




## Memorandum

TO: Kevin J. Jackson, Village Manager 

FROM: John P. Wielebnicki, Public Works Director

FOR: Village President and Board of Trustees

DATE: May 23, 2022

SUBJECT: Response regarding Water Loss as discussed at the May 9, 2022 Village Board meeting

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The purpose of this memo is to provide a response to Trustee Taglia's question from the Monday, May 9, 2022 Board meeting where the Climate Plan was discussed regarding water loss.

The specific question from Trustee Taglia was "it was mentioned that part of our 25%+ water loss might be due to a billing error that was discovered. Could I get more detail on that? I've not heard that before. I know we have to report that data out to other agencies. Were those reports correct?"

### Background

Water Loss is reported annually to the Illinois Department of Natural Resources (IDNR) as "Non-Revenue Water (NRW)". The most recent NRW reporting to the IDNR for the period October 1, 2020 through September 30, 2021 was 19.6 %. Previous NRW reporting for the same periods in 2019-2020 was 30.7% (mostly due to an unknown large water system leak) and in 2018-2019 was 24.0%.

NRW is calculated using the American Water Works Association Water Audit Software which is a nationally recognized method for determining a water suppliers NRW.

Below is a summary of the three categories of the Villages NRW for the period 2020 - 2021 totaling 19.6%:

- 1) "Unbilled but Authorized Consumption" consisting of hydrant flushing, street cleaning, water used for CIP projects, etc. (1.4%)
- 2) "Apparent Losses" which includes unauthorized consumption (0.2%), customer metering inaccuracies (3.3%) and systematic data handling errors or billing errors (0.2%)
- 3) "Real Losses" which includes leakage on watermains and leakage on service connections (14.5%)

The Water Audit Software uses some default values in determining some of the above losses. The default values are based on certain Water Supplier factors.

Only a small portion of NRW loss comes from billing errors (0.2%). As shown from the reporting above a majority of the 19.6% NRW comes from Real Losses (leaking pipes). In an effort to continue to reduce this number water system leak surveys are completed annually and watermain replacement projects are authorized as part of the Capital improvement Plan.

As far as relation to the Climate Plan, water conservation is a key component. In addition to those items noted in "Goal #4: Conserve and Maintain Clean Drinking Water" the Village will be implementing a Customer Portal as part of the water meter changeout program that is currently underway. The portal will allow water customers to personally monitor their water use and receive emails if they have a potential leak. This work will begin in 2022 for completion in 2023.

NRW for the Villages first quarter of the 2021-2022 water year was estimated at 17.6%. The reduction in water loss is attributed to closely monitoring Chicago supply meter calibration, aggressively locating water leaks and continued focus on determining accurate NRW loss.

#### Next Steps

If you have any questions, please contact Public Works Director, John Wielebnicki at 708-358-5700.

#### Attachments

cc: Lisa Shelly, Deputy Village Manager  
Ahmad Zayyad, Deputy Village Manager  
Rob Sproule, Assistant Public Works Director  
All Department Heads  
Christina M. Waters, Village Clerk