



Memo

To: Public Works Committee
From: Crystal Turner, Clerk
Date: 01/08/2026
Re: Review of potential meter installation for reporting sewer usage

Introduction

Over the past six months, I have conducted a review of the Village's sewer utility billing process, building upon research originally completed in 2022. The purpose of this review was to identify methods to ensure more accurate reporting of sewer usage, increase efficiency in collecting data on commercial users, and strengthen long-term budgeting and oversight.

This review confirmed that many of the irregularities identified in 2022 remain unresolved and have continued into 2025, indicating a need for improved controls which can be found in the process of automating the meter reads.

Summary of Issues Identified

The following issues were identified:

1. Unreported Vacant Commercial Properties

Businesses that are vacant are not reported to the Village in a timely manner. Following up with the property owners is a time-intensive process. In some cases, no readings are provided and estimates are used. Village staff cannot access buildings to obtain readings.

2. Incorrect Reporting to MMSD

Businesses have been incorrectly reported to MMSD, resulting in overcharges to the Village. Without consistent follow-up, meters can misreport or fail, causing prolonged inaccuracies. Example: A Bluemound Road property had a failed meter from over a year prior. The village had estimated the monthly amount.

The standard practice of estimating the bill, if no read is received, is twice the last in-person read. In the case of the Bluemound Road property, that last in-person read was half a period due to the

breakage and total amount billed was likely less than what was used. Therefore, no incentive for the property owner to fix.

3. Estimating reads

When the village estimates a read, we can be entering an incorrect lower read (as was the case with Bluemound Rd) or drastically higher read resulting in either additional work to correct or refund an overage. Often the overage is credited on future bills.

4. Incorrect Units of Measure

Some properties reported readings in cubic feet (CF) that were assumed and billed as gallons, resulting in inaccurate Village charges and MMSD reporting.

- Since August 2025, reporting now requires a photo of the meter.
- Staff converts CF to gallons prior to billing entry.

5. Changes in Business Use/Property Ownership

Changes in occupancy or use affect MMSD calculations but are not always reported. Example: Dentist office converting to retail.

The current system limits the Village's ability to obtain final readings, split usage accurately, and establish new accounts at the time of ownership transfer.

The Village issues an annual self-reporting form to non-metered properties. Aside from this form there are no controls to ensure sewer usage is updated when properties become occupied.

- The last annual self-reporting form was issued in June 2025 and only had a 22% return rate.
- A September 2025 review revealed businesses that were not properly accounted for in flat-rate calculations that do have significant impact on sewer usage (Restaurants).

6. Inequitable Flat-Rate vs. Metered Charges

Similar businesses may be charged the same despite differing operational intensity.

- A restaurant open three days per week is charged the same as one open seven days per week.
- Flat-rate properties may be charged differently than metered properties. Example: Property A in December 2025 as a metered building was charged for 292,900 gallons and a similar property, B was charged for 93,000 gallons on a flat rate. Please Note: no buildings are apples for apples.

Background

The Village has fewer than 86 commercial sewer users, consisting of both flat-rate (51 Users) and metered properties (35 Users/40 meters).

Currently:

- Some businesses self-report readings -29 Users/34 Meters.
- City of Brookfield reports 6 meters to the Village.
- There are 8 deduct meters (sprinklers and pools) that are reported to the Village
- The City of Brookfield and City of Wauwatosa use Badger meters to monitor water consumption.
- Sewer usage is based on inbound water consumption, as water entering the property ultimately discharges to the sewer.
- These meters are installed on the inbound water service pipe.

Brookfield collects meter data via cellular transmission, reports in cubic feet, converts to gallons, and provides quarterly reports to the Village. Staff are working with Wauwatosa to begin similar reporting, potentially starting March 2026. However, neither municipality complete readings on deduct meters (meters that account for pool or sprinkler usage).

Metering and Ownership Transitions

An Advanced Metering Infrastructure (AMI) based system would allow:

- Final meter reads at ownership transfer
- Accurate bill splitting
- Timely creation of new accounts
- Improved transparency and billing accuracy (to Property Owner and MMSD)

Installation Overview

- **Unmetered commercial buildings:** Approximately a 1" connection would need to be hard-plumbed into the existing sewer line.
- **Existing metered buildings:** An additional meter would need to be installed. Properties on a well system may opt to replace the current meter with the Village approved meter or install an additional meter.
- Property owners would retain responsibility for hiring a plumber and obtaining permits. This process was designated to be the path forward in 2021. The Village would then credit the amount to the first bill up to \$600.
- Village inspectors would notify staff upon final inspection.
- Existing Brookfield or Wauwatosa water meters cannot be removed; sewer meters would be installed in addition.

Cost and Operational Analysis

1. Expected meter lifespan – 10 years
2. Meter replacement procedures – review cost analysis worksheet to determine long term passed through cost recovery.

3. Meter sizing is based on sewer line size. The information for this is an estimate. As of December 2025, the survey response is minimal to accurately determine the cost of the meters (14 of 81 respondents).
4. Software/cellular connection costs – There are two options that were reviewed and, outside of Badger Meter, there are other vendors. At this point, the quotes were to get an idea of associated costs. Beacon allows the user to integrate meter reads into a utility billing software while AquaCue simply provides the meter reading either through its own software or the ability for the user to download the readings to another file such as excel.

Policy Considerations, Risks, and Open Questions

Key issues requiring further evaluation include:

1. Coordination with Wauwatosa water connection policies, including properties on wells that have or will have access to Wauwatosa water.
2. Can deduct meters be placed and reported in the same manner
3. Additional AMI vendor quotes and cost comparisons.
4. Timing and cost implications to property owners
5. Handling irregular connection scenarios without duplicative costs
6. Fire Department usage (fire trucks, ice rink, pool deduct meters)
7. Water pipe sizing verification for flat-rate properties
8. Installation costs. Staff consulted with the Village of Deerfield following a League of Wisconsin Municipalities article (October 2025). Deerfield implemented Sensus meters with AquaHawk software in 2024 and trained DPW staff to install meters as a cost-saving measure. Deerfield has offered to share training materials and implementation insights with the Village.
9. Lead and asbestos considerations during installation

Attachments

Property A example

Property B example

Meter Funds-Cost

PWC October 2021 Minutes

2021 Draft Ordinance