhasobha Isithumba, Inchanga
4	Abattoir Reservoir	Shut Ximba outlet (DV1810,1818,1821,1816, 1822)	21:00 to 05:00	Monday and Wednesday	Freys Meats, Cobra, Concrete
5.	Mpumalanga 1- 4 (7)	Shut offtake sections	09h00 to	Monday and	Mpumalanga Sections
6.	Alverstone Nek Reservoir	Shut outlet to Plateau	09h00 to 18h00	Tuesday and Thursday	Assagay, Summerveld & Shongweni valley
7.	Bothas Hill Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Bothas Hill, KwaNyuswa, Mabedlane, Umnamathe, Mgoqozi, Manqoba, Valley trust, Emaqadini
8.	Hammersdale H/L	Shut Offtake to	09h00 to	Tuesday and	Cliffdale, Bucksfarm
9.	Hammersdale L/L Reservoir	Outlet won't be shut (will be logged to monitor outflow at night) feed Factories e.g. Rainbow chicken.	21:00 to 05:00	Tuesday and Thursday	Buckman BLVD Scott Bader, Rainbow Chickens P1/ P2/ Farms & Buckman laboratories Industries affected
10.	Shongweni Reservoir	Shut offtake to	09h00 to	Tuesday and	Shongweni area
11.	Salem Reservoir	Shut Salem outlet	09h00 to	Tuesday and	Salem area, Shongweni

			18h00	Thursday	edamini
12.	Ufudu Reservoir	Shut reservoir outlet	09h00 to 18h00	Tuesday and Thursday	Mangangeni, Sgumbukuqwini Taffelkop, Upper Mgcaba, Emasomini
13.	Zwelibomvu Reservoir	Shut offtake to Salem & 2x BPT	09h00 to 18h00	Tuesday and Thursday	Whole of Zwelibomvu, Mangangeni Dabe section, Lower Magcaba area
1	Umlazi 1 Reservoir	Shut reservoir outlet	21:00 to	Monday &	Umlazi C, D, B, V, A
2	Umlazi 4 Reservoir	Shut reservoir outlet	21:00 to	Monday &	Z, U, Y, Malukazi
3	Umlazi 5 Reservoir	Shut reservoir outlet	08:30 to	Monday &	BB, AA
4	Ensimbini 1 Reservoir	Shut reservoir outlet	20:30 to	Monday &	Ntabankulu, Qhosheypethe,
5	Folweni 2 Reservoir	Shut reservoir outlet	08:30 to	Monday &	Southgate, Golokodo, Folweni
6	Umlazi 3 Reservoir	Shut reservoir outlet	21:00 to	Monday &	K, L, M
7	Umlazi 6 Reservoir	Shut reservoir outlet	08:30 to	Monday &	CC, AA, BB
		Shut reservoir outlet	20:30 to	Monday &	
9	Umbumbulu 3	Shut reservoir outlet	08:30 to	Tuesday &	Esikojeni, kwaNgqinya,
10	Umbumbulu 4	Shut reservoir outlet	08:30 to	Tuesday &	eTholeni, Umbumbulu CBD,
11	Umbumbulu 5	Shut reservoir outlet	08:30 to	Tuesday &	Ntinyane, Phezukomkhono,
12	Umbumbulu 6	Shut reservoir outlet	08:30 to	Tuesday &	Sunduzwayo, Mdumezulu part
13	Umbumbulu 7	Shut reservoir outlet	08:30 to	Tuesday &	Odidini, oGagwini, uQumbu,
14	Umbumbulu 8	Shut reservoir outlet	08:30 to	Tuesday &	Mdumezulu, parts of Ugu
15	Umbumbulu 9	Shut reservoir outlet	08:30 to	Tuesday &	Sunduzwayo
16	Umbumbulu 10	Shut reservoir outlet	08:30 to	Tuesday &	Madundube
17	Umbumbulu 11	Shut reservoir outlet	08:30 to	Tuesday &	Parts of Nkomokazi
18	Umbumbulu 13	Shut reservoir outlet	08:30 to	Tuesday &	Parts of Nkomokazi

Restriction Plan Details:

The following actions are to be undertaken:

- An immediate restriction of 15% of consumption (as defined before the onset of the initial restrictions in 2015) is to be imposed on all areas as mentioned above.

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- A Technical Joint Operating Committee (JOC), comprising of all affected parties, is convening on a fortnightly basis to assess the situation and agree on the level of restriction to be imposed going forward. The current restrictions are based on 15% for domestic, industrial and commercial and 50% on farming with effect from 14 December 2015.
- The Water Treatment Plants will be operated by Umgeni Water in such a manner as to only produce sufficient potable water to meet the daily overall quota as determined by the restriction level agreed to at that time.
- The water produced will be supplied by Umgeni Water to eThekweni, Msunduzi and UMgungundlovu Municipalities proportionately to their pre-drought consumption less the restriction amount. In other words, they will each receive a daily quota which has previously been agreed to.
- It is then the responsibility of each Municipality to individually apply whatever measures/strategies they deem appropriate to ensure that their daily quota is optimally utilised and any shortfalls on that day are addressed.
- A new quota will then be supplied to each Municipality the following day to be distributed in the same manner as described above.
- Due to the potable water supply system being complex and integrated, water interruptions will affect all consumers equally. Critical and strategic facilities (eg. Hospitals, clinics and industries) would need to create adequate internal storage to cater for the planned water interruptions.
- No alternate potable water supply would be made available during the planned shutdown periods.
- Industrial, Commercial and Construction companies can collect recycled water from designated Waste Water Treatment works for use in their operations which is strictly not for human consumption. Water Inspectors would assist with this request.
- Water interruptions to most high lying areas will be affected for longer periods than stipulated. This is caused by the fact that water will flow to the lowest points first. The watermains would take time to refill and pressurize itself after the planned water interruption.
- Individual water restrictors are being installed to all properties and the rollout has commenced. This is to reduce the volume of water released to each consumers when water is turned on. It also allows the watermains to refill faster so that higher lying consumers can have their water supply reinstated sooner. Consumers found tampering with the restrictor devices will be fined in accordance with our bylaws.
- Planned shutdown times are applicable to all consumers within that area and adjacent areas too. Our supply systems are not limited to roads, wards and suburbs. Depending on the supply reservoir residents in once community may be affected on different times/day.
- To prevent the loss of water, repairs to bursts and leaks are being prioritized depending on the severity and volume being lost. This is an unplanned event therefore consumers should plan for prolonged water outages to some areas.
- To proactively reduce the frequency of bursts and leaks, water pressure to many areas will be significantly reduced during the period of the drought. The minimum pressure will be reduced to 100kpa.

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- The challenge with interrupting water supply of this magnitude commonly results in an increase in bursts, leaks and workload. Although this is not ideal, when working with a quota system for each area, it is unavoidable as the quota of water allocated to an area/reservoir may be depleted before the planned shutdown times and water supply will be cut off.
- Consumers, whose water consumption has not seen significant decrease will be fined R500/incident/month and Industrial and Commercial consumers would be fined R10 000/incident/month.
- Carwashes, like all other business would need to reduce their consumption by 15% and recycle water where possible. , however carwashes who do not comply with adequate filtration processes and controls will be deemed illegal and forcefully shut down and fined if necessary. Pollution Inspectors and Metro Police will ensure compliance.

Typical Questions and Responses (as at 02 March 2016)

1. Why has the water schedule not been properly followed?

Water schedules are being followed however we have the following challenges

- The reticulation mains are extensive and system takes time to fill up so that consumers in the higher lying areas get water a long time later.
- Consumers in the lower lying area tend to draw and store excessive amount as water flows down to them first.
- Consumers leave taps open in anticipation of the water supply returning. They will only close it when they return from work.
- Consumers make use of water from their geysers. When water supply returns, the geysers starts to fill up automatically thereby increasing the demand on the system. Most geysers should not operate this way if properly installed.
- Some areas are supplied directly from pumped water mains which means that if pumping as the daily quota is reached, then the system will drain until the next day's quota is released. Water tends to flow to the lower areas first therefore higher lying consumers are affected even further. Water outages are therefore prolonged.
- The reticulation mains are also not designed to be operated by opening and dosing as we are forced to do currently. This causes air entrapment which results in bursts and leaks. Repairs will delay the restoration of supply even further.

2. How long can residents expect this?

- Consumers can expect this to continue until the dam levels reach 70% and more. Dam levels can be tracked on the Umgeni Water website. There is no prediction for rains and the situation is dire. Further water restrictions will be imposed until the dams recover to a safe level.

3. Is there a way for the municipality to get supply to residents for their mornings (in order to prepare for work etc)?

- Planned interruption times have been scheduled after considering various operational, social and economic factors. With you being our loyal customer we have your interests in mind however there are times like these where our measures are implemented in a desperate need to prolong the available supply. With the high consumption together with bursts and leaks, the water supply

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is interrupted beyond the stipulated times. Repairs are also being prioritized to minimize losses and down time. It sometime coincides with times when consumers are meant to have water.

4. How are tankers distributed? Are there enough for all these areas?

- a) The availability of water tankers are limited and in high demand. It is not the intention to supply areas with tankers during prescribed shut-down times. However areas with prolonged outages due to technical challenges will be prioritized with the available resources. From experience we have found that water tankers are frequently bogged down by residents at the entrance of an affected area and most often cannot make it through to the end as they are empty by then. We urge consumers to exercise compassion with their fellow residents.

5. Is the municipality finding ways to curb the bursting of pipes?

- a) Yes, other intervention are currently being implemented which are:-
- Reduction in pressures in various areas, where possible.
 - Prioritizing the relay and replacement of mains that are frequently bursting. Addition emergency funding is being sourced to fast-track these projects.
 - We are installing individual restrictors which will be installed at each water meter. In this way consumers in lower lying areas will receive a limited amount of water at a reduced rate of supply. This will allow reticulation systems to fill up faster and get to the consumers on the hill tops. Once all the restrictors have been installed and savings achieved, the reticulation mains will be left on full supply. Until then, the planned water rationing timetables will be enforced to achieve the targeted restrictions.

6. What measures are being implemented by the Municipality to help the situation?

- a) Various areas are being load-shifted onto neighbouring supply systems to reduce the demand on the Midmar and Albert Falls supply system
- b) Wide spread community and Councillor meetings are taking place sensitizing consumers and appealing to them to reduce their water consumption - behavioural change.
- c) Projects within Umgeni Water and Ethekeeni Water are being fast tracked to supplement supply into the drought stricken area.
- d) Installation of thousands of water restrictors are being rolled out to the affected areas thereby reducing the supply to each consumer individually.
- e) Staff numbers and working hours have been increased to prioritize repairs and minimize major losses.
- f) Exception reports are being extracted for consumers with high consumption and they are being addressed individually. Fines will soon be imposed for tampering and non-compliance.
- g) Use of production boreholes are being investigated to supplement supply.
- h) Use of recycled water for Industrial, commercial and Construction Companies is being made available for collection thereby reducing the demand and reliance on potable water
- i) Sales points are being identified and internal processes are being formulated to allow Industries to tanker in water from other supply zones such as the Inanda Dam supply systems.
- j) Hospitals, clinics and schools are being personally addressed to comply with internal storage requirements according to our bylaws.
- k) Forced repairs are being carried out to internal plumbing where high consumption and losses are being ignored.

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- l) Pressures are being significantly reduced to avoid unnecessary bursts and water loss in the affected areas.

7. Any additional comments you may have.

- a) We appeal to consumers to heed our call to reduce the demand as the Midmar and Albert Falls Dams are extremely low.
- b) Report bursts and leaks as soon as possible to our Call Centre as they are being prioritized and investigated.
- c) Close all taps when leaving home so that when the daily quota is release to consumers, it is not wasted until you get home from work.

8. What can consumers expect with the water interruptions?

Based on the current restriction, the water supply will be shut off for periods of 9hrs per day on 2 days a week.

The total number of reservoirs that are affected by this phase of the drought is 124 across the Municipality. Due to the locations and the extent of the area, it is not possible to plan daily interruptions as done in the Hazelmere Dam System.

After considering various factors and alternatives, it was decided that the reservoirs be divided into 3 groups, Group A, Group B and Group C.

Group A can expect the water supply being interrupted on Mondays and Wednesdays.

Group B can expect the water supply being interrupted on Tuesdays and Thursdays.

Group C can expect interruptions at night where Central Business Districts (CBD) areas are affected.

Depending on where you are located and from which reservoir you are supplied from, your water supply will be interrupted.

9. Why is it that my neighbour's water supply is affected differently to mine yet we live in the same road and area?

The water supply system is complex and extensive and the supply is limited by elevation, that is, level of the ground in relation to the Mean Sea Level (MSL). In this way we can supply resident's water under gravity.

Some consumers may be supplied from the water tower, others may be supplied from the closest reservoir and other may be supplied from reservoirs in adjacent areas.

Depending when the reservoirs are scheduled, you will be affected accordingly.

10. How does a water restricting device work?

It is a small device installed at each domestic water meter. It does not affect the pressure but merely reduced the flow rate into the property. Consumers will mainly notice the effect of this when a tap is left open for prolonged periods. Initially the water would gush out as normal but as the internal water pipes drain, the flow via the water meter will only refill the pipes at a slower rate.

Basically, a bucket would take 5 minutes to fill instead of 2 minutes.

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The main benefit of this item is seen when the mandatory water cuts are implemented whereby water is shut off for predetermined times. During this time, the entire watermain system would drain out to the lower lying consumers.

When the watermains are recharged, this device prevents the lower lying consumers from drawing excessive amounts of water resulting in upper lying consumer going without water for prolonged periods of up to 3-5hrs.

It simply allows the watermains to refill faster and restore water supply to consumers sooner.

Once this item is installed, one would need to stand one step closer to the shower and homes with many bathrooms would only be able to use fewer taps at a time.

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