



CSI/AMI Implementation

A Case Study – Cedar Hill, Texas

Intelligent Water Network Summit
February 13, 2018

Cedar Hill, Texas

Land Area: 35.5 mi²

Incorporated: 1938

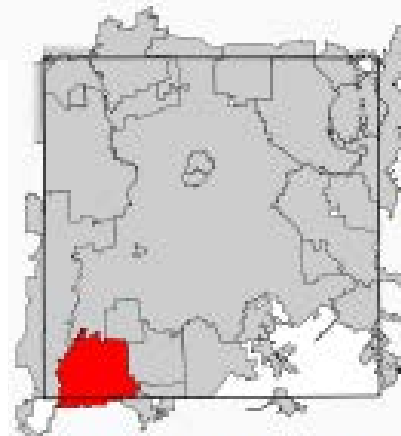
Population(2015): ≈49,650

Water/Sewer services only

Water Connections: ≈16,250

Initiatives in:

- Sustainability
- Conservation
- Green facilities



Location of Cedar Hill in Dallas County, Texas

- Customer Service
 - Service consistency issues
 - City centric, reactive operations
- Outdated infrastructure
 - Most meters 15 to 20 years old
 - Reliability and accuracy issues
 - Needed recapitalization
- Lost Revenue
 - Billed water at approximately 60% of purchased water

- Enhance Customer Service
- Recover Lost Revenue
- Reduce or Repurpose Expenditures
- Be Fiscally Prudent
- Facilitate Conservation and Green Initiatives

METERS &
MEASUREMENT

AMR / AMI
& SENSORS

DATA HOSTING
& DATA
MANAGEMENT

ANALYTICS

BILLING

CUSTOMER
SERVICE

TELEPHONY,
IVR &
REMITTANCE
MANAGEMENT
E-BILL, TEXT
BILL & 6
WAYS TO PAY

CUSTOMER
WEB TOOLS
&
MOBILE
APPLICATIONS

FATHOMTM

FATHOM MDM

- FATHOM Prime (including FATHOM Store)
- FATHOM Meter Accuracy & Warranty Management
- FATHOM Water Balancing & Reporting
- FATHOM Meter Verification & Data Collection Tool
- FATHOM Revenue Assurance

FATHOM CIS

- FATHOM Traditional CIS
- FATHOM Smart Grid CIS
- FATHOM Revenue Management (Managed Service)
- FATHOM Customer Care (Managed Service)

FATHOM U₂You Customer Portal

- FATHOM U₂You—Consumption Presentment
- FATHOM U₂You—Financial Presentment

- Agreement signed November, 2013
- Billing and Service Component
 - Billing transferred to Fathom
 - CCH retained a walk-up service counter
 - Portal and phone app added
 - Went live October 2014
- AMI Component
 - 16,200 meters replaced; started Dec 2014
 - Radio transmitters & data collectors added
 - Full MDM
 - Accepted August, 2016

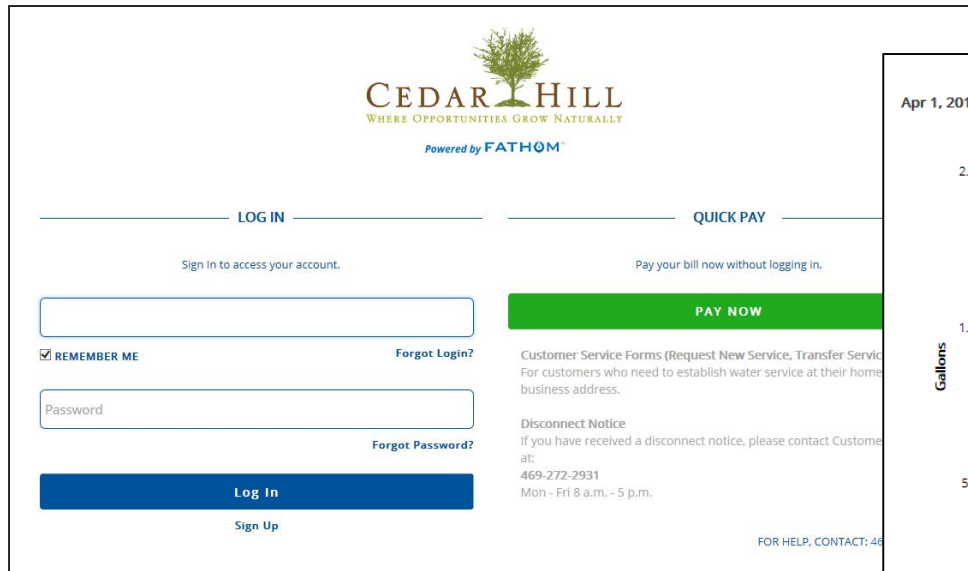
Meter Infrastructure



- MasterMeter 1" meters
- Acculinx Encoder/Register paired with Aclara radio transmitter
- Residential and light commercial
- Approximately 15,500 in use

- Neptune T-10 2" meters
- Neptune eCoder/Register paired with Aclara radio transmitter
- Commercial use
- Approximately 610 in use





CEDAR HILL
WHERE OPPORTUNITIES GROW NATURALLY
Powered by **FATHOM**

LOGIN
Sign In to access your account.

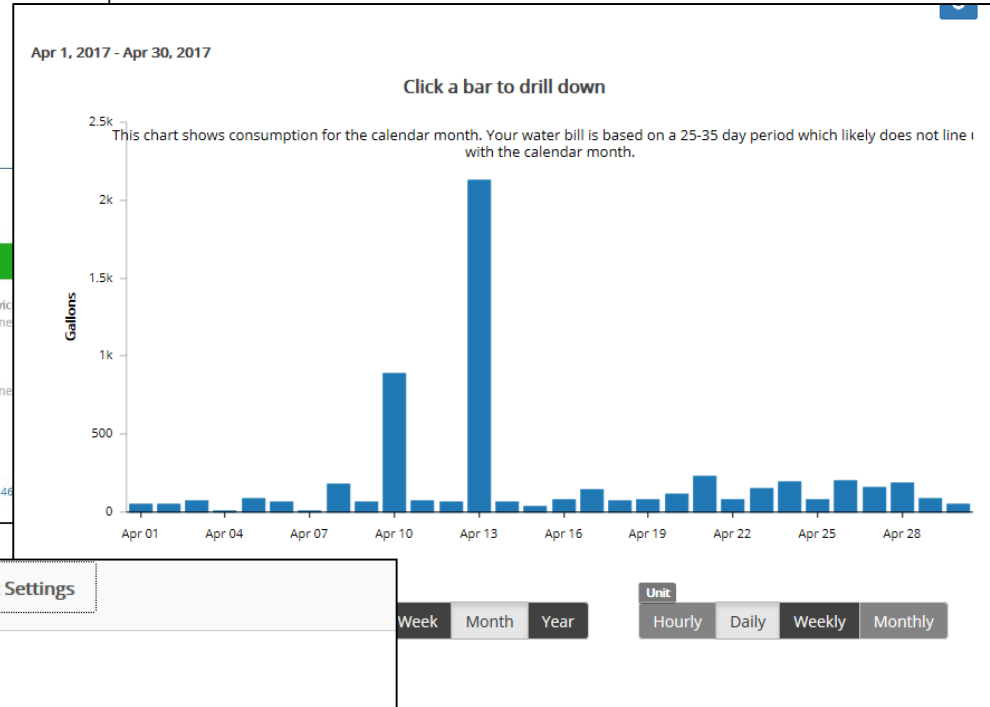
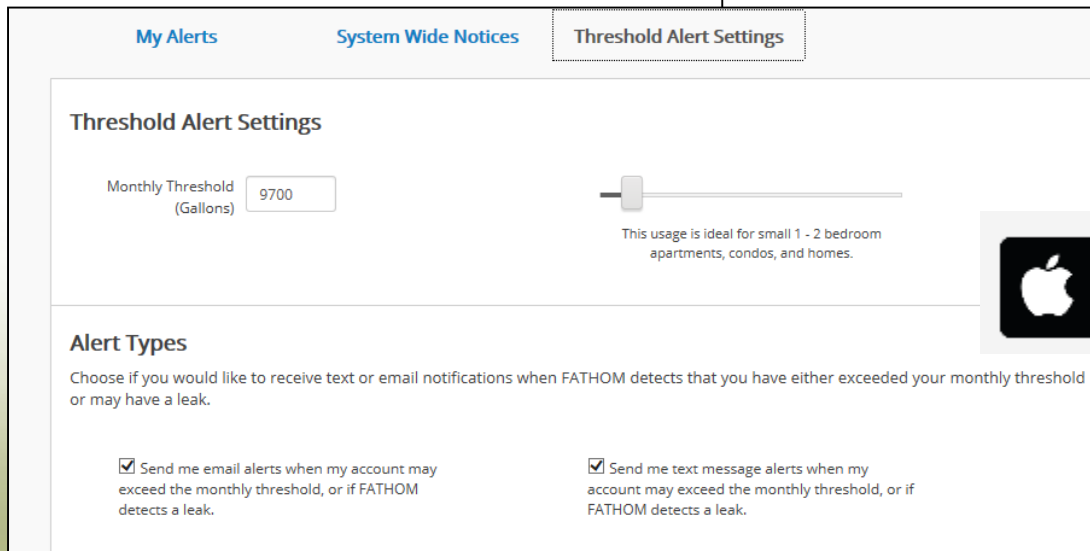
QUICK PAY
Pay your bill now without logging in.

PAY NOW

Customer Service Forms (Request New Service, Transfer Service) For customers who need to establish water service at their home or business address.

Disconnect Notice
If you have received a disconnect notice, please contact Customer Service at:
469-272-2931
Mon - Fri 8 a.m. - 5 p.m.

FOR HELP, CONTACT: 469-272-2931

My Alerts **System Wide Notices** **Threshold Alert Settings**

Threshold Alert Settings

Monthly Threshold (Gallons)

This usage is ideal for small 1 - 2 bedroom apartments, condos, and homes.

Alert Types

Choose if you would like to receive text or email notifications when FATHOM detects that you have either exceeded your monthly threshold or may have a leak.

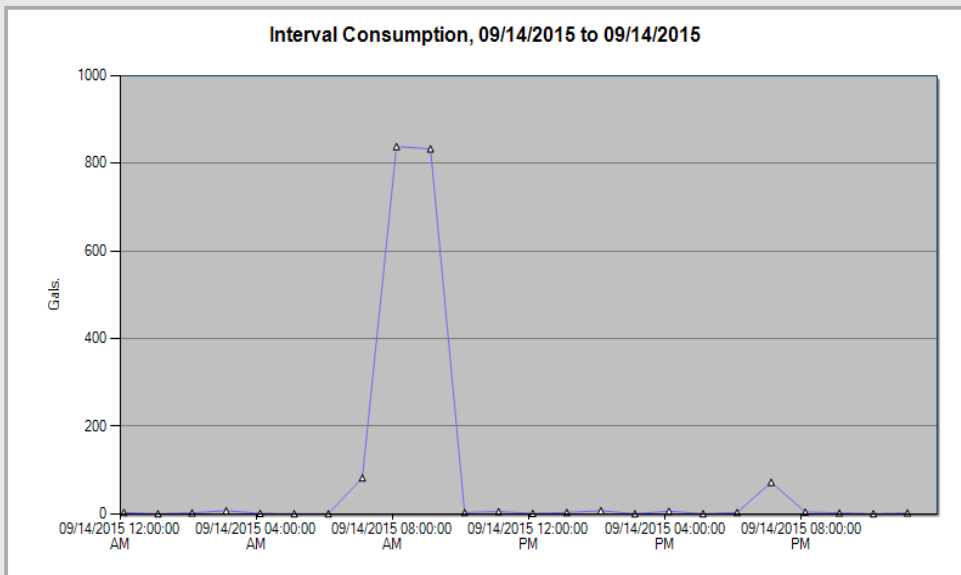
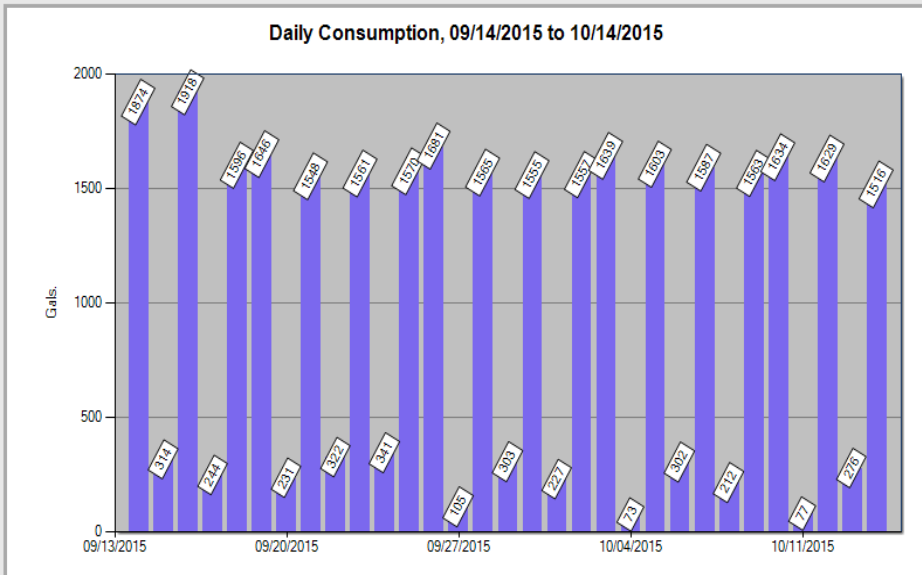
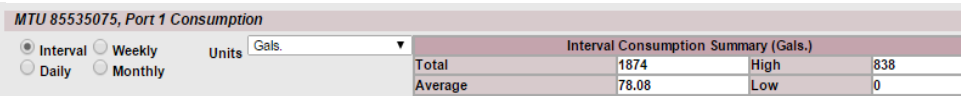
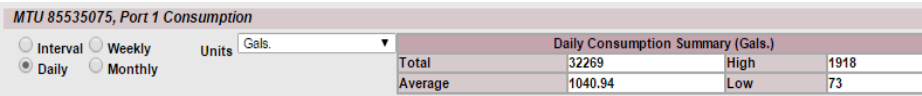
Send me email alerts when my account may exceed the monthly threshold, or if FATHOM detects a leak.

Send me text message alerts when my account may exceed the monthly threshold, or if FATHOM detects a leak.



Download on the **App Store**

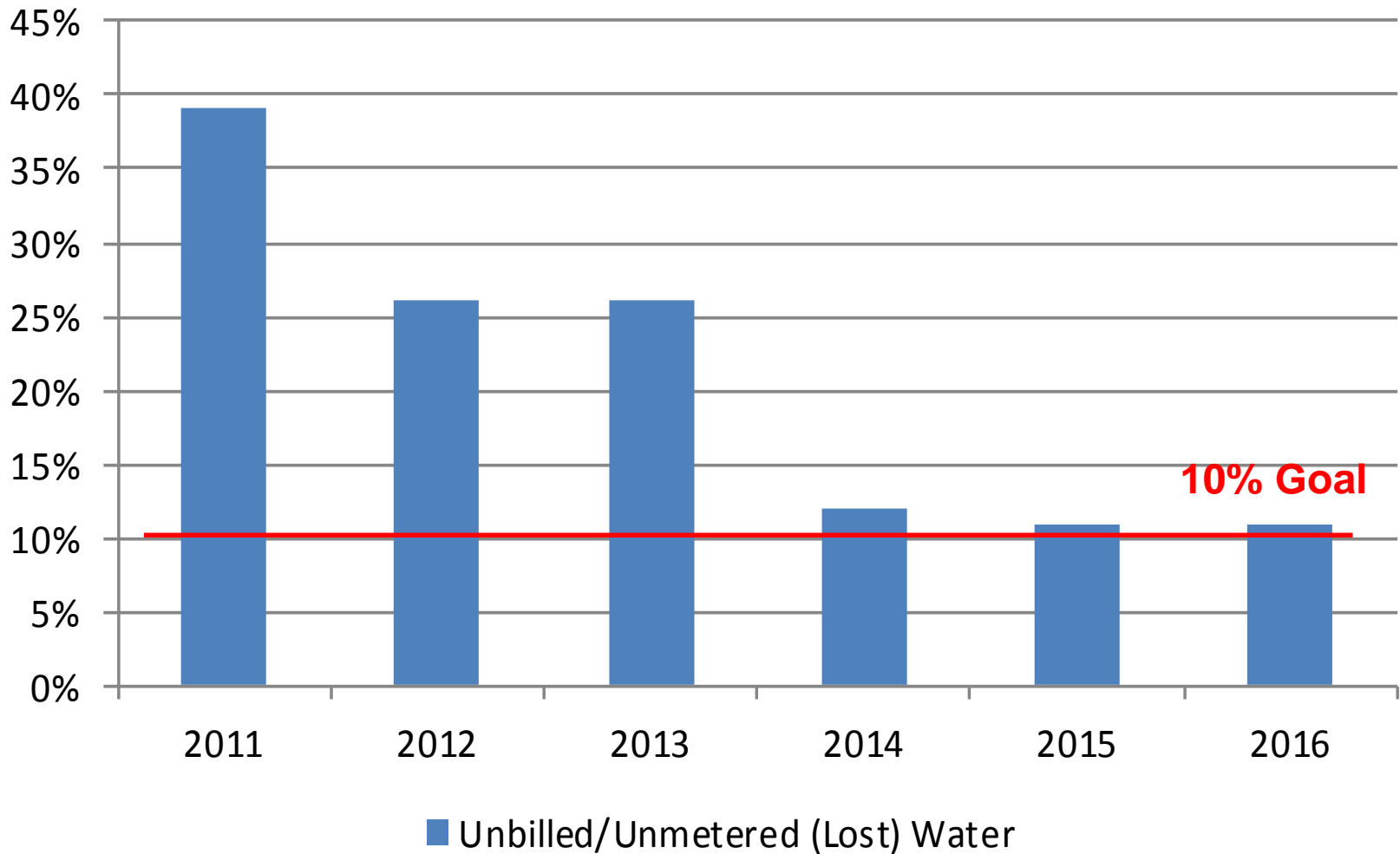
ANDROID APP ON **Google play**



- Monthly and daily detailed consumption data
- Analyses provided to customers with billing questions

- First step: data audit and field audit (2013/2014)
 - 16,409 accounts reviewed for services and billings
 - 16,339 field locations analyzed
- 2,800 “problem accounts” identified
- Sample of 32 meter locations over a six month period before & after AMI installation
 - Average 48% increase in consumption
 - 4 addresses demonstrated consumption increases from 169% to 284%

Recover Lost Revenue



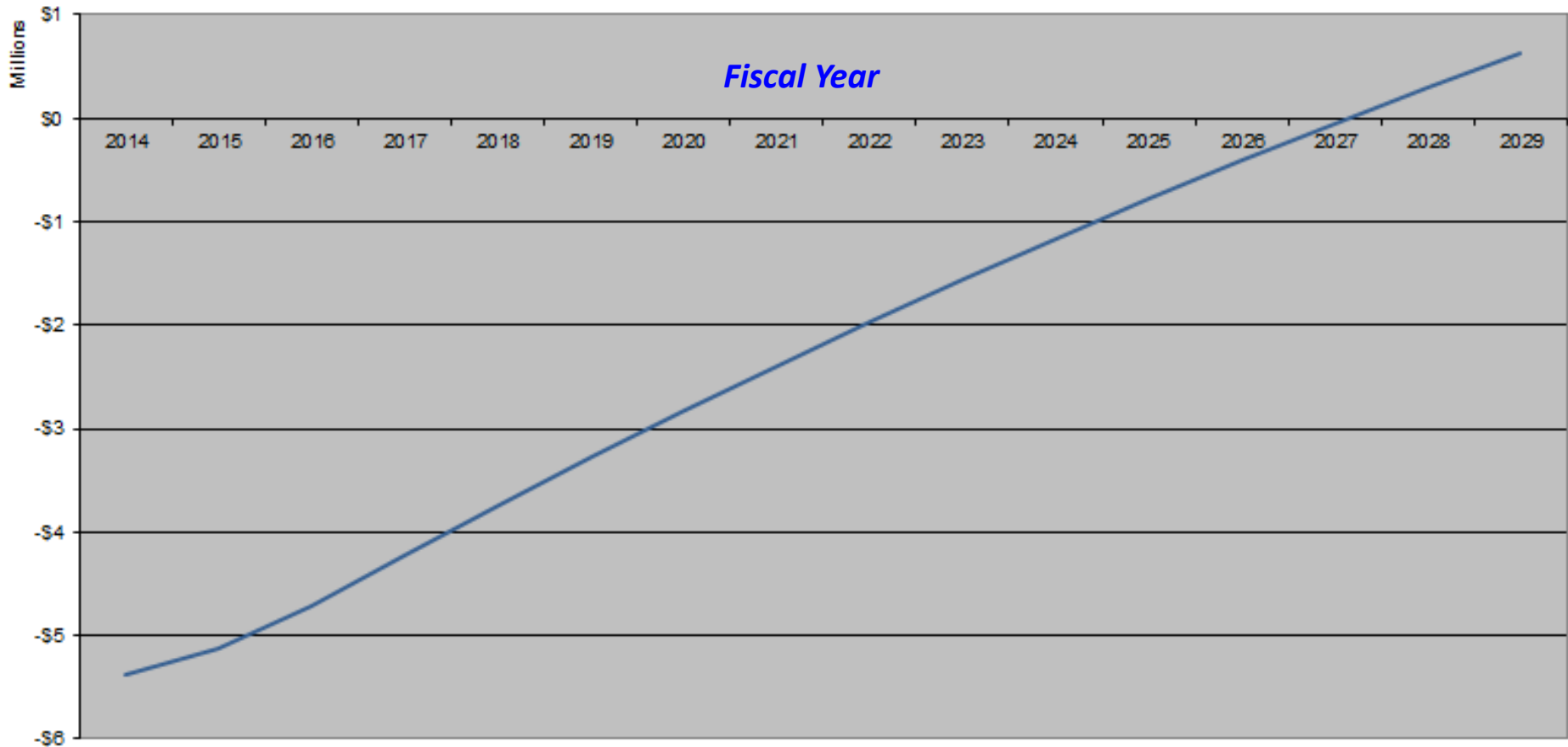
Note: 2016 is year-to-date data

Reduce Expenditures

- Reduced staff (\$303K savings/yr)
 - Eliminated 6 FT & PT positions
- Saved billing and printing costs by contracting out billing functions (\$202K savings/yr)
- Eliminated meter reading as a primary task (\$13K savings/yr)
- Deferred meter purchases for 10 to 15 years \$280K savings/yr)
- Lost revenue recovered (\$425K, year 1)

- **Cost of service improvement**
 - In-house Cost: \$6.51/meter/month
 - Fathom Cost: \$4.49/meter/month
 - Net Savings: \$2.02/meter/month
- **\$2.02/meter/month: \$393,756/year**
 - Paying down the investment in AMI infrastructure

Projected Payback Schedule



- Eliminated meter reading routes covering 210 miles monthly
 - Reduced emissions; saved fuel costs
- Provide 6 ways to pay without leaving home
 - Pay by mail
 - Pay by phone (IVR and App)
 - Pay via web through customer portal
 - Automatic monthly charge to credit card
 - Automatic deduction from bank account

- Large amounts of new data available
- Change management
 - Internal and external resistance to change
 - Public outreach and education workload
- Repurposed workforce & modified duties
 - Before: Routine, simple, repetitive, reactive tasks
 - After: Diagnostic, investigative, complex and proactive tasks
- New maintenance priorities
 - Benefits depend on fully operational system; rapid maintenance responses are critical

Thank You!

