



Water Quality Checklist

The Washington State Board of Health drinking water regulations require that no portion of a public water system, which is to contain drinking water, can be used unless it has been properly disinfected, flushed, sampled and approved by SPU's Water Quality Laboratory. The success of the disinfection process depends primarily on the measures taken by construction crews to avoid contamination during the installation of the water main. If these practices are followed the chances of getting a good bacteriological sample are much improved and the existing drinking water supply will be protected.

SPU Construction Engineering personnel perform continuous on-site inspection during installation of water distribution mains to verify conformances with appropriate AWWA, DOH, and City of Seattle Standard Specifications. SPU Construction Engineering personnel ensure that proper disinfection and flushing are performed and sample taps are provided during the water distribution main installation. They coordinate inspection and sampling of the main with SPU's Utility Service Inspector.

HANDLING & STORING PIPE:

- Unload pipe to prevent entrance of ground contaminants.
- Inspect interior of pipe for debris. If any debris is in pipe, it must be swept out.
- Use watertight plugs when main is not attended to, at the end of workdays, or when storing pipe along the route for future installation.
- Ditch must be kept pumped out at all times. At least one pump is required on job site.
- Keep brush handy for sweeping out end of mains prior to connection.

DISINFECTING PIPE:

- Chlorinate and flush all new mains, including hydrant branches. Refer to the latest edition of the Seattle Standard Specifications, section 7-11.3(12). At SPU Customer Service Inspection's discretion, the chlorine content at the end of the prescribed contact time, **usually 24 hours**, shall be measured to ensure **minimum 10-PPM** free chlorine residual.

- A Washington State Approved Reduced Pressure Backflow Assembly shall be used between the new main and the supply hose to prevent contamination of the supply.

FLUSHING - BACTERIOLOGICAL SAMPLING AND TESTING:

- Ensure a Washington State Approved Reduced Pressure Backflow Assembly (RPBA) is installed and has a satisfactory test report prior to filling new main.
- Complete the hydrostatic test prior to requesting bacteriological sampling.
- Ensure a physical separation between existing main and new main during hydrostatic test.
- Obtain a satisfactory bacteriological sample prior to connection. Sample results are good for a period of 14 days (from the time the sample was drawn). If the connection is not made within this timeframe the main will have to be re-flushed and re-sampled.
- If the new water main is over 500', representative bacteriological samples will be required every 500'.
- Use a clean, chlorinated hose for supplying flush water.
- Maintain an approved air gap, twice the diameter of the discharge pipe/hose between the outlet and the receiving vessel.
- Locate sampling faucet ahead of discharge hose and above excavation.
- **24- Hour notice is required prior to collection of bacteriological sample.**
- All hydrant branches over 18 feet and dead-ends will require a satisfactory bacteriological sample prior to connection.
- **Allow 48-72 hours for completion of bacteriological tests, the Resident Engineer will contact you with the results.**
- **PLEASE DO NOT CALL THE WATER QUALITY LAB.**