Parameter List For New Drinking Water Sources

Evaluating new water sources for hazards and quality is crucial for safe system design and operation. The data required, sampling locations, and frequency of sampling* to characterize a proposed source should be established by the design team. Sampling to characterize a new drinking water source should typically include:

BACTERIOLOGICAL:

E. coli	Background growth
Total Coliform	

CHEMICAL AND PHYSICAL:

Alkalinity	Copper	pH
Aluminum	Corrosivity (Calcium	Phosphorous**
Ammonia	Carbonate	Potassium
Antimony	saturation/Langelier's index)	Selenium
Arsenic	Cyanide	Sodium
Barium	Fluoride	Sulphate
Boron	Hardness	Temperature
Cadmium	Iron	Total Dissolved Solids
Calcium	Lead	Total Organic Carbon
Chlorides	Magnesium	Turbidity
Chromium	Manganese	Strontium
Colour	Molybdenum	Uranium
Conductivity	Mercury	UV transmittance
(Conductance/Specific	Nitrates	(unfiltered)**
Conductance)	Organic Nitrogen	Zinc

** Testing should be done by a laboratory accredited by the Canadian Association for Laboratory Accrediation Inc.; collect samples using appropriate methods recommended by the laboratory*
***May not be required for wellwater sources.*

ADDITIONAL TESTING FOR SPECIFIC CONTAMINANTS

Additional analysis may be required based on the results of the initial testing and/or nearby sources of contamination. For example, if contamination from industrial, agricultural or forestry operations is suspected, specific parameters of concern (e.g. protozoa, pesticides) should be identified and tested for. If petroleum contamination is suspected analyze for BTEX (benzene, toluene, ethyl benzene and xylene) and conduct a hydrocarbon scan.

SEASONABLE VARIABILITY

The frequency and extent of monitoring should be done as necessary to fully characterize the source. A source will normally need to be monitored for at least two years to provide a reasonable account of seasonal variability.