

## Start-up Procedure Checklist

Date \_\_\_\_\_

This checklist is for your reference only. You are not required to send a copy to MDH. See the companion document [Start-up Procedure for Seasonal Public Water Systems](https://www.health.state.mn.us/communities/environment/water/docs/ncom/startup.pdf) (<https://www.health.state.mn.us/communities/environment/water/docs/ncom/startup.pdf>)

**✓/NA - Complete and check only boxes that are applicable**

### Required Step 1: System Inspection

#### Water Source

- Well casing is structurally intact.
- Well cap or sanitary seal is in good repair and forms a tight seal.
- Electrical wiring is in conduit with watertight connection where it enters the well cap.
- Vent is screened, clean, and in good repair.
- Well is physically protected if in high traffic area (e.g., protective posts).
- No flooding within 50 feet of the well. Contact your sanitarian or engineer if flooding has occurred.
- Ground surface is sloped to divert surface water away from the well.
- No visible problems with potential contaminant sources within 200' of the well.
- No potential contaminant sources are being stored inside the pump house.
- A raw water sample tap for each well is accessible and operational.
- For surface water systems, the water intake was inspected.

#### Pressure Tank

- Tank is in good condition with no indication of prior leakage (e.g., staining).
- Preset pressure on bladder/diaphragm tank is set approximately 2 psi below the system's low pressure limit (or pump on pressure). With empty tank, pressure is checked at air valve.
- System pressure gauge(s) in place and operational.

#### Non-pressurized Storage Tank

- Storage tank is covered and in good condition (e.g., no cracks, holes, or dents in tank).
- Tank interior is clean and free of sediment. It is recommended the tank also be disinfected as part of the start-up procedure.
- Vent and overflow screens are clean and intact.
- Tank hatch is properly fitted and secure with no evidence of insects or rodents.

#### Treatment (e.g. water softener, reverse osmosis, filters, etc.)

- Treatment components are clean and in good condition with no indication of leakage.
- No safety issues identified (e.g., loose or exposed wiring).
- Treatment unit backwash/regeneration discharge lines have proper air gap.
- All chemical containers are clean, labeled, and properly stored.
- All chemicals are certified by NSF International and within the expiration date.
- Treatment unit is operated and maintained according to manufacturer's instructions.

#### Distribution System

- Dead end piping has been identified and/or removed.

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- Inoperable treatment units have been identified and/or removed.
- Backflow protection devices are in place.
- Distribution system valves have been exercised (opened and closed) and are not leaking.

### Required Step 2: Integrity Check (conducted after system is filled with water)

- Pressure tanks are functioning properly (not waterlogged).
- Document the operating pressure range for each distribution system:

<b>System A</b>	Low psi (pump on) _____	High psi (pump off) _____
<b>System B</b>	Low psi (pump on) _____	High psi (pump off) _____
<b>System C</b>	Low psi (pump on) _____	High psi (pump off) _____
- Each distribution system has been examined for leakage by closing all taps, switching the well and/or distribution pump(s) off, and documenting system pressure loss over a one-hour period:

<b>System A</b>	Start psi _____	End psi (after 1 hr) _____	Pressure loss _____
<b>System B</b>	Start psi _____	End psi (after 1 hr) _____	Pressure loss _____
<b>System C</b>	Start psi _____	End psi (after 1 hr) _____	Pressure loss _____

### Required Step 3: Flushing

- Watermains have been flushed with adequate flow for a minimum of 30 minutes to the ground surface. **Note: Do not flush into the subsurface sewage treatment system (SSTS).**
- Building service lines and plumbing have been flushed with adequate flow for at least five minutes until the water runs clear.

### Recommended Step 4: System Disinfection

- Distribution system has been disinfected and thoroughly flushed until chlorine has been removed or returned to normal operating levels (for systems that continuously chlorinate). **Note: Do not flush into the SSTS.**

### Recommended Step 5: Water Testing

- If the distribution system was disinfected, the absence of a chlorine residual was verified using an appropriate testing method (e.g., chlorine test strips that measure down to 0 ppm). This does not apply to systems that use continuous chlorination as part of their treatment process.
- As recommended, each distribution system was sampled and tested for coliform bacteria at a certified lab. A total coliform absent test result is satisfactory. If total coliform are present, perform additional flushing and/or system disinfection and re-sample. If the second sample has total coliform present, contact your sanitarian or engineer for assistance. Important! If any sample is positive for E. coli, there should be no consumption of the water and your sanitarian or engineer should be contacted immediately for assistance.

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