Utility Billing / Meter-to-Payment Audit

Findings, recommendations & actions

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Findings – Public Meeting (first draft)

February 3, 2025

Agenda

- Overview of Findings
- Scope
- Findings
  - Context
  - Approach
- Key Observations
- Next Steps
- Questions

Meter Accuracy

- Meter test
- Track meter to bill

Utility Billing

- Decision – making
- Summary bill process

Billing Accuracy

- Rates
- System transition
- Proration

Communications

- Transparency
- Challenge call volume

Data

- 100% data retained accuracy through the flow

Meter

- 46 meters tested in three flow rates
- None overbill

❑Written meter maintenance plan

Weighted

- 99.36% Revenue realized (Weighted Accuracy)
- 40/46=87% Pass revenue test

Context

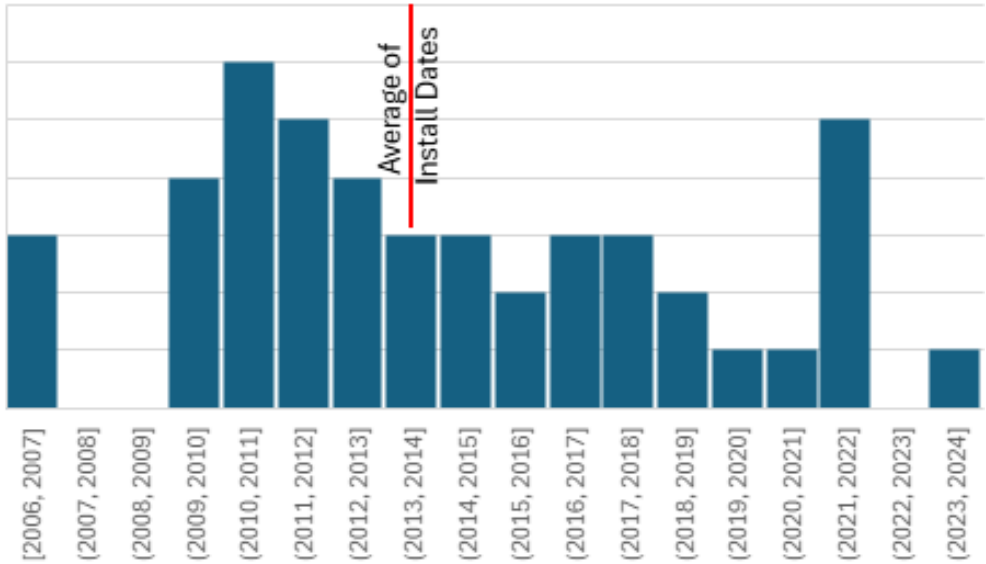
- Meters are 10 years old
- Strong meter service team
- Meters changed at 20 years of use

Approach

- On site account meter visits
- Meter test

Findings

- Data is accurate
- Meters are performing well



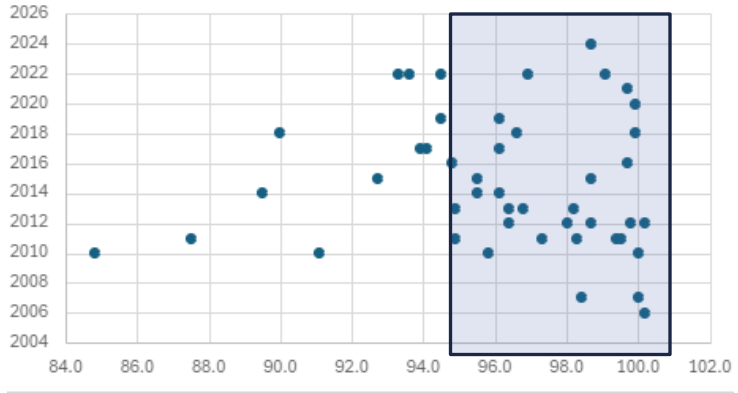
Meter Accuracy

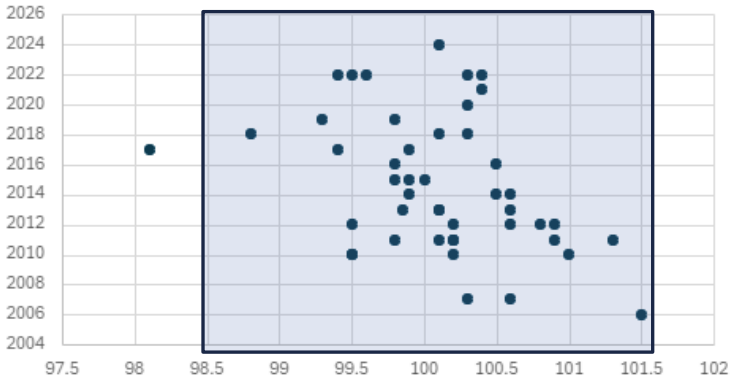
Meter Test Results

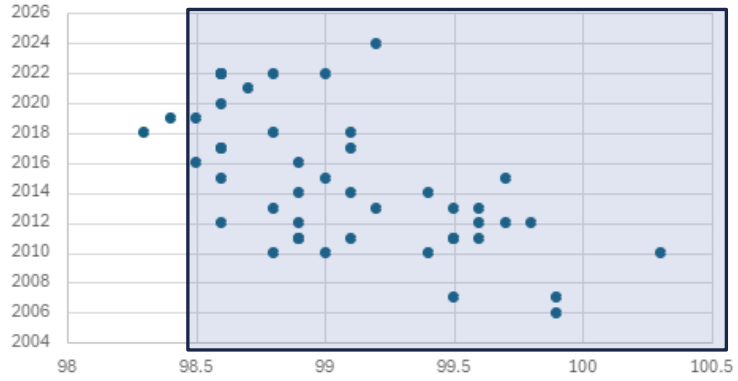
Minimum – 15% of Flow

Intermediate – 70%

Maximum – 15%







Criteria	Value
Level of confidence	95
Expected Standard Deviation	5
Precision or Margin of Error	1.5
Number of meters	46

Meter selection?

- Meter change out not part of the implementation
- Industry does not expect meters to speed up
- To move from a level of confidence of 95 to 99 multiply cost of testing 2.39 times current cost
- SLserco selected random meters to select
- This process was different than site visits

Random Sample Size

- Level of confidence
- Method of selection

Testing Firm Used

- Certified
- Respected
- Available

Findings

- Strong revenue performance without overbilling

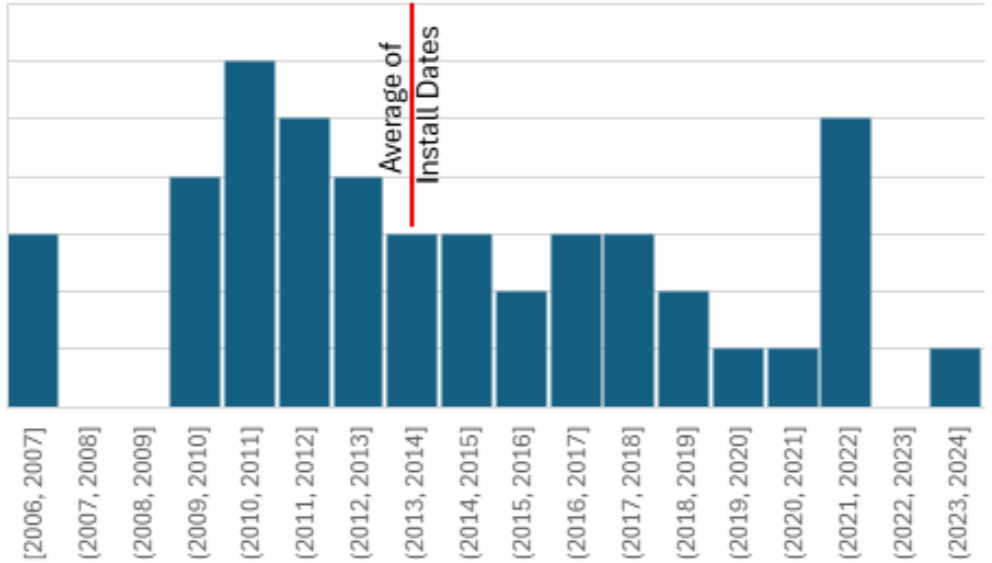
Table 5–3 Test requirements for new, rebuilt, and repaired cold-water meters*

Displacement Meters (ANSI/AWWA C700 and C710)

Size	Maximum Rate (All Meters)				Intermediate Rate (All Meters)				Minimum Rate (New and Rebuilt)				Minimum (Repaired)
	Flow Rate†	Test Quantity††		Accuracy Limits	Flow Rate**	Test Quantity††		Accuracy Limits	Flow Rate	Test Quantity††		Accuracy Limits	Accuracy Limits
in.	*gpm*	*gal*	*ft³*	*percent*	*gpm*	*gal*	*ft³*	*percent*	*gpm*	*gal*	*ft³*	*percent*	*percent (min)*
1/2	8	100	10	98.5–101.5	2	10	1	98.5–101.5	1/4	10	1	95–101	90
1/2 x 3/4	8	100	10	98.5–101.5	2	10	1	98.5–101.5	1/4	10	1	95–101	90
5/8	15	100	10	98.5–101.5	2	10	1	98.5–101.5	1/4	10	1	95–101	90
5/8 x 3/4	15	100	10	98.5–101.5	2	10	1	98.5–101.5	1/4	10	1	95–101	90
3/4	25	100	10	98.5–101.5	3	10	1	98.5–101.5	1/2	10	1	95–101	90

Context
Approach
Findings

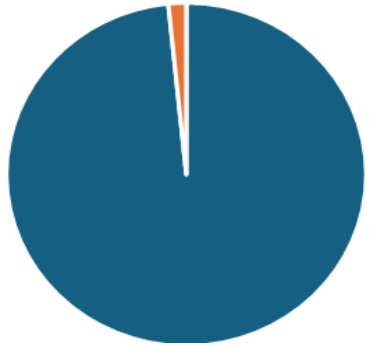
Meters are Accurate



Meter Accuracy

Bills – Water and Wastewater

- 98.4% accurate
- Most of the differences were off by 2 cents



Solid Waste and Storm

- Solid waste had slow application of new rates or inconsistent rounding
- ✓Storm appears correct

Proration

- ✓Long bills calculated correctly
- ✓Low estimate caused high prorated amount (Credit issued)

Context

- Billing system install happening
- Rate changes

Approach

- Receive data
- Justification of process
- Evaluate results
- Understand process weakness

Findings

- System calculation accuracy is high
- Inaccuracy favors resident

Billing Accuracy

Autopay

- Partial payments when full payments expected

✓Error on setup - corrected

Decisions

- Professional

❑Situational leadership

❑Documentation – process, goals, performance indicators

Context

- Several larger issues coming from the operation of Utility Billing needed evaluation
- Utility billing is experienced

Approach

- Evaluated meters, bills and execution issues with an eye toward the decision-making process

Findings

- Team works well together
- Clear documentation needed
- Overwhelmed with exceptions immediately after go live

Utility Billing

Transparency

Portal – Currently 17,882 registered

Advertisements in local paper

25 Social Media posts

Press releases

Phone tree messages

Auto email reply

Customer Service Representatives

Website messages

Call Volume

Performance indicators

Industry standards

Context

- Trust gap

Approach

- Discussed bill error handling
- Reviewed call logs
- Reviewed communications

Findings

- Performance indicators

Communications

- Meters are accurate
- System is calculating accurately
- Exception overload
- Project staff was too lean

Bottom line

- Lean project staffing
- Complexity increased with schedule changes
- Exception overload
- Core value ***send correct bills***, forced delay
- Accurate and favored the resident

What happened on go-live day

Context:

Legacy system data difficult to extract

- ❑Verifying vendor declarations would have caught this problem
- ❑Needed public works IT leadership available

Conversion part one - was provided by City

Conversion part two - missing critical parts

Third attempt for Go-live

- appeared complete
- processed as expected
- Vendor performed test

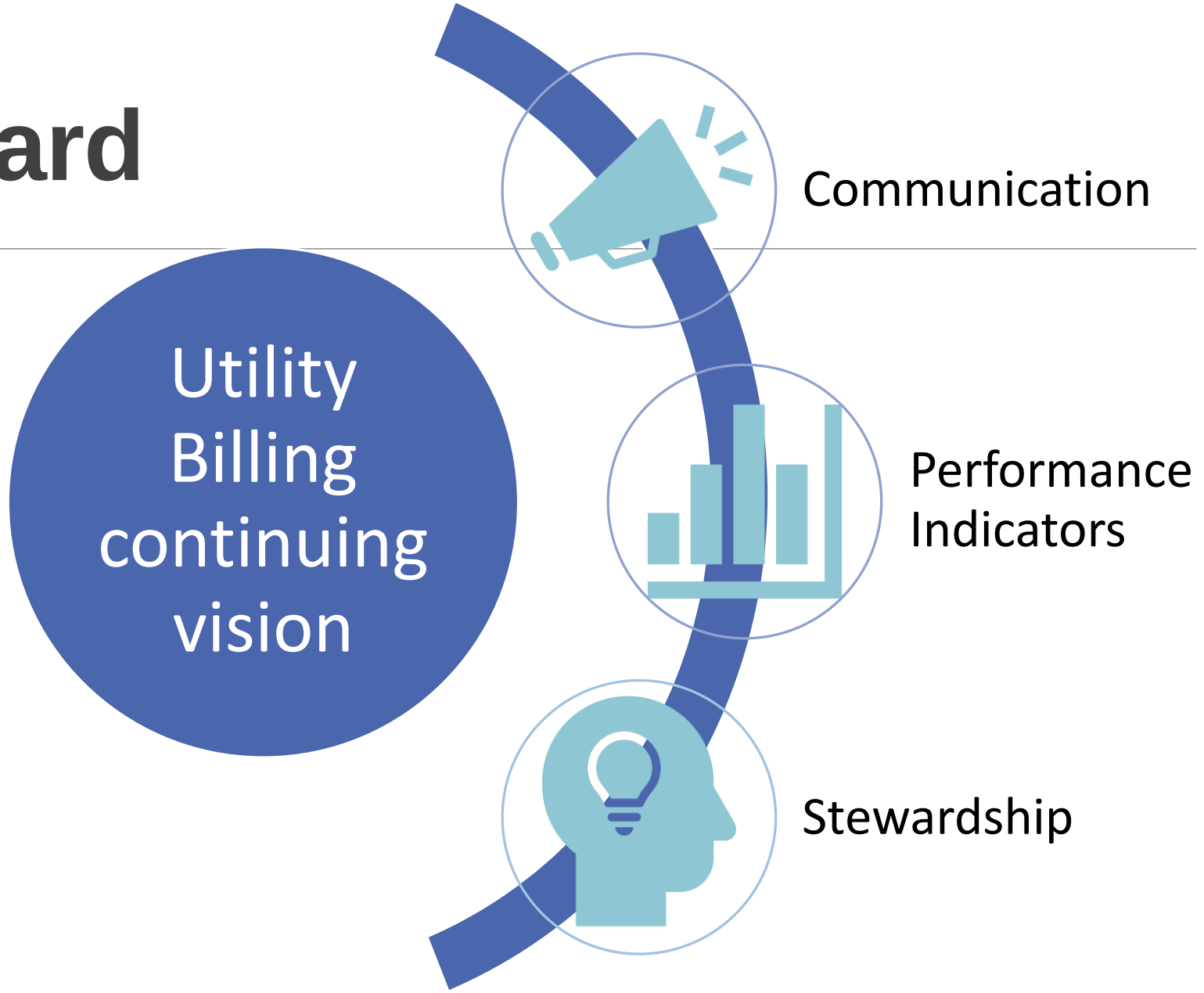
Data was found by City exception checking

- “not complete” after go-live evaluation decision
- City could not go back

Key Observations

- Procedures and governance documents
- Performance indicators
- Written meter maintenance plan
- Vendor / Billings' relationship
- Communication
  - Account holders
  - Leadership
- System training

Path Forward



Conclusion & Questions

CITY OF Billings

City Slides

If we could do it over

1) One IT employee in PW
2) Contracted a 3rd Party software conversion expert to represent the City throughout the project
3) Improved communication with public and executive staff
4) Moved implementation to October once we missed April
5) Requested a delay in rate adjustments to triage exceptions

Action Items

1) **Revised IT Policy via administrative order**
   - Mandatory IT involvement
     (IT was included in this project but too lean)
   - Expanded integration and migration guidelines
     (including 3rd party consideration)
   - Testing standards (change management policy)
   - Training & awareness requirements
   - Vendor accountability
   - Increased IT resources for projects of this magnitude

Action Items (Cont.)

2) **Add IT staff expertise to PW**
3) **Improved communication -** External & internal
4) **Determine when late fees and turn off dates are reinstated**
   - Minimum of 90 days out
   - Payment plans encouraged

Action Items (Cont.)

5) **Detailed utility bill**

   Info necessary to verify calculations:

   - Service periods
   - Utility rates including tiers, K-gal & Cubic Feet
   - Historic usage charts & graphs
   - Integrate west end water plant and reservoir line item
   - Listen and respond to customer feedback

Customer Information

- **Call center for audit questions**
- **BillingsMT.gov/auditresults**
- **Create your on-line account**
- **Sign up for water notifications**