WHAT TO DO ?

- **Where water analysis revealed deterioration in the aesthetic, bacteriological and chemical water quality :**
  - ✓ Water within the yellow class can be used, but with caution.
  - ✓ Red class water can be used in case of an emergency, when no other water sources are available
  - ✓ Initiate a process of acquiring adequate funding and see that operators are properly trained to operate the specific treatment works concerned.
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- **During a power failure:**
  - ✓ Make use of an emergency power generator.
  - ✓ Implement basic emergency treatment options to comply with at least the red class water, but
  - ✓ preferably the yellow class.

- **In the case of over-fluoridation**
  - ✓ Stop fluoride addition immediately, until problem can be rectified.
  - ✓ Warn the consumers.
  - ✓ If water resorts under the purple class, use alternative drinking water source.
  - ✓ Most home treatment devices do not remove fluoride adequately.
  - ✓ Control the water quality by doing hourly measurements of fluoride concentrations.
  - ✓ Prevent overdosing, since there is no antidote to fluoride poisoning.
  - ✓ For the effective removal of fluoride, advanced fluoride treatment methods, such as activated alumina or bone char are required.
  - ✓ Home treatment with clay or calcium carbonate chips may ameliorate high concentrations.
  - ✓ Home treatment kids using ion-exchange processes are available, but tend to become saturated very quickly.

- **In the case of over-dosing with chlorine:**
  - ✓ A simple option is to boil the water for a few minutes to drive off the excess chlorine.
  - ✓ The same effect can be achieved by stirring the water vigorously or pouring it from one container to another a few times to aerate the water.
  - ✓ If the water is left standing long enough, the chlorine will also dissipate.

- **In the case of under-dosing with chlorine, when bacteriological contamination is suspected, the consumer can:**
  - ✓ Add some bleach to the water.
  - ✓ Boil the water for a few minutes to destroy micro-organisms.

- **In the case of change in raw water quality, the action will depend on the nature of the change.** Water analysis of the raw and final water will determine which treatment is required.

- **During flood** events, when the microbial water quality decreases and the turbidity increases:
  - ✓ Adapt the flocculation dose for optimum flocculation.
  - ✓ Backwash the filters more frequently.
  - ✓ Increase the chlorine dosage temporarily for adequate disinfection.
  - ✓ Cease abstraction until the first “pulse” of flood water has passed.

- **During droughts**:
  - ✓ Change in raw water quality may require re-optimisation of the dosing chemical regimen,
  - ✓ Plan for dealing with water shortages.

References: DWAF (2002). Quality of domestic water supplies. Volume 5: Management Guide. WRC No. TT 162/01, pp. 39 and 40.

Photos: Pixabay