

# **SCOPE OF WORK**

WATER STUDY

WATER QUALITY TESTING

## 1. WATER QUALITY PROPERTIES

Water quality describes the condition of the water, including chemical, physical, and biological characteristics. Water quality assessments shall be carried out for all the water sources covered by this study with a frequency of once every 14 days for the entire period of the study. The contractor shall conduct Bi-monthly tests and record all the results and send them to Blumont monthly. The obtained results shall provide a full analysis of the water quality situation in the entire area.

Water from all four (4) specified sources shall be sampled and sent to labs for testing, the following parameters are considered in these tests:

*i. Physical parameters:*

Colour
Taste
Odour
Temperature
Turbidity (NTU)
Solids (TDS and TSS)
Electrical conductivity (EC)

*ii. Chemical parameters:*

PH
Alkalinity
Hardness
arsenic
chloride
nitrogen (including NO <sub>3</sub> )
phosphorus (including PO <sub>4</sub> )
Sulfur (including SO <sub>4</sub> )
calcium
magnesium
potassium
Carbonate/bicarbonate
sodium
iron
fluoride
heavy metals (arsenic, cadmium, nickel, mercury, chromium, zinc, and lead)
BoD <sub>5</sub> ,
COD
DO

*iii. Biological parameters: Bacteriological:*

Total Coliform
E coli

## 2. **SAMPLING CONTAINERS**

Sampling containers shall be sterilized in the lab before resampling. Usually, glass bottles will require steam sterilization at 120 degrees centigrade for 20 minutes. they should not be rinsed or washed before sampling. They should be sealed and stored in a dry place until the next sampling procedure.