

SUGGESTED CHECKLIST FOR PUBLIC WATER SUPPLY SYSTEM OPERATION & MAINTENANCE MANUAL

- Map of all source/intakes and raw water transmission lines to plant(s)
- Map of current finished water distribution system
- Inventory List of property, service lines, equipment, tools and instruments; include manufacturer, model, serial number, and condition
- Locations of spare parts (including pumps and backup power source) and vendor contact information or repair service used
- O&M technical manuals for equipment and water system facilities (e.g. treatment plant, distribution system)
- Lists of daily, weekly, monthly, quarterly, and/or annual maintenance tasks to be performed. Log sheets for recording maintenance performed.
- Location of first-aid instructions and supplies.
- Contact names, telephone/fax numbers and email addresses for:
 - System operators, including contract support;
 - System owners or local government officials;
 - EPA Region 8;
 - WY DEQ District Office/Tribal Environmental Director;
 - State/County Public Health or Indian Health Service/Bureau of Reclamation;
 - Certified laboratories used, with identification for each type of sample analyzed; and
 - Local responders (law enforcement, fire, hazmat)
 - Experienced operators at nearby systems who can serve as backup or provide help in an emergency.
- Monitoring Plan: Current Year EPA monitoring requirements, location of sampling or monitoring sites, sampling/reporting forms, and instructions for reporting and recordkeeping.
- Location of sampling and monitoring records
- Location of other formal communications from/to EPA Region 8 and others on the contact list above
- Locations of spare sample bottles, sampling technique information; monitoring plans
- Instructions when notified by lab of RTCR/fecal positive sample
- Location of public notice forms and instructions
- Instructions for pressure loss in system (flow chart)
- Instructions for flushing and shock chlorinating tanks, wells, distribution system mains, etc.
- Location of secured instructions for maintaining security in your system.
- Take-Away Emergency Response Plan: (1) Flow charts for operators to handle specific problems (main breaks, chlorine leaks, chemical spills); (2) Names and phone/fax numbers of state and local responders (police, fire, hazmat, county, etc.) (3) Names/numbers of county and state agencies to call if waterborne disease outbreak or other health emergency.

Examples of Operation & Maintenance Tasks

Listed below are examples of tasks that might be included in your Operations and Maintenance Manual and instructions to persons involved in servicing your public water supply system. Use these lists only as examples for creating your own lists appropriate to your system.

Examples of **Daily** Tasks:

- Check water meter readings and record water production.
- Check chemical solution tanks and record amounts used.
- Check and record water levels in storage tanks.
- Inspect chemical feed pumps.
- Check and record chlorine residual at the point of application.
- Check and record chlorine residual in the distribution system.
- Inspect booster pump stations.
- Check and record fluoride concentration in the distribution system.
- Record well pump running times and pump cycle starts.
- Check instrumentation for proper signal input/output.
- Investigate customer complaints. Record threats or suspicious activity.
- Complete a daily security check.
- Inspect heater operation during winter months.
- Inspect well pumps, motors, and controls.

Examples of **Weekly** Tasks:

- Inspect chlorine and fluoride testing equipment.
- Clean pump house and grounds. Make sure fire hydrants (if any) are accessible.
- Record pumping rate for each well or source water pump.
- Conduct weekly security check.

Examples of **Monthly** Tasks:

- Read electric meter at pump house and record.
- Take appropriate monthly water quality samples.
- Check and record static and pumping levels of each well.
- Read all customer meters and compare against total water produced for the month.
- Inspect well heads.
- Lubricate locks.
- Check on-site readings against lab results.
- Confirm submittal of monthly reports.

Examples of **Annual** Tasks:

Possible time-of-year for each task is provided in parentheses.

- Overhaul chemical feed pumps, such as O-rings, check valves, and diaphragms. (first Monday in January)
- Inspect and clean chemical feed lines and solution tanks. (first Monday in January)
- Calibrate chemical feed pumps after overhaul. (first Monday in January)
- Begin Safety Equipment Repair Log. Maintain log continuously throughout the year. (first Monday in January)
- Operate all valves inside the treatment plant and pump house. Maintain log continuously throughout the year. (first Monday in January)
- Review emergency response plans. (first Monday in January)
- Inspect chemical safety equipment and repair or replace as needed. (first Monday in February)
- Operate all valves inside the treatment plant and pump house. (first Monday in February)
- Inspect, clean, and repair control panels in pump house and treatment plant. (first Monday in March)
- Exercise half of all mainline valves. (first Monday in March)
- Inspect and clean chemical feed lines and solution tanks. (first Monday in April)
- Calibrate chemical feed pumps. (first Monday in April)
- Inspect storage tanks for defects and sanitary deficiencies. (first Monday in May)
- Clean storage tanks if necessary. (first Monday in May)
- Flush the distribution system and exercise/check all fire hydrant valves. (first Monday in June)
- Perform preventive maintenance on treatment plant and pump house buildings. (first Monday in June)
- Inspect and clean chemical feed lines and solution tanks. (first Monday in July)
- Calibrate chemical feed pumps. (first Monday in July)
- Prepare a demand forecast. Identify and evaluate energy conservation measures (for your utility). Identify and evaluate distribution system leaks. Establish/update water loss mitigation program. Establish/update customer incentive program for water-efficient home devices. (first Monday in July)
- Operate all valves inside the treatment plant and pump house. (first Monday in August)
- Exercise mainline valves that were not exercised in March. (first Monday in September)
- Prepare system for winter operation. This task may be postponed until October or November, depending on local conditions. (first Monday in September)
- Make sure unnecessary equipment is properly decommissioned. (first Monday in September)
- Inspect and clean chemical feed lines and solution tanks. (first Monday in October)
- Calibrate chemical feed pumps. (first Monday in October)
- Prepare system for winter operation if not completed in September or October. (first Monday in November)
- Contact an electrician to check running amps on well pumps. (first Monday in December)