



Memorandum

TO: Kevin J. Jackson, Village Manager *KJ*

FROM: Rob Sproule, Public Works Director *RS*

FOR: Village President and Board of Trustees

DATE: March 8, 2023

SUBJECT: **Water Infrastructure Upgrades Update: Customer Water Metering**

The purpose of this memo is to provide the Board an update on ongoing Water Infrastructure Upgrades associated with Customer Water Metering. There are three primary projects associated with upgrading customer water metering across the Village: the Water Meter Change-out Program, Installation of the Advance Metering Infrastructure (AMI) system, and Water Smart Software implementation.

Water Meter Changeout Program:

The Village has a total 12,683 meters throughout the domestic water system network. These meters have a useful life of approximately fifteen to twenty years and need to be upgraded to ensure accurate reading of customer usage. Just over a third (4,403) of those meters have been upgraded or fully replaced over the last seven years in an effort to upgrade the meter bodies and radio reporting heads. The remaining 8280 meters were reaching the end of their useful life and needed upgrading or full replacement. Over the course of 2022, the Village worked with a Plumbing contractor to upgrade those meters. The contractor was able to replace all but the last 301 meters. These meters were skipped for a number of reasons including vacant properties, active construction or needed plumbing alterations by the customer. The remaining meters, not included in their project are being address by Village Staff. In addition, Village staff used this project as an opportunity to begin identifying the pipe material of the private services. The Village is required to collect and inventory this information as part of Illinois Lead Service Line Replacement and Notification Act requirements.

AMI System:

The new radios on the replacement water meters are strong enough to talk directly with a fixed antenna network instead of the current drive-by collection method. This advanced metering infrastructure will collect customer usage date multiple times a day instead of once every three months. This will allow the Village to more accurately track usage and provide

reports on exact water usage on any given day or monthly schedule. The Village will also be gathering more accurate “billed metered” data, for internal auditing purposes, as well as for the annual IDNR Water Use Audit Form (LMO-2). This fixed network will also gather customer water data on a quarter-hourly basis allowing Village personnel to access this information through our Neptune 360 software.

The Village recently installed the first antenna at 150 Forest Avenue and has started to collect data reads from water meters across a section of the Village. Staff are working with Neptune, the provider, to get the best possible results from this antenna. An additional 6 antennas have been ordered but are being held up with supply chain constraints. As these antenna orders are received staff will work with Neptune to determine the best locations for their placement and install them as quickly as possible. Once the Village is receiving consistent readings from across the Village for most users, the Village can evaluate transitioning to monthly billing and implement the customer service Water Smart portal.

Water Smart:

Water Smart is a customer portal software that allows customers access to their daily / hourly water usage. The portal allows the customer to evaluate their usage helps identify where customers can potentially reduce their water usage. The portal software also works in conjunction with a built-in leak notification feature in the Neptune meter to inform a customer of possible leaks on their property. A leak notification will push out to the water customer to alert them that a leak is occurring if the system identifies unusual significant usage for a period of time.

Staff are scheduled to meet with the software provider during the next couple months to get a better understanding of the benefits this software will provide and discuss execution options and scheduling based on the successful implementation of the Village’s AMI fixed antenna network.

Staff will continue to keep the Village Board updated on any significant milestones with this project. Please feel free to reach out to me with any questions at rspoule@oak-park.us or 708.358.5700.

cc: Lisa Shelley, Deputy Village Manager
Ahmad Zayyad, Deputy Village Manager
Mike Bills, Water & Sewer Superintendent
All Department Heads
Christina M. Waters, Village Clerk