## Board of Water Supply Main Break Repair Primer

When a main breaks, the Board of Water Supply's top priority is to protect public health and safety, while minimizing water loss and the impact on the public. Repairs are complex and require considerable care and time. Our crews work to restore service as quickly as possible – here is a quick overview of what they do:



### 🔶 1. Stop Water Loss

Upon learning of a main break, we go to the site to close the necessary valves to stop water loss and isolate the broken section from the rest of the main. We close valves gradually to protect the rest of the system from abrupt changes in pressure and flow. Initially, the water outage may be more widespread until the break is isolated. Then once we start repairs, we try to keep water flowing to the rest of the system to minimize impact to our customers.



To report a main break, 24/7, please call the BWS Trouble Line at 748-5000 and press "1" at the prompt. Customer Service: (808) 748-5030 Billing & Payments: (808) 748-5020

#### 🔶 2. Notify Other Utilities

Prior to repair, utilities with buried conduits near the main are notified to mark their lines so we can avoid damaging them.



#### 🔶 3. Minimize Impact

We set up a water wagon, or a spigot on a nearby hydrant, for customers who lose water service during repair. If a break affects many people or a vital traffic route, we alert media and the public via HNL.info\*, social media, or our website (<u>www.</u> <u>boardofwatersupply.com</u>). If the break has a significant impact on traffic, we work with other City and State agencies on mitigation plans. When appropriate, we arrange with the police for traffic control.



#### 🔶 4. Repair The Main

We clear debris, set up safety equipment, excavate the main (most pipes are 3 to 10 feet underground), and pump out excess water around it. Excavating can be prolonged if there are other buried utilities close by. Once the main is unearthed, we can determine the extent of damage and make repair. Often, we need to replace the damaged section.





#### 🔶 5. Restore Water Service

Once repair is done, we test the new pipe to ensure it is fit for service and disinfect it to protect public health and water quality. Next, we open a nearby hydrant to flush air and debris out of the pipe. Then, we reconnect customer lines to the main and carefully re-open the valves so that water will again flow through the main and build up pressure to normal levels.



#### 🔶 6. Restore The Roadway

Last, we refill the repair trench and prepare the road for patching. We install a temporary patch to cover the excavated area until a pavement contractor can put in a permanent one.

> \* Get the HNL.INFO App Alerts on your cell phone: https://hnl.info



### What does the BWS do when a main breaks?

Although Oahu experiences far fewer main breaks than the national average, the resulting inconvenience, damage, and cost means we must act quickly.



# What we're doing to prevent future main breaks:

- Replacing portions of the system that are most vulnerable to breaks and most critical to service dependability.
- Extending the life of water mains in areas of highest corrosion potential.
- Conducting forensic analysis to determine the primary causes of main breaks and identify changes to design, construction, and operation.
- Pinpointing small cracks or holes for repair.
- Encouraging customers to reduce water use and adjusting operations to increase efficiency, which reduces water being pumped through the system and means less stress on pipelines.
- Developed a 30-year Water Master Plan to identify and prioritize long-term improvements.

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Board of Water Supply

# Main Break & Repair