

# Water Metering and Billing Overview

City of Denton

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# Subject Matter Experts

Ryan Adams, Interim Chief of Staff

Christa Foster, Customer Service Manager

Stephen Gay, Director of Water and Wastewater

Brandon Hamby, Electric Meter Manager

Antonio Puente, General Manager, DME

Bill Shepherd, Executive Manager of Business Services, DME

# Agenda

Why Have a Community Meeting?

Role of Customer Service

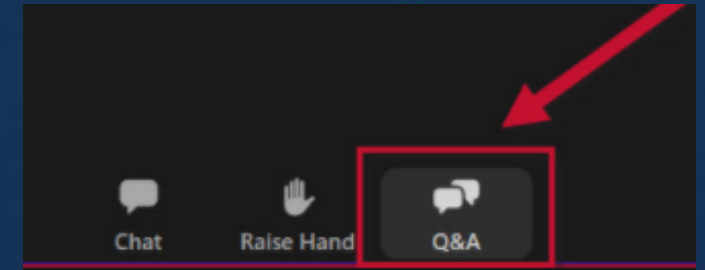
Overview of Monthly Billing Processes

Billing System Function and Accuracy

Meter Function and Accuracy

# Virtual Community Meeting Reminder

- All attendees are muted
- All attendees videos are disabled
- Short presentation by staff
- Questions
  - Q&A - Questions will be answered at the end of the presentation in the order they are received, and will only display in the Q&A after they are answered
  - Select “Raise Hand” to request to speak – For people wishing to verbally ask a question, those questions will be answered at the end of the presentation. If you raise your hand, the presenter will call your name and you will need to unmute after you have been called on to ask your question
- Presentation will be available at [www.cityofdenton.com/virtualcommunitymeeting](http://www.cityofdenton.com/virtualcommunitymeeting)





# Why Are We Here Today?

- Customers Raised Concerns via Social Media
- Reviewed a Sample of Accounts from Area Twice
- Want to Provide Transparency in the Billing Process

# The City's Role

- Ensure Water Delivery to the Meter
- Ensure Accurate Measurement of Usage
- Ensure Accurate Bill Calculations

The City Cannot Track Where Water Goes  
When it Goes Through the Meter.

# Daily Billing & Metering Statistics

- 2,000 Water Meters Read
- 3,425 Utility Bills Produced
- 72 Water Meter Service Orders Worked
- 16 Water Meter Change Outs Completed
- 1 Water Meter Tested

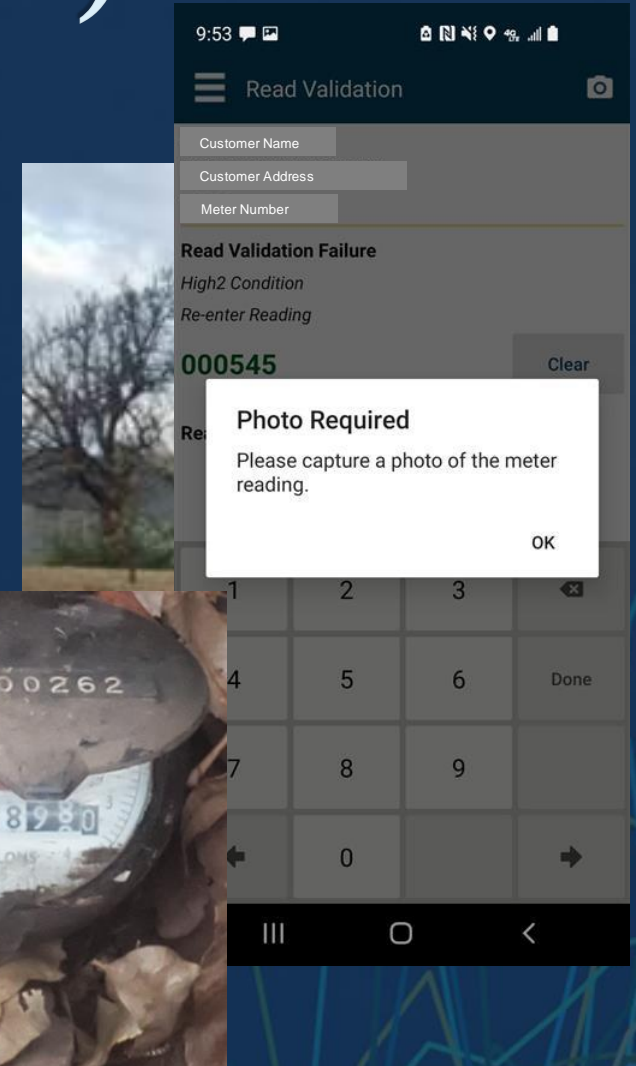
Many Activities Occur Daily to Ensure Service and Billing Continuity.

# The Billing Process (Reads)

Collecting “reads” is the activity of gathering the current number of registered water usage from the water meter.

- Meter readings are Completed in the Field
  - Staff Does Not Have Previous Read or History
  - Unit Flags Reads That Seem Too High or Low
  - Staff Re-Enters in & Takes Photo

The Process is Designed to Eliminate Errors and Irregularities Prior to Billing.





# The Billing Process (Read Validation)

- DME Meter Shop Does a High/Low Usage Review
  - 3 Month Average Last Year Plus and Minus One Month
  - High > 180%, Low < 80%
- Customer Service Does a High/Low Usage Review
  - Usage is 100,000 or over
  - Usage is 0

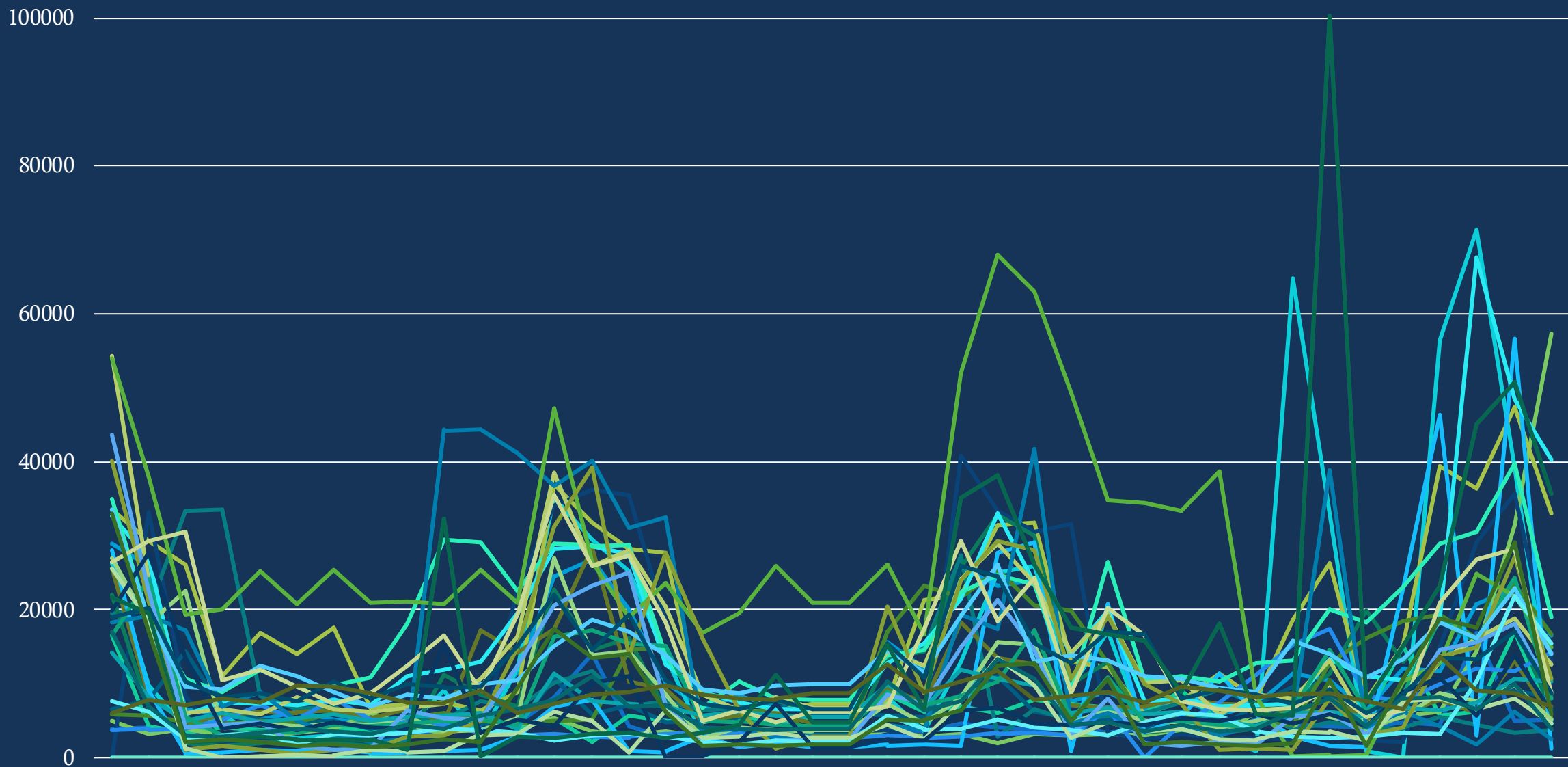
Additional Validation of High and Low Usage  
Further Reduces the Possibility of Billing Errors.

# Can't You Call Me?

- Proactive Calls Lead to Possibility of Fraud
  - Must Speak to Authorized Account Holder
  - The City Will Not Call You and Request Personal Identification Information
- Water Use is Highly Individual
- Fluctuation Does Not Always Equal a Problem
  - Vast Majority of Changes in Billing are Expected by the Customer

Customer Service is here to help.

(940) 349-8700 | [CustomerService@cityofdenton.com](mailto:CustomerService@cityofdenton.com)



**Water Use Patterns Are as Unique as the Individual Customer.**

# It All Adds Up

US Average per Household Member: 94 Gallons per Day (Month: 2,820)

Automatic Sprinkler: 20 Gallons per Minute (GPM) per station  
(Broken Head adds 15 GPM)

Hose-End Sprinkler: 17 GPM

Soaker Hose: ½ GPM

Running Toilet: 6,450 Gallons per Day (Month: 190,000+)

Leaking Toilet Flapper: 200 Gallons per Day (Month: 6,000)

**Fixtures and Sprinklers Should Be Checked Regularly.**



# How Does a Meter Work?



1. Leak Detector Tracks Even Minimal Movement
2. Outer Dial Records Usage by 1/10 Gallons
3. Numeric Register Tracks Usage by Full Gallons

Meters Record Water Usage the Same Way a Car Tracks Miles

Water Meter:

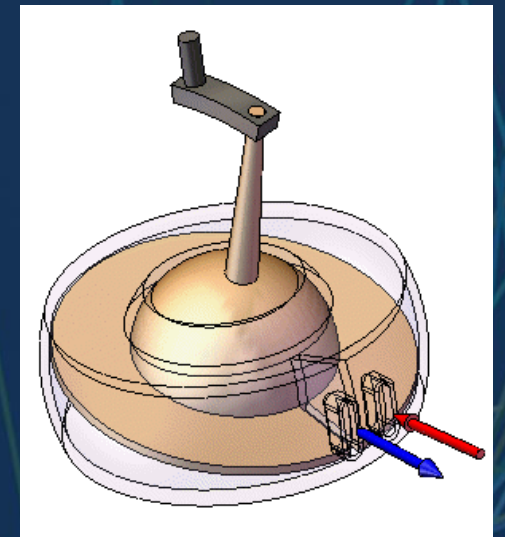
Disc Turns

Rotations Cause Usage Advance

Car:

Wheels Turn

Rotations Cause Mileage Advance

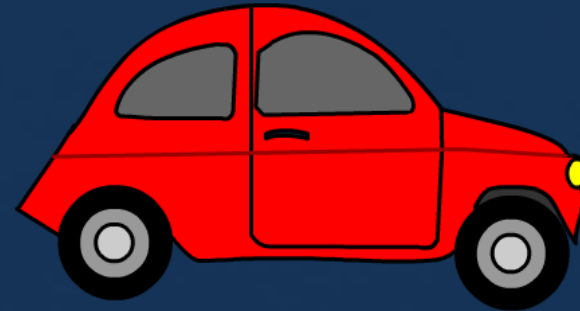


# Can a Meter Over Report Usage?



Expected Usage: 5,000

Actual Usage: 20,000



For a meter to incorrectly report 4 times the usage, it is the equivalent of making your normal 10 mile drive to work, but your car suddenly reporting it as 40 miles driven.

Physical and Mechanical Design Prevent Over Reporting Usage.  
Water Meters Slow Down and Under Report Usage with Age.

# How Do We Ensure Accuracy?

## Meters

- Test Meters Regularly
- Meter Change-Out Program

## Billing Calculations

- Rates are Validated
- Bill Sample Calculations Checked





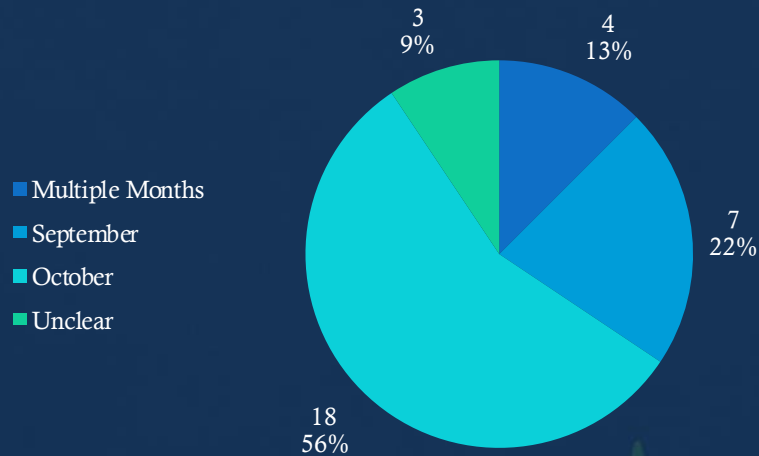
# Discussion



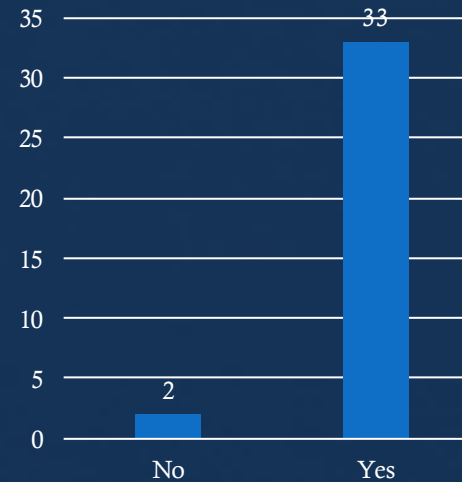


# Summary of Account Review

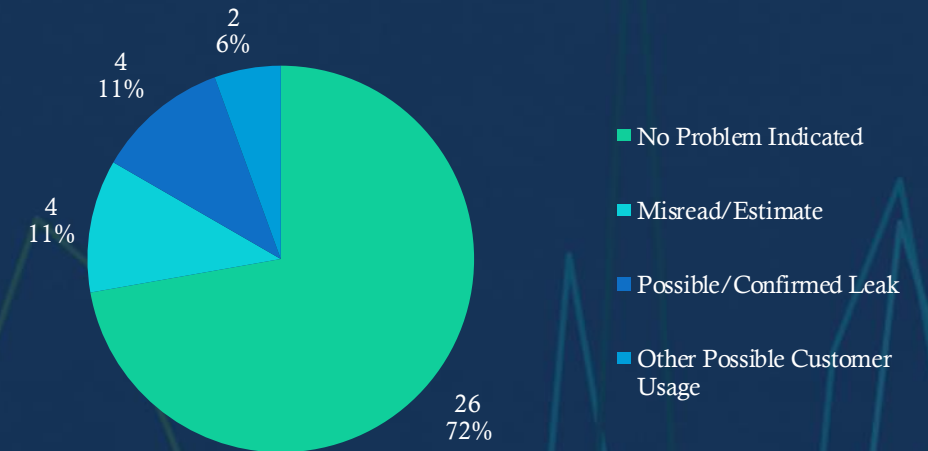
Month Perceived High



Current Usage is Lower



Investigation Results



\*All misreads and estimates are resolved without customer intervention.

# How Does a Meter Work?



Triangular Dial Tracks All Movement  
Outer Dial Records Usage by 1/10 Gallons  
Numeric Register Tracks Usage by Full Gallons

# What Are Realistic Deviations?

- Meters may slightly over or under report (+/- 1.5% is allowed)
  - Over Reporting Within Allowed Range is Still Uncommon
- Gears become brittle and stiff with age
- Ultimately stop reporting water flow