VALVE FAILURE

By Nathan Wissenbach

Throughout my travels I've stopped at many towns and villages, one common occurrence is valve failure. What is happening to these valves is the nuts and bolts are corroding away, causing the top of the valve to separate. The number of these valve failures are increasing in the distribution systems due to the age of the system.

One of my experiences with valve failures was an 8-inch main break with a fist-sized hole in the main, which was draining the clear well. My crew and I responded to the scene and started closing valves to isolate the leak. We tried to isolate the leak to just the street, but could not locate the valve, so we ended up closing the next street over to isolate the leak. Once we got the leak under control, we took the time to locate the valve we couldn't find before. We located it under 4 inches of pavement, got it open, and started to close that valve. We closed the valve down; heard a pop and knew we had just broken the valve. Once we finished fixing the 8-inch main break, we started digging down on the valve and found that the nuts and bolts had snapped, causing the top of the valve to separate from the lower part of the valve. We did not have a valve in stock to replace the broken one, so we removed the valve out of the line completely.

After this experience and to prepare ourselves for future valve failures, we purchased stainless steel nuts and bolts and rubber O-rings for every valve size we had in our system. We also identified valves in the same area that were installed at the same time and scheduled digs to replace the nuts and bolts to prevent the failure from happening again. My recommendations to my readers are to stock spare O-rings and stainless-steel nuts and bolts for all sizes in your system so when you do have a failure, all you must do is replace them.

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