



# INFRAMARK

## CUSTOMER FIRST NEWSLETTER

OCTOBER 2019

### AN INTRODUCTION TO VALVE AND MANHOLE SURVEYS and AIR SCOURING

#### **VALVE, MANHOLE SURVEYS and AIR SCOURING**

Inspecting your district's water distribution system main line isolation and dead-end flushing valves and performing a complete inspection of all manholes in the district's sanitary sewer collection system is a key component in preventative maintenance. Cleaning your water mains through air scouring is another aspect in maintaining your district's infrastructure.

#### **VALVE SURVEY**

The process of performing a valve survey is to physically locate the valve and inspect it for any physical or obvious damage, exercising the valve by hand or with a valve exercising machine and noting any deficiencies.

When we do an inspection, we are looking for damaged or buried A-boxes, valve adjustments to grade, misaligned valve stacks, broken valve stacks, debris in the valve stacks and broken or difficult to operate valves. We recommend that a valve survey be performed annually as part of a Preventative Maintenance Program. Not performing the survey could create operational issues that could impact public health and water quality, especially during an emergency when speed is of the essence. This gives the operator and the District the opportunity to make a repair with a planned outage. Discovering a valve is broken or inoperable when there is a water main break results in more lost water, longer outages and typically more of your community out of water during the repair.

#### **MANHOLE SURVEY**

A manhole survey is an inspection of all manholes in a sanitary sewer collection system. The survey is done to ensure the collection system has no identifiable problems and structural issues that could allow inflow and infiltration into the collection system. The survey is performed by removing the manhole cover and physically inspecting the manhole. We look for damaged or missing manhole rings and covers while ensuring the manhole is adjusted to the proper grade and that the ring is properly installed and grouted in place. In addition, we check the joints and connections to make sure that they are sealed to prevent infiltration. Deterioration caused by hydrogen sulfide gas, age or any other factors are also noted. We recommend that a manhole survey be performed annually as part of the district's Preventative Maintenance Program. Not having a proper Preventative Maintenance Program could result in more costly repairs including a complete manhole collapse. This type of failure is catastrophic for the collection system and results in disruption of service and potential environmental impacts due to untreated sanitary sewer unauthorized discharges.

#### **AIR SCOURING**

Air scouring is an effective and modern process used to clean water mains. Inframark has been using this process as an alternative to pigging. Air scouring is faster and less expensive than pigging. With air scouring, we close valves on either end of the section of the main to be cleaned. An air supply hose is attached to a fire hydrant on one end of the closed section and then open another hydrant at the opposite end. A large compressor then

pumps high volume air through the fire hydrant. The high-pressure air agitates the water and loosens the mineral scale, in turn, acting like a scouring agent helping to clean the pipe. As the water flow is increased, the open fire hydrant discharges the rusty scale and mineral deposits. Once the fire hydrant runs only clear water, the process is complete. If an adequate flushing program is maintained, air scouring is recommended every five years, but systems with nitrification issues may consider cleaning more often.

Regular preventative maintenance like valve and manhole surveys, coupled with air scouring can keep your system in tip top shape and reduce costs over the long term.

On behalf of the Texas MUD Leadership Team

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