



sapia | South African Petroleum
Industry Association

Western Cape Water Crisis: Key Risks for the Petroleum Sector and the City

Fatima B Shaik
HEAD: Health, Safety, Security and Environment

CONFIDENTIAL

sapia | South African Petroleum
Industry Association

Assumptions

1. Focus on basic human need
2. Worse case scenario
3. No water provision for Business
4. No fire fighting capability
5. Duration of zero water supply unknown



Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
Chevron Refinery (NKP) shutdown:	- Supplies petroleum products (LPG, petrol, jet fuel, diesel, fuel oil and bitumen) to the Western Cape (WC). - Refinery requires 6 Million litres per day (1% of the City's 600ML/Day). - Reverse osmosis plant used to treat waste water effluent. Refinery uses less than 6ML/day of raw water – approx. 0,1%. This flow has reduced due to lower input increasing dependence on raw water. - For the refinery to remain in “park mode” it still requires water. No water, No refinery - Impacts to CPT INT, other airfields, shipping, all other strategic assets, terminals and retail sites. - Staff and contractor impacts at refinery. - Impounding dams will assist with refinery fire fighting capabilities	- Activate Heads of Supply to determine likelihood, contingencies, etc. - Import considerations: Imports not sustainable – weather, can not correct off spec product if there is no refinery, jet fuel susceptible to off spec – adding pressure, significant lead times, etc. No fire-fighting – no Imports – no fuel. - JOC to advise on business water supply contingencies and volumes available. - Chevron to develop detailed plans to address refinery risks. - Heads of Supply to develop plans to address security of supply to WC.

Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
No Emergency Response Capability	• Very low water pressure or NO water in fire fighting systems • Inability to conduct drills and critical equipment tests • Inadequate or no response from local emergency services. • No fire fighting capabilities, No operations. Supply crisis. • Impacts marine and land-based terminals, retail sites and office buildings. • Risks to staff, assets, environment and communities. • Open velds will pose an additional threat. • No supply to EMS, SAPS, etc.	• Heads of Supply to advise on operational capability. • Non- water based drills to determine exposures. • Possible use of sea water – unlikely • Consideration of mobile water back up options e.g. tankers, fire water tanks, water dams, etc. where possible. Water to be sourced outside of the WC and EC or sea water - limited • Use of boreholes if available – limited. • Use of non-water based fire extinguishing options - limited • All Companies to review risks and prepare appropriate contingencies • JOC legal is seeking legal mandate to limit or stop water based drills

Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
Security Threats	• Potential risks associated with social unrest – looting, violence, fire, etc. • Risk to terminals, retail sites, offices, etc. • Risk to staff and assets during delivery. • No SAPS support for sites not designated as national key points (NKPs) • No security – no delivery. • No fuel - emergency services and strategic customers.	• Road transport to assess potential risks with contingencies. If deliveries are authorised: proper route risk assessments, and journey management. Night deliveries where possible and aligned to company policies. • Activate SAPIA representation at NATJOC. • Seek support for SAPS escorts from NATJOC • SAPS to support NKPs – part of SAPS plan • Sites will run dry – prioritised delivery if product is available and safe to deliver.

Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
Extraction of contamination	• Increased extraction could potentially draw existing contamination from sites into boreholes. • Sites that choose to use boreholes as a water source, should seek guidance from their environmental advisors. • The city may extract contaminated water for hygiene purposes (e.g. flushing).	• DEA: Contaminated land Division has a list on all sites across all sectors to NEMWA. • Contaminated water extracted for hygiene purposes – not ideal.

Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
Disease and infection	• Public health and hygiene risk during food preparation at retail sites and offices canteens. • Due to limited water at facilities risk of disease and infection will increase amongst staff. • Use of chemical toilets – vectors, odours, etc.	• Companies to decide on the use of public toilets at retail sites. • Companies to decide on the operability of food offering at retail site and offices. • Use wellness departments to develop proper messaging for staff awareness and contingencies. • Use of wet wipes and waterless sanitisers

Risks to the Petroleum sector and the Western Cape

RISK	COMMENT	ACTION /OPTIONS
Inoperability of the cities sewerage systems	Increased use of the sewerage systems without adequate water to flush the systems will lead to blockages in the sewer system.	- Companies to plan for worse case scenarios. - Entry into sewer manholes. These are confined spaces – seek guidance from environmental /safety advisors when entering manholes on site.
Staff impacts	Staff will need time to collect their daily rations – severe impact on operations	- Work from home policy to be dictated by company policy. - Critical staff relocation where possible. - Companies to consider measures to support impacted staff.

General

- All Companies are to review their Business Continuity Plans as an integrated team, considering actual and potential risks along the supply chain. (HSSE, Supply, Road Transport, HR, etc.)
- Any additional risks that need to be escalated should be done as soon as possible to SAPIA.