



# WATER BILLS

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**Houston Public Works | Customer Account Services**

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# CUSTOMER ACCOUNT SERVICES

billing & collections service to largest water/wastewater utility in Texas

over **2 million** served

**480,000** water bills sent monthly with **99.7% accuracy**

# METER READING PROCESS

1

22,000+ METERS  
READ EACH BUSINESS DAY



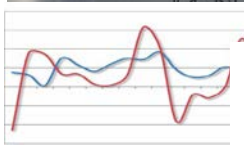
47%  
auto



42%  
auto



10%  
manual



<1%  
estimate

2

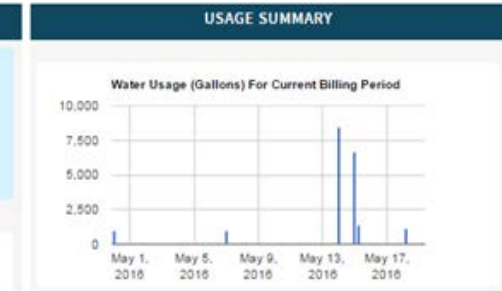
DATA SENT TO SERVER



3

DATA UPDATED IN BILLING  
& CUSTOMER SERVICE SYSTEMS

ACCOUNT SUMMARY	
<b>AMOUNT DUE</b>	
Past Amount Due	\$0.00
Current Charges	\$0.00
Total Amount Due	\$0.00
Due Date	05/18/2016
<b>LAST PAYMENT</b>	
Amount	N/A
Date	N/A

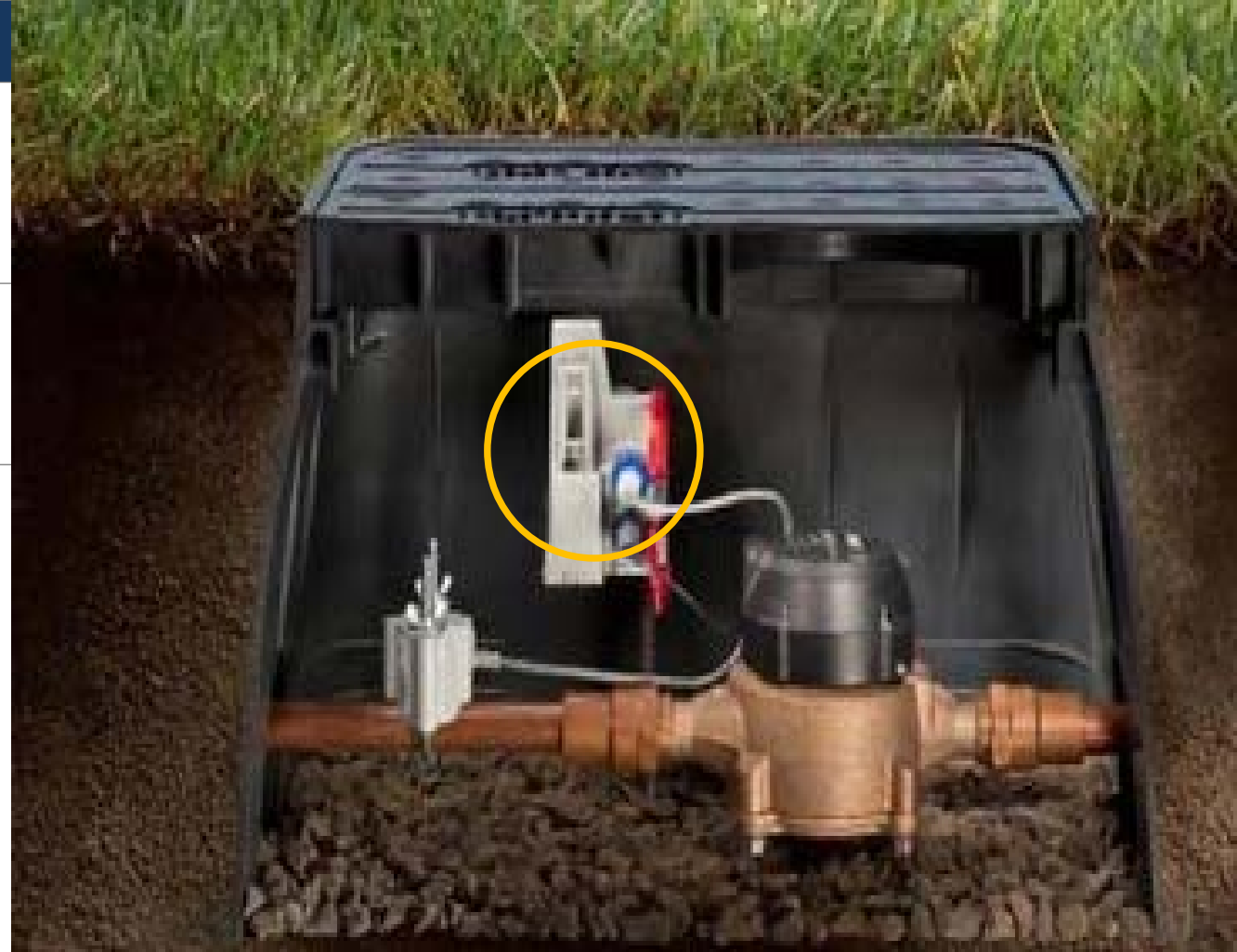


# FAILED AUTOMATED METER READING

## DEVICE UNABLE TO TRANSMIT READ

water passes through meter &  
correctly measured by register

meter manually read to obtain correct usage



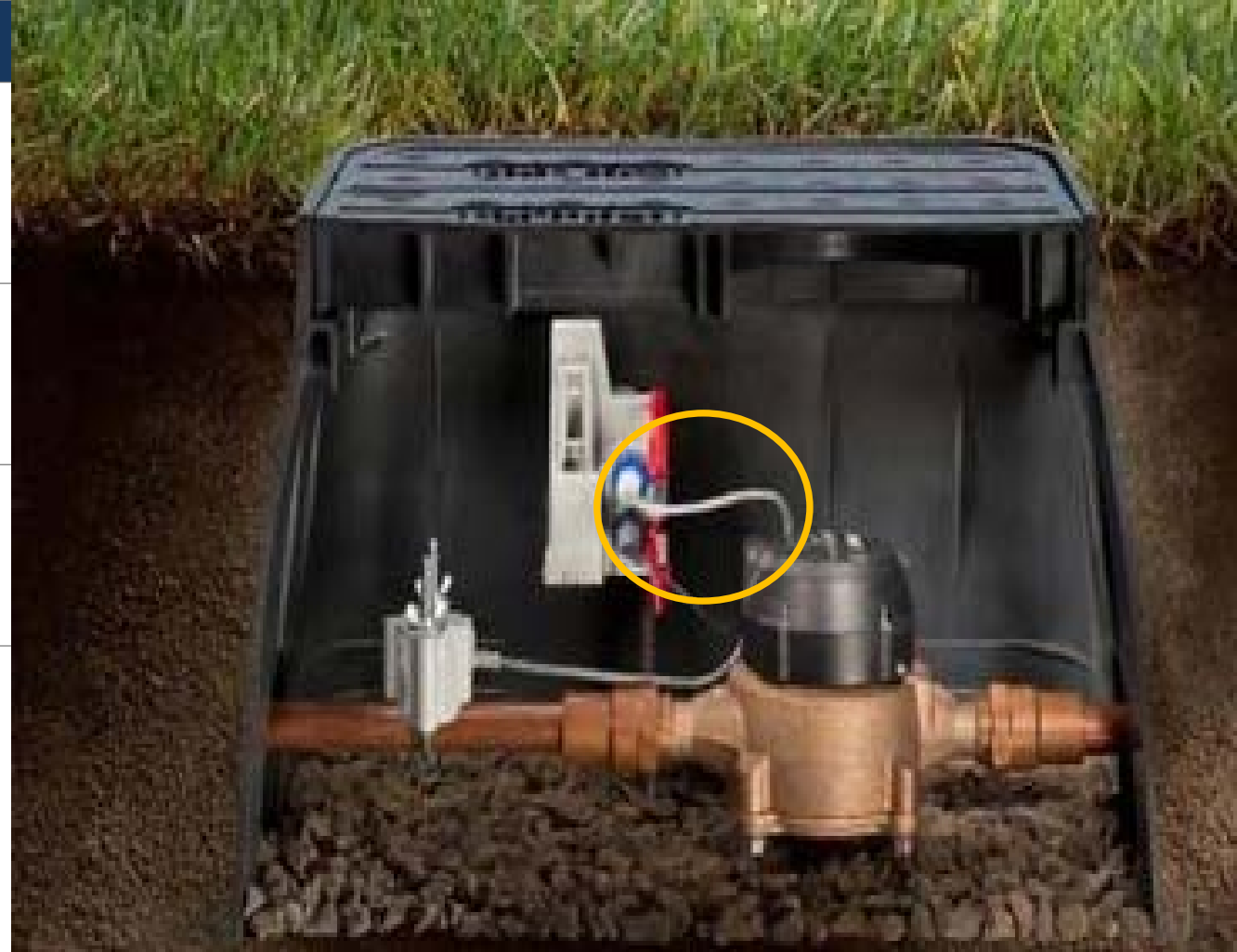
# FAILED AUTOMATED METER READING

## CUT CABLE (STUCK DEVICE)

continuously transmits same reading from register

water passes through meter & correctly measured by register

meter manually read to obtain correct usage



# FAILED AUTOMATED METER READING

## DAMAGED REGISTER

usage incorrectly measured by register

water still passing through the meter

device “not synched” with register

reading estimated based on historical consumption



# FAILED AUTOMATED METER READING

## DAMAGED METER

physical damage to meter (i.e. tree root)

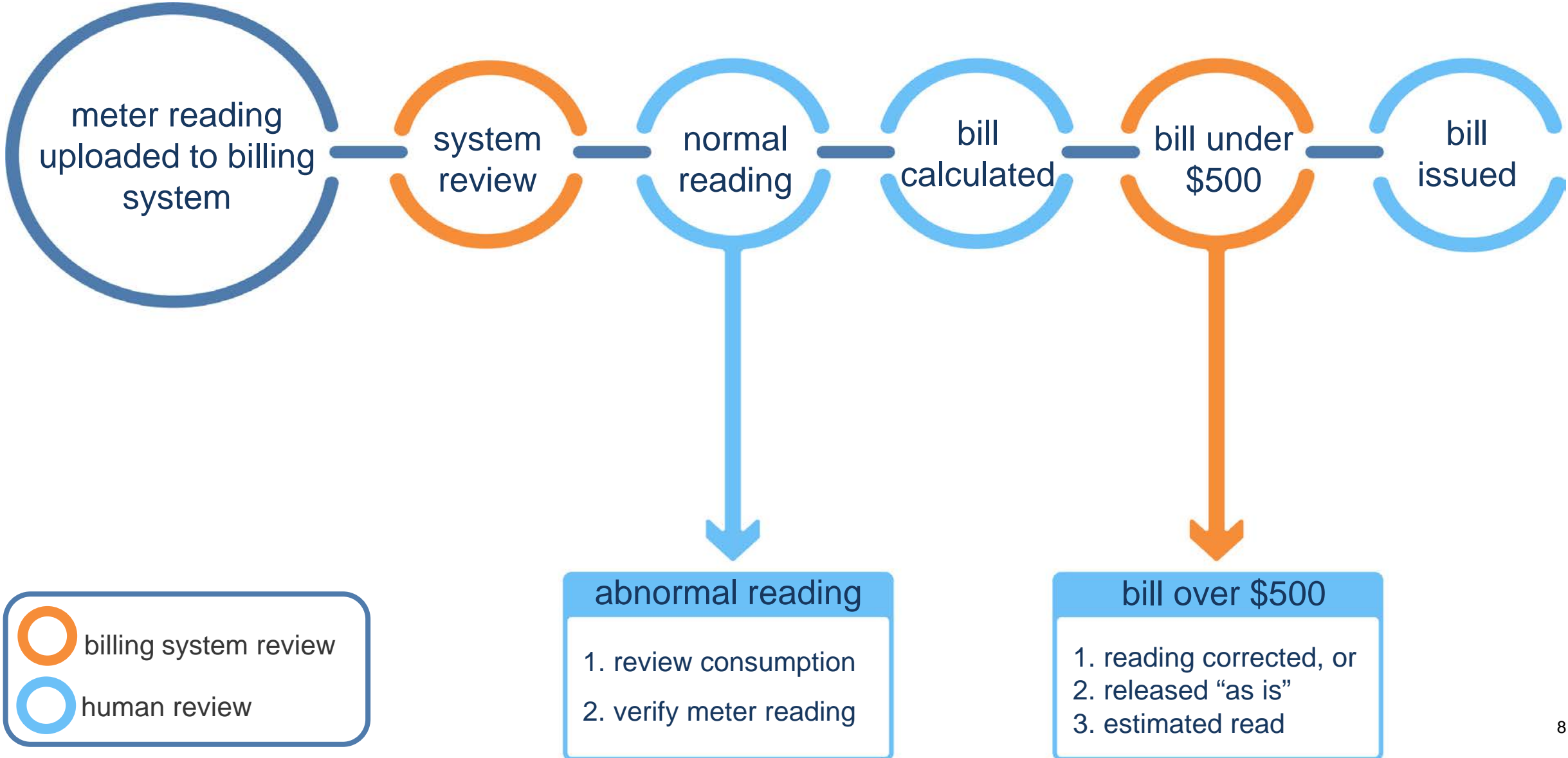
records incorrect consumption

reading estimated based on historical consumption



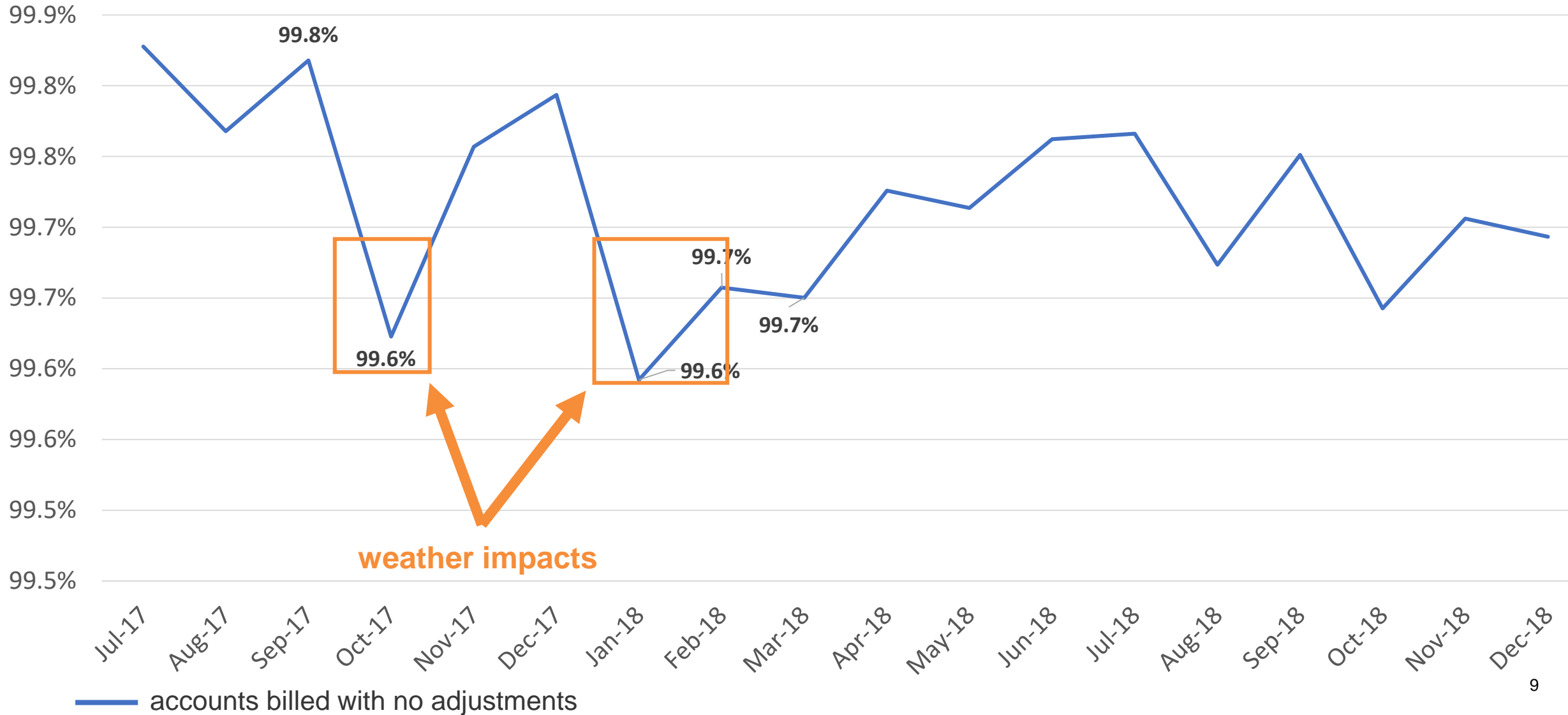


# QUALITY REVIEW





# 99.7% BILLING ACCURACY



# 0.3% OF BILLS

## 1. AGING INFRASTRUCTURE

automated meter reading device is at end of 20-year life expectancy

increased number of damaged or failed component devices

## 2. HUMAN PERFORMANCE

error in visual reading

incorrect account analysis

error in installation of meter reading device components

## 3. METER READING ESTIMATES

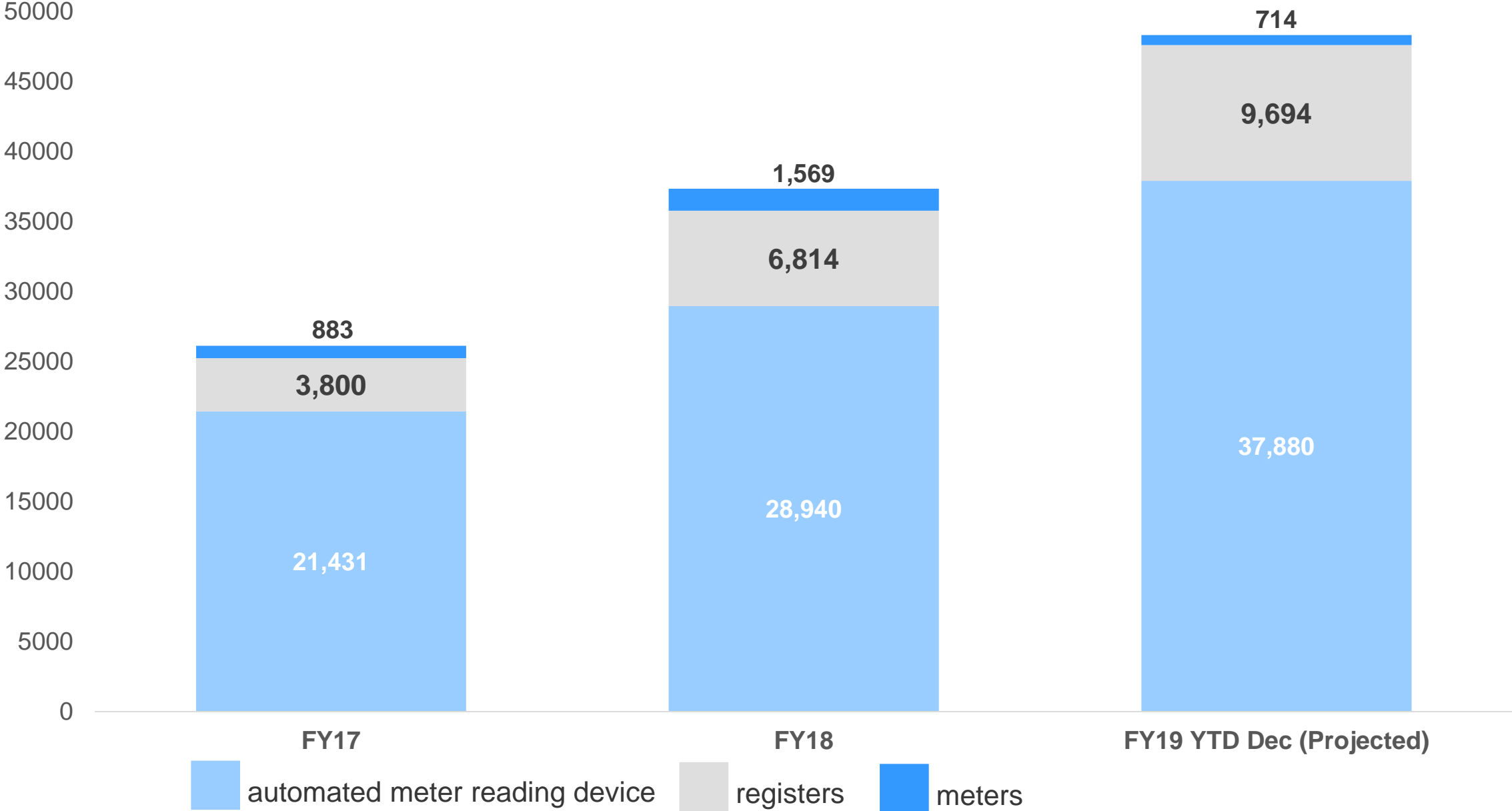
adverse weather

inaccessible or covered meters

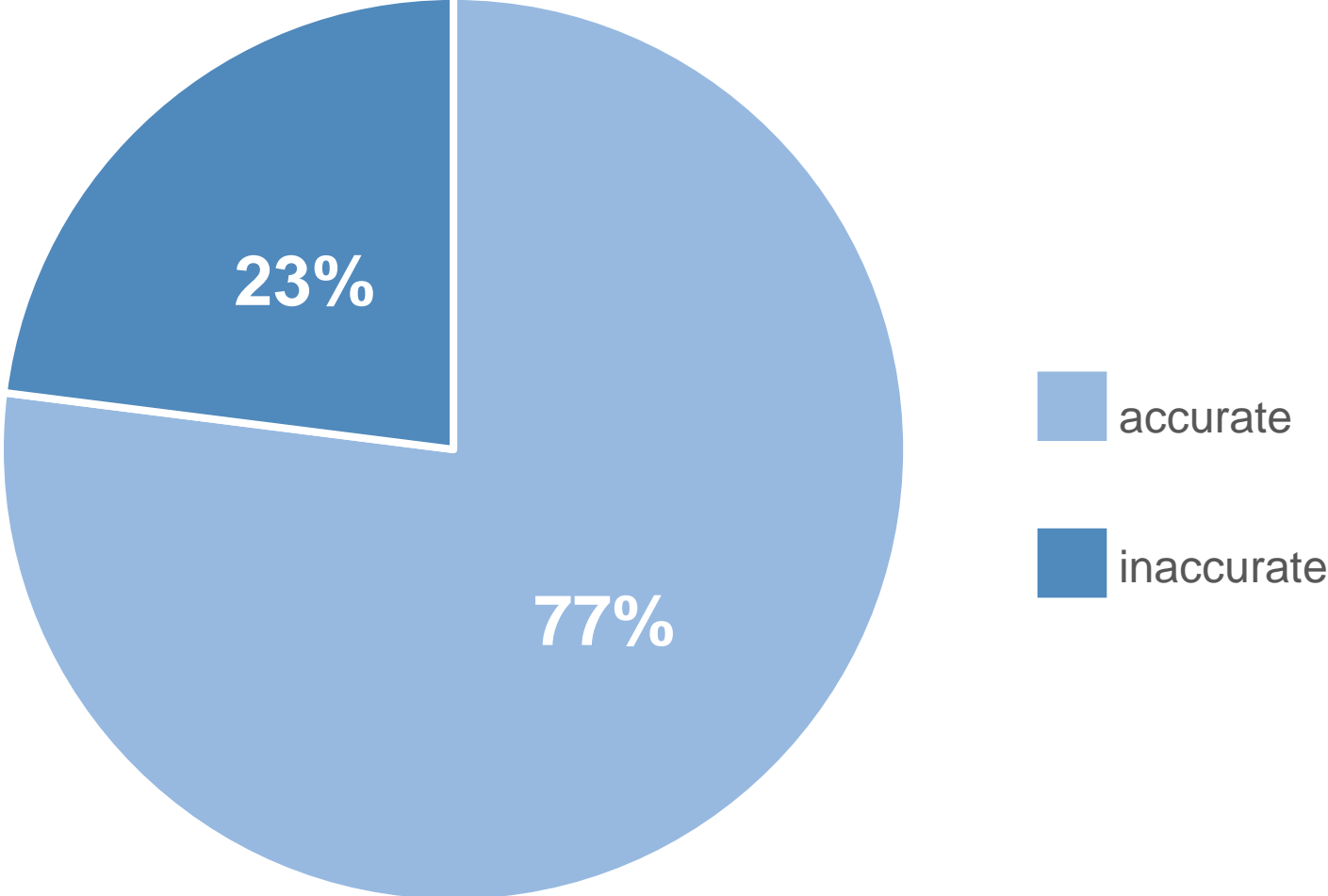
damaged components

time constraints

# AGING INFRASTRUCTURE | REPLACEMENTS

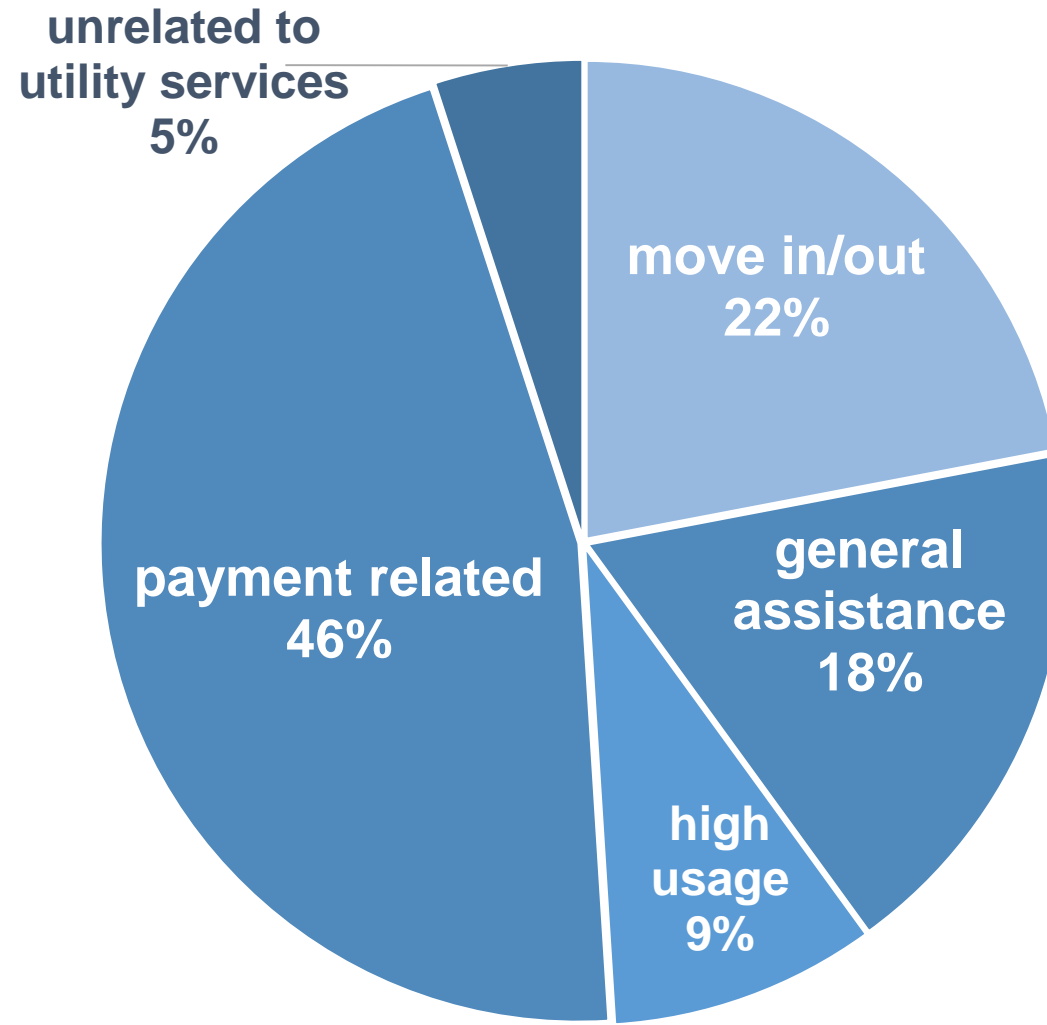


# AGING INFRASTRUCTURE | METER ACCURACY



\*2003 – 2018 average accuracy of 2,313 randomly selected meters using American Water Works Association standard <sup>12</sup>

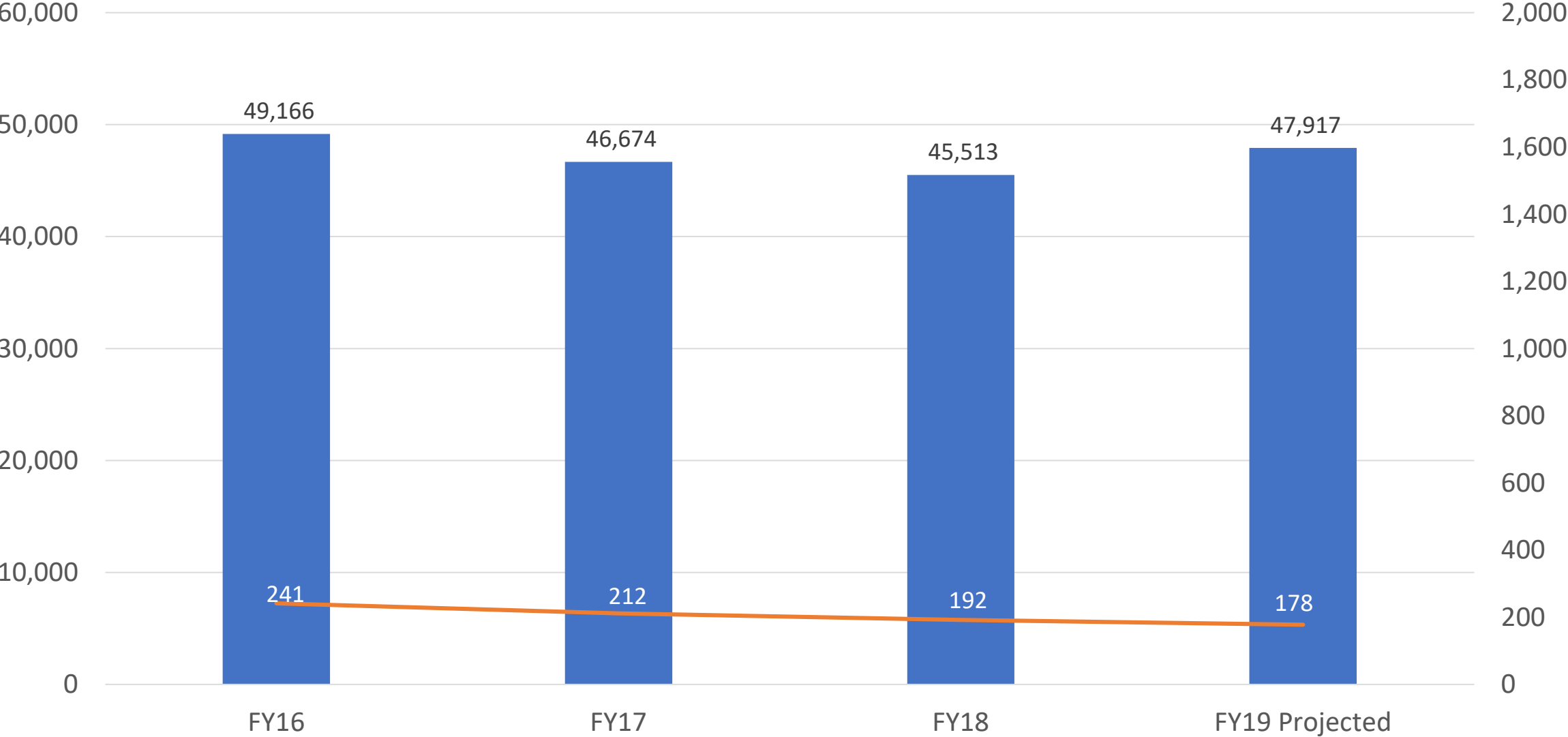
# CALLS PER MONTH | FY 2018 – PRESENT)



# TOP 6 CAUSES OF HIGH CONSUMPTION

CAUSE	RATE	LINE SIZE	EXTRA COST
<b>1. LEAKING TOILET</b>	@ ½ gal per minute 21,600 gals per month (can be much higher)		<b>\$377</b>
<b>2. WATERING GARDEN/GRASS</b>	@ 5 gals per minute 1/2 hour per day 4,500 gals per month		<b>\$86</b>
<b>3. PRIVATE LINE BREAK</b> (underground)	1 Week @ 7.5 gals per minute 75,600 gals per week 1 month @ 7.5 gals per minute 324,000 gals per month		<b>\$1,303</b>  <b>\$5,553</b>
<b>4. HOSE LEFT ON</b> (one night)	@ 5 gals per minute for 9 hours 2,700 gals in one night		<b>\$51</b>
<b>5. IRRIGATION SYSTEM LEAK</b> (underground)	@ 1 gal per minute 43,200 gals per month		<b>\$754</b>
<b>6. POOL FILL</b>	20,000 gallons (varies from 10,000 to 30,000+)		<b>\$343</b>

# FRONTLINE CALLS VS BILLING INQUIRIES\*



\*monthly averages

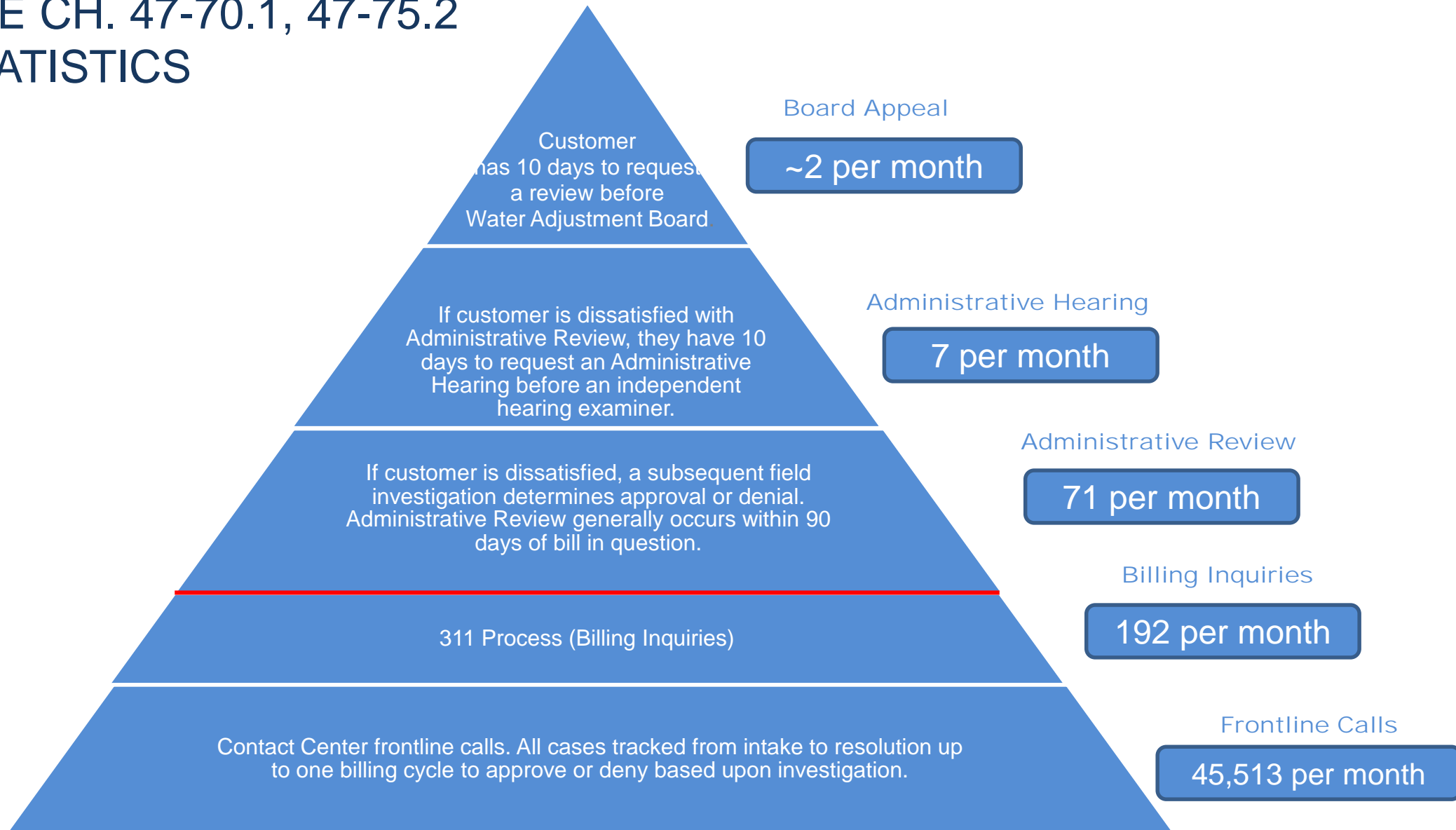
■ Total Calls Received by Agent    — Total 3-1-1 Billing Inquiries



# BILL DISPUTE PROCESS\*

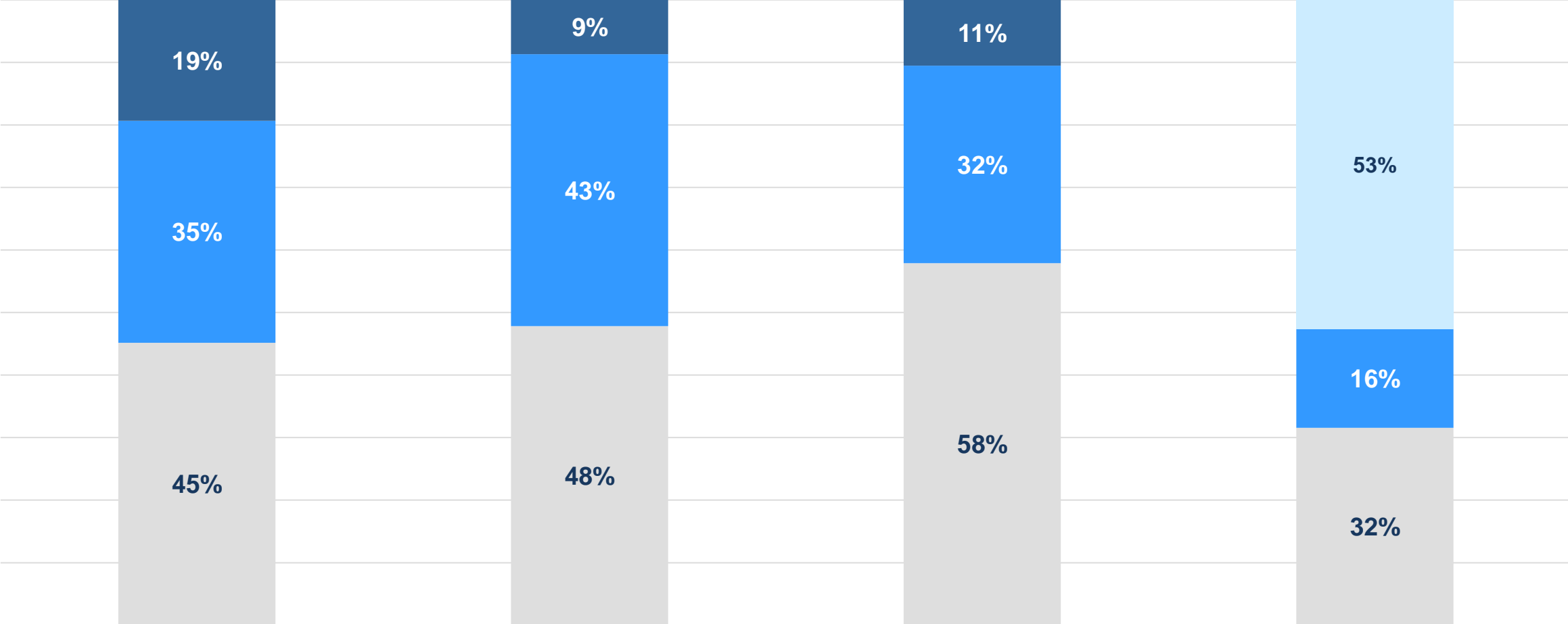
ORDINANCE CH. 47-70.1, 47-75.2

FY 2018 STATISTICS



\*monthly averages

# WATER ADJUSTMENT BOARD | DISPUTE RESULTS



FY16

FY17

FY18

FY19 YTD\*

■ Outside Jurisdiction

■ Upheld

■ Overturned  
in Customer's  
Favor

■ Pending

# CUSTOMER SERVICE IMPROVEMENTS

1	Education Initiatives	<ul style="list-style-type: none"><li>• High Bill Refresher and Empathy Training for Contact Center personnel.</li><li>• Billing Dispute Refresher Training for Council Staff and MCAO.</li><li>• Formal Training Program for Field Technicians – in progress.</li></ul>
2	Billing Accuracy	<ul style="list-style-type: none"><li>• Audit new billing system*</li><li>• Formalized process for Covered and Inaccessible Meters.</li></ul>
3	Meter Reading Accuracy	<ul style="list-style-type: none"><li>• Replace the obsolete Automated Meter Reading Infrastructure (AMI)*</li><li>• Contract for programmatic remediation of AMR devices*</li><li>• Small meter replacement program*</li><li>• Meter reading and accuracy testing program (independent audits)*</li></ul>
4	Service Level Improvement	<ul style="list-style-type: none"><li>• Deploy automated shut off devices to enhance move in/out process*</li><li>• Service Level improvement in the Contact Center</li></ul>

\*Procurements pending will require Council Action

**THANK YOU**