

VILLAGE OF HOMEWOOD



BOARD AGENDA MEMORANDUM

DATE OF MEETING: April 8, 2025

To: Village President and Board of Trustees

Through: Napoleon Haney, Village Manager

From: Joshua Burman, Director of Public Works

Topic: Bid Award – Water Distribution System Leak Survey

PURPOSE

Staff requests the Village Board award a bid to M.E. Simpson Company, Inc. of Valparaiso, Indiana, the lowest responsible bidder, to perform a Water Distribution System Leak Survey, in an amount not to exceed \$31,075.

PROCESS

All municipal water systems will experience leaks somewhere within their miles of watermain. These leaks will generally have varying degrees of priority causing non-revenue water loss. Simply put, non-revenue water loss is water that does not make it from point A (the source of the water distribution system – *Chicago Heights*) to point B (the end user – *Homewood water users*) because it got lost along the way due to leakage. These losses can be real, physical losses (caused by leaks, breaks, spills, etc.) or only apparent losses that occur as a result of broken or tampered meters. Even relatively small amounts of water loss can add up over time to represent a significant financial drain on the water utility. In very rare cases, leaks and breaks that allow water to escape can also allow impurities to enter the distribution system.

Water Leak Survey Process

One of the most absolute way of identifying critical water system leaks is through the performance of a leak system survey. Water is lost through leaks and cracks in pipes and their fittings. Since most water infrastructure is underground, it is virtually impossible to visually determine the location of these leaks unless the leaking water reaches the surface (causing ponding and sink holes, structural damage, buckling pavement, etc.) and the exact location of the leak may be nearly impossible to determine. Leak detection requires special technologies that allow trained inspectors to precisely determine the location and severity of pipe leaks. This is accomplished by ultrasonically monitoring every foot of water main, hydrant and mainline valve. A computerized leak analysis pinpoints every suspected leak is confirmed with an electronic leak correlator. Suspect leak sites are electronically confirmed by measuring and analyzing the timing of sound waves simultaneously from two monitoring points.

VILLAGE OF HOMEWOOD



Acceptable Water Loss

According to the Illinois Department of Natural Resources (IDNR), the standard for water loss for Lake Michigan Permittees in Illinois is 10%. In essence, it is acceptable that a minimum of 10% of the water that enters into a municipality's water system (pipes and service lines) will be "loss."

The LMO-2 is an IDNR annual mandatory report that details the amount of water used, sold, and lost by a "permittee" (a municipality that provides water to a population) in the past water year (October - September). To provide context and to show the progress of Homewood's work in the area of water system loss reduction, in an LMO-2 water use report from 2017, Homewood's water loss was 16.7%. Homewood's **9.8%** current water loss is below the IDNR's acceptable water loss percentage. Our progress of lowering this loss rate is directly attributed to our annual water system leak survey.

Best Management Practices (BMP) for Leak Survey Frequency

As it relates to Homewood's Best Management Practices (BMP), leak detection surveys should be performed annually; at least until the Village can reduce its water loss to the 8% "gold standard" or lower. Leak detection for municipal systems is becoming increasingly important. As many municipalities face aging pipelines and water supplies, leaks are becoming more frequent and more costly. Consistent loss of water can equate to high lost revenue amounts that would otherwise be used for water operations and the completion of capital projects.

This Year's Leak Detection Survey

As part of the water distribution system infrastructure maintenance, and effort to reduce water loss, Public Works issued a bid for a Water Distribution System Leak Survey, in which the Village's 113 miles of water main will be inspected. The awarded vendor will supply a written report on all leaks, their location, and estimated water loss to the Village. With this critical information, repairs to the water system can be scheduled by the Public Works Department.

Public Works publicly opened bids on April 1, 2025. A tabulation of the bids received is below.

Vendor	Bid Price
M.E. Simpson Co., Inc.	\$31,075
Associated Technical Services	No Bid – workload full
American Leak Detection	No Bid
Xylem	No Bid
EJP	No Bid

M.E. Simpson Co. Inc. is a recognized industry leader in water loss control programs, and utilizes the latest technologies and services to develop tailored solutions that meet the specific needs of each municipality. With over 40 years of experience, M.E. Simpson provides expertise in water

VILLAGE OF HOMEWOOD



loss control and reducing non-revenue water. The company offers a comprehensive range of services, including:

- Large Meter Evaluation, Testing, Calibration, and Repair
- Water Distribution System Leak Surveys
- Water Audits
- Large Transmission Main Leak Detection
- Leak Detection for Pressurized Water Mains
- Leak Detection for Water Distribution and Transmission Mains

OUTCOME

Awarding this bid will help reduce the consistent loss of water which in turn equates to significant lost revenue for water operations and capital projects.

FINANCIAL IMPACT

- **Funding Source:** Capital - Water/Sewer Fund
- **Budgeted Amount:** \$78,523
(Budgeted amount includes Valve & Flow Testing budget to be bid separately in April 2025)
- **Cost:** \$31,075

LEGAL REVIEW

Not Required

RECOMMENDED BOARD ACTION

Award a bid to M.E. Simpson Company, Inc. of Valparaiso, Indiana, the lowest responsible bidder, to perform the annual Water Distribution System Leak Survey Project, in an amount not to exceed \$31,075.

ATTACHMENT(S)

Bid Tabulation