WHAT CAN GO WRONG AND WHAT ARE THE CONSEQUENT EFFECTS ?

- **Drought conditions** could potentially affect water quality due to lower feed rates and higher mineralisation (concentration of salts) in the water source.
- **External sources** can also impact on the water quality of boreholes and springs. Potential sources are septic tanks and French drains, solid waste disposal sites, industrial activities, feedlots, etc.
- The **over-exploitation** of a groundwater source will result in a reduced yield. This could also draw polluted groundwater to the abstraction point because of the cone of depression created by the over-abstraction.

HOW WILL YOU KNOW?

For drought conditions focus should be placed on general substances.

- Analyse for substances that are general indicators of water quality, substances which may lead to health problems and substances which are of economic and aesthetic concern.

For pollution conditions focus should be placed on toxic substances and bacteriological pollution:

- Analyse for substances that are indicators of general water quality, substances which may lead to health problems or are of concern to your health and substances which are of economic and aesthetic concern.
- Classify water to determine its fitness for use.

For over-exploitation conditions, focus should be placed on:

- Classifying the water to determine its fitness for use.
- The deterioration in the water quality and to check when it does not comply with the SA Water Quality Guidelines.

WHAT TO DO?

- During drought conditions, alternate sources for drinking and cooking should be considered after assessing the water quality. Treatment plant options should also be evaluated and considered for implementation.
- External sources of contamination should be addresses at source. The water used for drinking and cooking purposes should be treated during the period of contamination or alternative sources should be considered.
- If the source is over-exploited consideration should be given to the development of additional sources or allow enough tome for the source to recover.

REFERENCES: DWAF (2002). Quality of domestic water supplies. Volume 5: Management Guide. WRC No. TT 162/01, pp. 35 and 36