

Appendix B

Emergency Management Program of the Lake Wenatchee Water District

Contingency Operation Plan

The following section contains contingency operation plans for responding to potential emergency conditions for each of the major system components. The district operator will be involved in the implementation of any solution surrounding any of these conditions.

Wells

Emergency Condition: Aquifer Contamination

Impact on System: Potentially major impact. The water is not suitable for potable water use – major loss of supply.

Emergency Response

1. Shut down the well(s).
2. Notify DOH of the aquifer contamination.
3. Notify all customers of the problem and instruct them to boil all water to be used for consumption and cooking.
4. Analyze the water quality within reservoirs and dispose of them properly if contaminated.
5. Disinfect reservoirs and water mains as necessary to remove contaminated residuals.
6. Adjust control of system facilities as necessary to provide supply from storage facilities if water within them is not contaminated.
7. Monitor water quality at the source and investigate the cause of contamination.
8. Communicate and implement water use reduction measures as necessary to ensure an adequate supply of water.

Emergency Condition: Power Outage

Impact on System: Little to moderate impact depending on length of outage, the area affected by the outage and the level of system demand.

Emergency Response

1. Notify the power company of outage determining if source/and repair time is known.
2. Investigate/assess affected equipment for a cause if readily known/visible and determine necessary precautions per projected length until power is restored.
3. If necessary, bring a portable generator to the affected site (possibly rent one with sufficient capacity and specifications) and connect to the facility.
4. Supply water demand from reservoirs.
5. Communicate and implement water use reduction measures as necessary to ensure an adequate supply of water.

Reservoirs

Emergency Condition: Structural Damage

Impact on System: Potentially major impact depending on reservoir (or reservoirs) damaged. Impacts could include loss of storage capacity and reduced fire flow.

Emergency Response

1. Isolate reservoir(s) from water system (Close valve).
2. Notify LWWD Commission and local appropriate authorities (police, fire department, PUD) and nearby residents of potential hazards and reduced firefighting capabilities.
3. Have Operator assess damage and communicate recommended or required course of action.
4. Drain reservoir(s), as necessary to reduce level of damage and threat to local residents.
5. Evaluate the extent of damage and contact for assistance the necessary agencies.
6. Adjust control of other system facilities to operate system without the damaged reservoir(s).
7. Communicate and implement water use reduction measures as necessary to ensure an adequate supply of water.

Transmission and Distribution Mains

Emergency Condition: Water Main Break

Impact on System: Depending on the size and location of water main and size of the break, impacts range from minor to major. Loss of water from reservoirs, reduction or loss of fire protection capability, disruption of water service to customers and potential damage to adjacent property are all possible impacts.

Emergency Response

1. Have Operator assess severity and investigate the source as well as contact necessary contractors/utilities/ and LWWD Commission.
2. Notify affected customers of loss of service and hazards until repaired.
3. Isolate, shut down and repair damaged water main.
4. If one of the major transmission mains must be shut down, adjustments to the control and operation of other facilities may be necessary and communicate to the affected residents.
5. Review and employ DOH standards prior to re-implementation of fixed main into the system to assure safety.

Emergency Condition: Water System Contamination Due to a Backflow Incident

Impact on System: Potentially major impact. Water not suitable for potable use means a loss of supply.

Emergency Response

1. Notify the Cross-Connection Control Specialist of the incident.
2. Shut down the affected mains, if possible, to contain the affected contaminants.
3. Notify DOH of the backflow incident.
4. Notify all customers of the problem and instruct them to boil all water to be used for consumption and cooking and/or issue a no drinking warning.
5. Flush affected water mains to remove contaminants.
6. Disinfect reservoirs and water mains as necessary to remove contaminated residuals.
7. Analyze water quality in other parts of the distribution system to ensure that all contaminants were contained.

Control System

Emergency Condition: Control Equipment Failure

Impact on System: Probably minor to moderate impact depending on the extent of loss to control equipment at the affected facilities. If the control equipment fails, the supply pump will have no automatic control. This would result in non-stop pump operation and reservoir overflow if the control equipment failed during pump operation. If the control equipment failed while the pump was in the “off” mode, the results would be failure to activate the pump and excessive drawdown in tanks.

Emergency Resp

1. Have Operator assess failure alarms or non- functioning controls and notify LWWD Commission if further assistance is needed.
2. Contact troubleshooting assistance including contractors/software providers/engineering firms/manufacturers for possible solutions and assistance.
3. Shut down and/or hand operate the supply pump as needed to maintain reservoir levels.
4. Make necessary adjustments to or manually operate the facility with the failed control equipment.
5. Order and install (or have installed) replacements for failed equipment or software updates as required.¹

¹ Revised 1.13.22