

Document Owner: Manager Customer Planning

Water Shutdown – Procedure for Critical Customers

Scope/Purpose: Maintenance of a safe water supply takes on added importance to critical (includes priority and vulnerable) customer groups (e.g. dialysis patients, schools, food processing companies, hospitals etc) because without this supply they are either forced to close or other implications of the lack of supply could be serious (e.g. interrupting medical treatment cycles). It is therefore important that we work very closely with critical customers when looking to interrupt their water supply due to both reactive and planned works.

Health & Safety and Operational Information

Hazard Indicators

Personal Protection

U/G Services

Asbestos Cement

Concrete Saws

- Health and Safety Information**
- Health and Safety documentation.
 - Generic Traffic Management Plans or site-specific Traffic Management plan.
 - Hazardous Waste
 - Confined Space Entry

- Operation’s & Maintenance Documentation**
- Corridor Access Requests (CAR) and WIP Permits (site specific or generic/global)
 - Service plans (B4uDig)
 - Design drawings
 - Site plans
 - Notification Calling Cards

- Customer Information (Confidential)**
- Blow Back at risk customers (WWL)
 - Vulnerable customers (DHB supplied list)
 - Priority customers (WWL)

- Priority Customer Categories**
- Schools and Childcare
 - Commercial premises
 - Hospitals
 - Retirement Homes/Villages
 - Correction Facilities
 - Military Installations
 - Oil and Gas Refinery

- Emergency Procedure / Escalation**
- Make “Site Safe” and isolate risks to people or property with resources at hand

- Additional Documentation**
- Fulton Hogan Work Instruction for Disinfection of Water Systems

- Escalate if extra resources required or problems occur!**
- Escalate to Team Leader and inform of the issues faced and/or expected resources required if necessary.

Required Skills, Competencies (Qualifications and/or Certifications)

Competent persons only NZ Certificate in Infrastructure Works Level 3 or higher (or similar) with a strand in water.

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Standard Operating Procedure

Required Equipment

Equipment and Information	Details
Fully Equipped Vehicle	Ensure vehicle, plant, equipment and materials appropriate to the day's work schedule is available.
Vulnerable & Priority List	Review shutdown area against this list.
Specialist Equipment	FAC Photometer, disinfection equipment, approved pipe and fittings. Excavators may be needed on some jobs.

Prepare to do the work

Action	Action Details
Forward Planning –Scheduled Shutdowns	<ul style="list-style-type: none"> Consider if work can be staged to minimise the number of customers without water at any one time, check correct pipes and fittings, enough staff, plant and materials will be ready and available to complete the work. (The most acceptable times of water outage are usually 10am – 12pm and 1pm – 3pm.) Submit water shutdown request to Water supplier's Engineer's Representative as required. Check vulnerable and priority customer's list and complete on-site investigation, prepare shutdown diagram & identify critical customers (e.g., medical facilities, cafes, bakery, restaurants, hairdressers, schools, dialysis patients and where affecting fire protection systems).
Medical Officer of Health – Approval/notification	<ul style="list-style-type: none"> If shutdown could be >8hrs prior approval required from the regional Medical Officer of Health (including reasons for interruption).
Customer Notification	<ul style="list-style-type: none"> Ensure critical customers who rely on water are notified/ alternative temporary supply provided as determined by water supplier / Engineer's Representative. Notify Fire Service. Notification to be distributed to all affected customers via shutdown cards/letters (date, time and likely duration) at least 2 days prior to shutdown

Perform the work

Action	Trade	Action Details
Scheduled shutdowns	Serviceperson	<ul style="list-style-type: none"> Notify client call centre, provide map of outage area if able Notify Engineer's Representative at shutdown commencement
	Serviceperson	<ul style="list-style-type: none"> Close valves bringing water into the affected area. Draw off the water by opening a hydrant within the closed down area.
	Serviceperson	<ul style="list-style-type: none"> Carry out the repair or the required work. If during the progress of an estimated <8hr job it becomes apparent that the work will run >8hrs the Engineer's Representative and Medical Officer of Health should be notified and customers updated (remember once repair work completed and pipes charged with super-chlorinated water this needs to be left for 1 hr before checking FAC levels). Flush and disinfect the affected area as per the FH Work Instruction for Disinfection of Water Systems. Check FAC suitable after 60mins. Dispose of super chlorinated water in an approved manner Feed water into the closed down area by opening the valve at the live end. Flush out the closed down area through an open hydrant/s. Close off hydrant to leave the affected area fully charged with water. Notify the customers & Engineer's Representative after the valves are turned back on.
Unscheduled shutdowns (jobs <30mins, limited properties)	Serviceperson	<ul style="list-style-type: none"> Notify client call centre and affected customers (door knock). Carry out repair work. Flush out closed area through open hydrant. If only a single (or couple of properties isolated and no hydrant is available then use the consumers tap closest to the point of supply.

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Action	Trade	Action Details
Emergency Shutdown	Serviceperson	<ul style="list-style-type: none"> Notify client call centre, confirm situation found with Engineer’s Representative and affected customers (door knock if staff available). Notify Fire service of area involved and expected time that service will be off. Close valves to isolate area of break and prevent further loss of water. Carry out repair work. Flush the affected area as per the flushing guidelines If considered ‘High risk’ (i.e. contamination occurred) - Disinfect the closed down area, leave 60mins and test to ensure area is safe to be reconnected to the network (see FH Work Instructions for Disinfection of Water Systems). Dispose of super chlorinated water in an approved manner Feed water into the closed down area by opening the valve at live end. Flush out the closed down area through an open hydrant. Close off hydrant to leave the affected area fully charged with water. Notify the customers & Engineer’s Representative after the valves are turned back on. Recommend that customers run taps for a few minutes to clear any air from the system. It may have a milky or discoloured appearance. This is due to air in the system. It should clear after a couple of minutes of running the cold tap. The water may also look dirty or have a brown tinge to it. This is caused by changes in water pressure which may have dislodged silt that lies in the pipes. Again, this should clear after running your cold tap for a short time. Ensure notification to Medical Officer of Health occurs ASAP and no later than 24hrs after commencement if there is outage to any property of >8hrs.
Notification to Medical Officer of Health		
Close Out	Serviceperson	Complete updates to asset information and job specific details as required

Follow Up Work(s)

Action	Trade	Action Details
Record	Serviceperson	On receipt of the laboratory tests update the Water Quality Sampling Survey Form(s) that have been completed with the test results.
Report	Serviceperson	If laboratory results indicate, an issue with the supply network, which requires further intervention, on discovery, immediately notify your Supervisor of the issue to enable the decisions on further actions to be taken.
Comm’s	Serviceperson	Update customer of the results of the laboratory testing which has occurred. This may occur via the hub customer centre.
Contact Card	Serviceperson	Customer Calling Card / Notification letter drop cards. Explain activities undertaken in their absence and the results of any field test undertaken. Provide a date when expected results of Lab testing will be made available