LARGE-VOLUME WATER SAMPLE COLLECTION
BY DEAD-END ULTRAFILTRATION
(FROM PRESSURIZED SOURCES)
*Naegleria fowleri* Analysis

**Sample Collection:** Dawn protective attire, connect inlet tubing using the FGH connector (or alternative), turn on water supply, and flush the system by allowing the source water to flow for >10 gallons.

**For Field Filtration:** Turn off water supply. Remove Port 1 and Port 3 filter end caps. *Save end caps in a secure place as they are needed for sealing the filter post-collection.* Connect the filter to a pressurized water source via the tubing. Connect the output Port 3 end of filter to the flow meter and record initial meter (in gallons) reading. When connecting the filter system, please ensure that the water flow is in the correct direction and all adapters before Port 1 are secured with a hose clamp. Slowly turn on water supply and check to make sure water is only flowing out of Port 3 (and that there are no leaks). For finished water, collect approximately 26.5 gallons or 100 L sample. Should the filter start to clog and flow rate drop below 50%, sample collection may be stopped, volume recorded, & noted on the Field Data Sheet. At the end of the sampling, turn off water supply, drain tubing, & record final meter reading. When detaching filter from the hoses, ensure to *attach the end caps securely to the filter.* Do not drain excess liquid from the filter. Disconnect the filter system & drain any excess water from hoses & meter. Label filter with all parameters on the label & on the field data sheet. *Should dechlorination be required, add sodium thiosulfate directly into output Port 3 following tube disconnection and cap end.*

**Sample preservation, hold time, & shipping:** following sample collection, *replace filter capsule caps,* and place in a storage cooler. Store the filter at *room temperature* between collection & shipment to the laboratory. *Do not chill.* Ship sample to arrive within 72 hours of completion of sampling. Maximum holding time between initiation of sampling/filtration & elution is 96 hours.
ULTRAFILTER SET-UP
Rexeed-25SX ultrafilters are being supplied to filter water from a pressurized source. See Figures 1 and 2 below. The ultrafilters have been labeled to identify the various filter ports. These ports are:

- Port 1: Input port
- Port 2: Plugged port; no water should flow through this port
- Port 3: Output port
- Port 4: Plugged port; no water should flow through this port

The required tubing and clamps/caps have already been attached to the appropriate ports. The Port 1 tubing supplied can be cut to the appropriate length and connected on-site. The tubing attached to port 3 can be used with multiple filters. Identify the filter with Port 3 tubing already attached and use that first.

Figure 1. Ultrafilter Setup
White snap cap has been removed and set aside for later use. Filter connector is connected to L/S 36 tubing and secured with a hose clamp. The filter connector then screws into the top port (Port 1) of the Ultra-filter.

Port 1 Influent Water

Port 2 Closed
Push white cap onto Port 2 until a ‘snap’ is heard and it is secure and locked. This port along with port 4 must be sealed to ensure sample retention.

Port 3 Effluent water to meter
Tubing is attached to Port 3 by pushing tubing over the open port. No hose clamp is needed.

Port 4 Closed
Ensure White screw plug is screwed on tightly prior to start.