

**REPORT TO COUNCIL BY THE MUNICIPAL MANAGER: DROUGHT**

**DROUGHT IN THE MAKANA LOCAL MUNICIPAL AREA**

**1. PURPOSE**

To give a progress report on the drought situation in Makana.

**2. BACKGROUND**

An item was submitted to the previous Council meeting to declare the Municipality as a disaster area. Although this request was submitted to SBDM, the SBDM at that stage already submitted an application to declare the District as a disaster area. This drought is described by scientist as the worst drought in 220 years and is being compared with the drought in Makanda in 1945. According to scientific data it is expected that it might last for another three years

**3. EXECUTIVE SUMMARY**

The report deals with the establishment of the Water Joint Operations Committee (WJOC), the disaster management plan, James Kleynhans Water Works, Waainek Water Works, water distribution, and measures that are being put into place to augment water supply (boreholes)

**4. DISCUSSIONS/ CONTENT**

**4.1. *Water Joint Operations Committee***

On 14 January 2019, the municipal manager convened a special Makana water intervention meeting with all relevant stakeholder representative, a water intervention task team was established to develop a plan on how to address the current water challenges. The task team was then constituted as a Water Joint Operations Committee.

The following organisations are represented on the WJOC:

- Makana Municipality
- MISA
- National COGTA
- National Arts Festival and Grahamstown Foundation
- Rhodes University
- Provincial Disaster Management
- District Disaster Management
- Department Water and Sanitation
- SAPS

The WJOC crafted a disaster management plan to deal with the disaster facing the municipality during the imminent water crisis facing the municipality as a result of the prolonged drought. It is anticipated that the dams feeding the Waainek Water Works would not be viable to deliver water to this water works in 20 days' time, i.e. 16 March 2019 if the drought persists. Waainek produces 8 Mega Litres of water per day and supply Makanda West of water.

The James Kleynhans Water Works supplies Makanda East with water from the Fish River Scheme and is supposed to produce 10 Mega Litres of water per day.

The total consumption of water in Makanda is 20 Mega Litres of water. The Disaster Management Plan deals with how water rationing will be implemented when the Waainek Water Works is not producing water. James Kleynhans water will then be rationed on a two day on, two day off rotational basis between Makanda East and West. Water will be transported to Makanda East and distributed at points identified to the residents. In Makanda West tanks will be placed at designated points to make water available to residents. During this time residents will be allowed 25 Litres per person to a maximum of 4 people per household, i.e. 100 litres per household per day. Water restrictions are already in place restricting residents to 50 litre per person per day to a maximum of 4 people per household, i.e. 200 litres per household.

The Disaster Management Plan also addresses medium and long term measures that are being put in place to prevent future disasters in case of drought, security at key points and law enforcement, as well as a communication plan.

The Council resolved on 30 January 2019 to submit an application to declare the Municipality as a disaster area. The Sarah Baartman District Municipality declared the district as a whole as a disaster area.

It is important to note that the disaster plan compiled by WJOC is based on the premise that no interruptions will be experienced at the James Kleynhans Water Works for it to be implemented successfully.

#### **4.2. James Kleynhans Water Works**

Before the water shortage (Waainek not being able to produce water by 16 March 2019) occurred as expected, problem were experienced at the plant with high turbidity water that was released into the James Kleynhans Dam from the Glen Melville Dam. This caused the plant to shut down for a period of 10 days to deal with the turbidity. This was not an event that the Municipality had any control over. With the assistance of Amatole Water, desludging took place and the Water Works starting delivering water on 17 February 2019.

It was then discovered that the filters needed to be replaced and some of the valves needed to be repaired due to a lack of maintenance at the plant. From the time the plant became operational it delivered water at half of its capacity, namely 5 Mega Litres a day. Consequently many areas in Makanda East can still not be supplied with water. Lately the situation has worsened in that during an eight hour shift only 4,4 Mega Litres of potable water could be produced. During this time it was also discovered that the Botha's Hill Reservoir was not fed with water due to a lack of discipline and commitment

of staff at the plant. Whilst filling the Botha's Hill reservoir there was an incident where a valve was opened after the plumbers closed it for the night – pointing to deliberate acts of undermining the work undertaken. There are serious concerns that the plant would be able to produce 10 Mega Litres per day, under current circumstances – the assumption that was used in the disaster plan.

On 25 February the generator at the plant became faulty and needs to be repaired. It is now estimated that the plant will not be in full operation for another 5 days, at least. Verbal reports received points to gross neglect and poor maintenance at the plant.

A request was submitted to Amatole Water to second Mr Nair on a two day per week basis to assist in optimising the process units.

#### **4.3. Waainek Water Works**

The Waainek Water Works has been off-line three times in the past two weeks. Firstly the scheduled maintenance work by Eskom necessitated the power being shut down for 8 hours, after that the Howiesonspoor Pump Station was out of commission due to the pumps and equipment being wet because an operator at the pump station did not notice the faulty pump. The pump station could not operate yesterday because of vandalism at one of the substations. This is not the first time this has occurred and it is vital that the Municipality increases security at the substations. It is important to note that, when the Waainek Water Works is down and James Kleynhans are only producing at half of its capacity, it becomes almost impossible to deliver water to Makanda East where some areas have been without water for more than two weeks.

#### **4.4. Water Distribution**

A plan was crafted to provide residents' water based on a two day on, two day off rotational basis for the period when Waainek cannot produce water. This plan is based on James Kleynhans consistently providing water at 10 Mega Litres a day. Over the past two weeks there is enough evidence that this is not attainable and most probably would not be attainable before water dries up in the west.

In addition when the statistics (Rhodes University) available for the drought situation in Makana are considered, March could be either a dry month or a month where severe flooding is experienced. April until October are statistically dry months. This could thus result in the municipality having to deliver water for 7 months, provided it starts raining in October. The possibility is that the impact of this drought will last another three years. The cost of delivering water to communities is not sustainable when the time lines as referred to is considered.

It is important to note that where Makana, could up to now rely on neighbouring municipalities and Rhodes University to use their water tanks, this will not be possible when the time line is considered.

Gift of the Givers assisted Makana with the delivery of bottled water from the 12th of February. This method of supplying water to residents is also not sustainable due to the high cost factor.

As from 26 February 2019, 8 tankers were hired by the municipality to deliver water to Makanda East. These tankers will fill up at the boreholes already drilled. Gift of the Givers are also providing two tankers to deliver water, as the delivery of bottled water will cease due to high cost. 370 Jo-Jo tanks were donated to Gift of the Givers by Engen and these are on its way to Makana. The Jo-Jo tanks will be placed at strategic areas in Makanda and will be filled by the water tankers for usage by residents.

A more sustainable method of providing water to communities, namely boreholes, are now being rolled out.

#### **4.5. Boreholes**

Gift of the Givers undertook a study to determine the availability of ground water and the viability of specific points for boreholes. As an urgent measure a borehole was drilled at the Waainek Water Works – yielding 70 000 litre per day. The water is potable and will be fed into the Water Works. In the meantime the tankers will fill up from this borehole. Another three boreholes will be drilled and the water fed into the water works.

Two boreholes were already drilled at Rhodes University and these are yielding 400 000 litres a day and the water is potable. Another borehole will be drilled and the final estimated yield is expected to be 1,2 million litres per day. Some of this water would be relayed directly into the intermediate and high level reservoirs.

The borehole at Settlers monument yielded 100 000 litres per day and will be used for all the events that are currently happening and is still going to happen.

The borehole at Ntsika Secondary School is yielding 60 000 litres per day, another hole is being drilled and the water must still be tested. This water will be used for the school and residents.

Some boreholes will also be drilled on the commonage for use by farmers, a borehole will be drilled in town for use of residents and three boreholes are going to be drilled around Botha's Hill reservoir to be fed directly into Botha's Hill reservoir.

The prison, 6SAI and the SAPS Dog School is also earmarked to receive water through boreholes.

A meeting was held yesterday with Gift of the Givers to ensure that the drilling of boreholes are happening in a coordinated manner. Ways of the municipality contributing financially to the drilling of these boreholes were explored. It is anticipated that eventually 6 drilling machines will be at work to complete all the boreholes by 19 March 2019.

Once the water situation has stabilised and the drought is over the boreholes will be shut down.

**5. FINANCIAL IMPLICATIONS**

Funding made available for drought purposes will be used

**6. LEGAL IMPLICATIONS**

According to the Disaster Management Act, Act no 57 of 2002, a disaster could be defined as:

"a progressive or sudden, widespread or localised natural or human-caused occurrence which-

(a) causes or threatens to cause-

(i) death, injury or disease;

(ii) damage to property, infrastructure or the environment; or

(iii) disruption of the life of a community; and

(b) is of a magnitude that exceeds the ability of those affected by the disaster to cope with its effects using only their own resources."

It is important to also note the definition of disaster management according to the act:

"Disaster management means a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at

(a) preventing or reducing the risk of disasters;

(b) mitigating the severity or consequences of disasters;

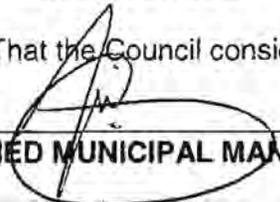
(c) emergency preparedness;

(d) a rapid and effective response to disasters; and

(e) post-disaster recovery and rehabilitation;"

**7. RECOMMENDED**

a) That the Council considers the report.

  
\_\_\_\_\_  
**SIGNED MUNICIPAL MANAGER**