

# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)



# Cleaning Up On Conservation

Deb Lane

Shawn Sosa

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OUR FUTURE IN EVERY DRÖP



watersmart  
INNOVATIONS



# Our mission:

Protecting public health  
by sustaining water  
resources, infrastructure  
and the environment



# ABOUT US

- Population 175,000
- Maintain over 1,200 miles of water and sewer pipe
- Deliver over 20,000 acre-feet of water per year
- Treat and beneficially reuse 6 billion gallons of recycled water per year
- Provide water and sewer service to 53,000 connections:
  - 44,300 Residential
  - 3,200 Multi-family
  - 3,900 CII
  - 1,600 Dedicated Irrigation
  - 32 Urban Recycled Water



OUR FUTURE IN EVERY DRÖP















# Water Use Efficiency Programs

- WaterSmart Checkup
- Cash for Grass
- Irrigation Efficiency
- Rainwater Harvesting
- Graywater
- High Efficiency Clothes Washer



# CI Program

- WaterSmart Checkup
- High Efficiency Urinal
- High Efficiency Clothes Washer
- Sustained Reduction Rebate



# Sustained Reduction Rebate

- \$200 for every 1,000 gallons of monthly sustainable reduction in water use
- Pre & post metering
- $\frac{1}{3}$  -  $\frac{1}{2}$  upfront rebate paid (engineered estimate)
- Final payment = actual sustained savings
  - 12 months post
  - Cost of materials vs. actual savings
- 40 Million gal saved annual



# Case Study: Laundry Water Recycling

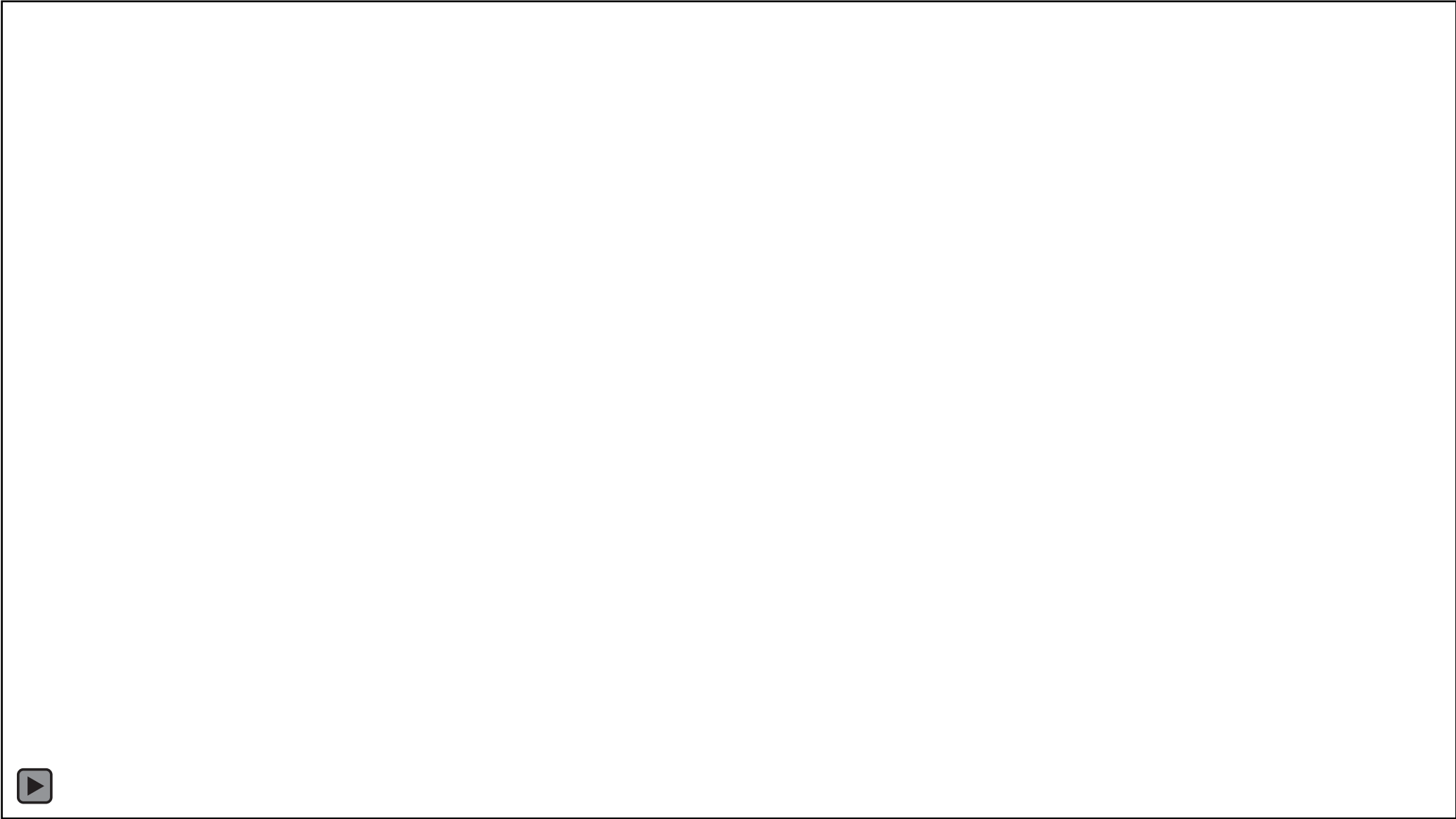




Conveyor

Tunnel

Press







Linen  
Press

Effluent  
Trench



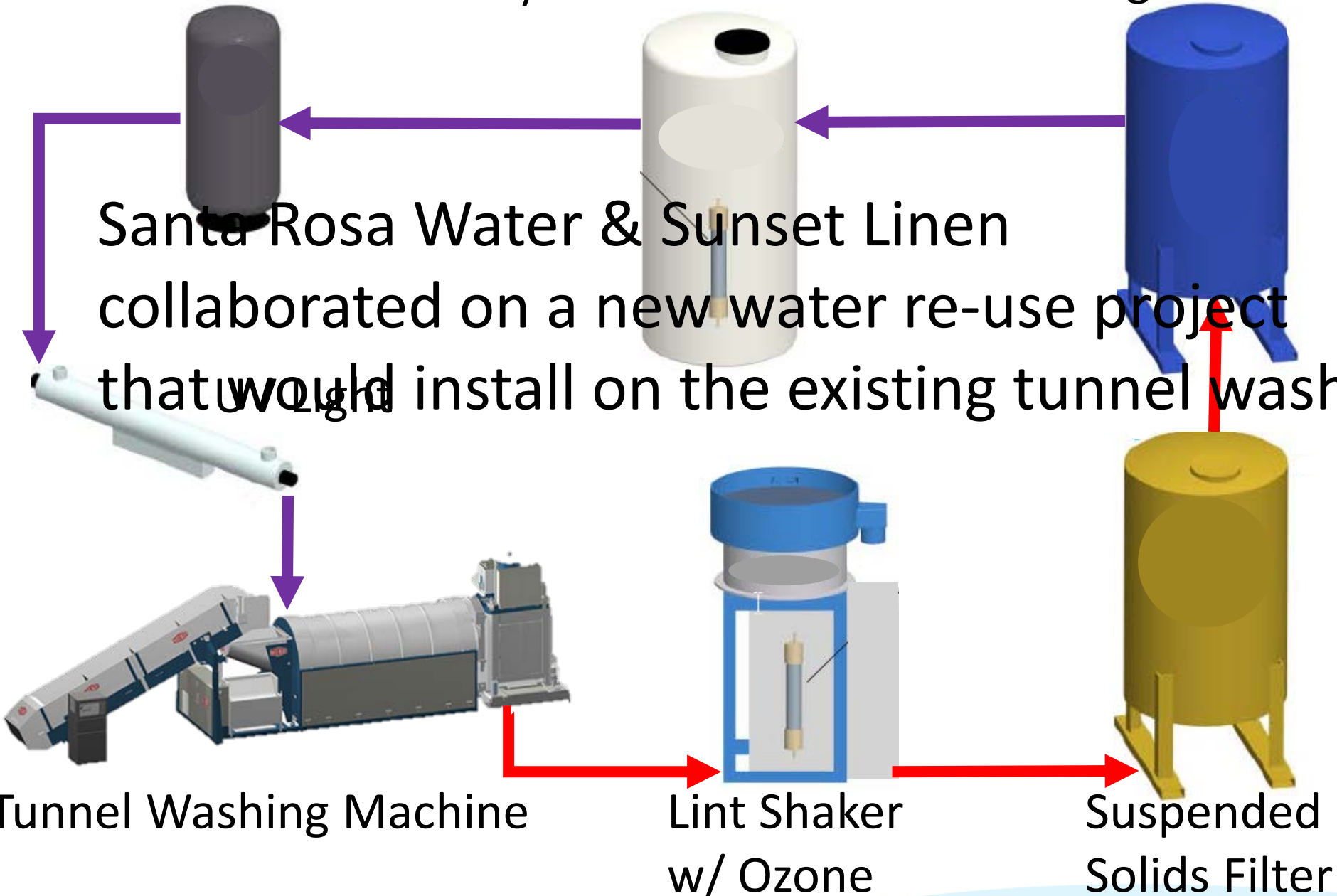


Bladder Tank

Final Holding Tank  
w/ Ozone

Oil, Grease, Soaps  
and Organics Filter

Santa Rosa Water & Sunset Linen  
collaborated on a new water re-use project  
that would install on the existing tunnel washer



Tunnel Washing Machine

Lint Shaker  
w/ Ozone

Suspended  
Solids Filter

# Sustained Reduction Rebate

\$200 for every 1,000 gallons of monthly sustainable reduction in water use

- Site conditions?

**Performance based incentive!**  
**SR Water requires data collection**

# Data Validation Hurdles

Areas with water use on site

- Bathrooms, kitchen
- (3) 100lb washers
- Boiler Steam Evaporation system
- Tunnel Washer (recycling system installed here)

One potable City meter serves entire site

- How estimate water used by washer?
- How calculate savings through City meter?

# Data Validation Hurdles

- Sunset Linen assumes approx. 60% of potable meter's water use for tunnel washer
- Verify with washer's flow meters
  - Calibration issues
  - 2 of 3 registered in master computer
  - Expensive to replace

# Data Validation Hurdles

- May - July 2015: On-site assessment
  - Various data points submitted to City
- Aug '15: flow meter calibration attempts
  - Mfg. convinced issues with meters
  - Software old and \$\$ (*if*) can upgrade

Customer learned a lot about own system.

Stressful situation, would they get a rebate?

# Data Validation Hurdles

Contacted recycling system engineers

Any possible methodologies to calculate consumption & savings achieved as result of system?

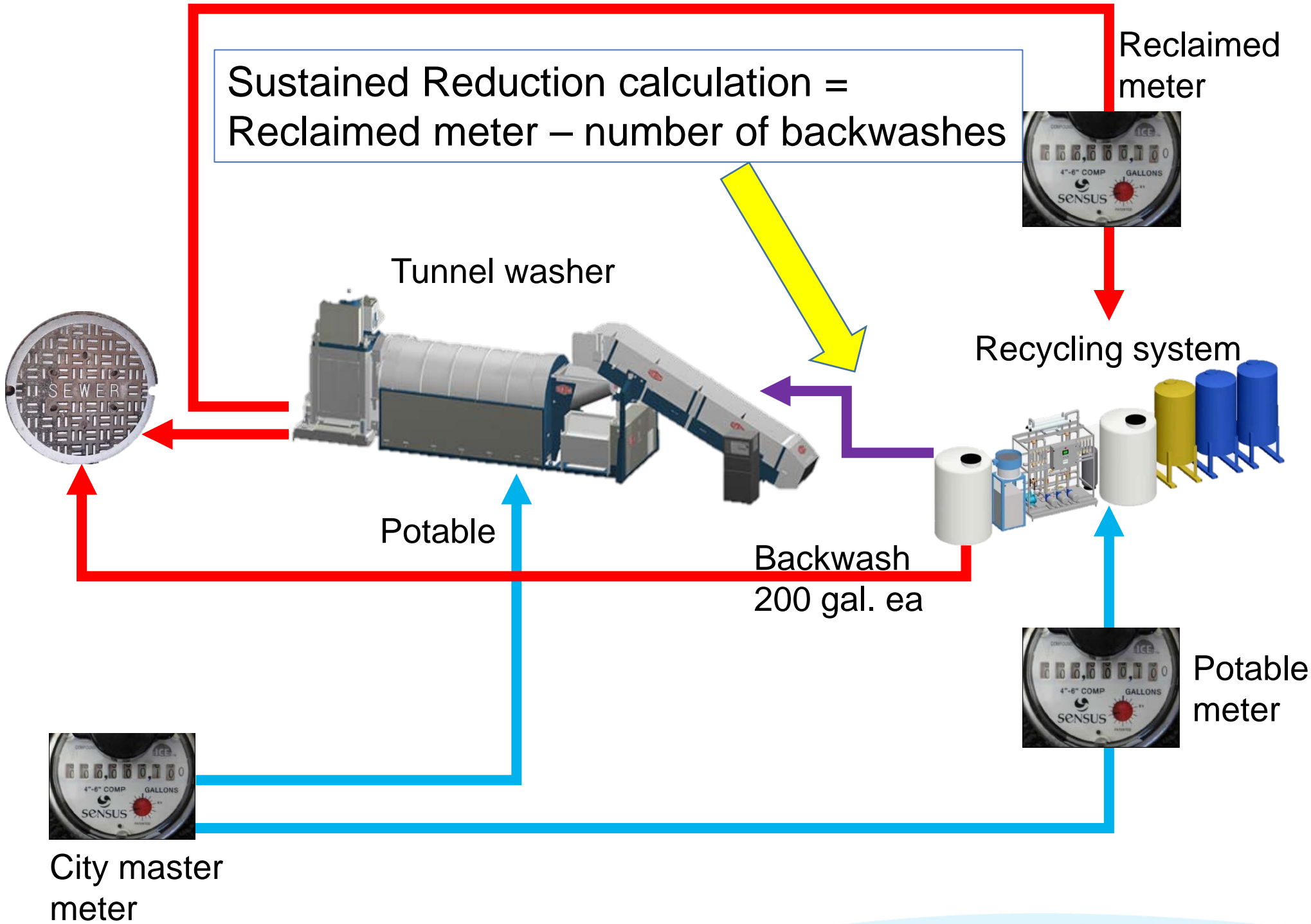
- Technical specs
- Backwash use and recurrence
- New system sub-meters



# Success!



Sustained Reduction calculation =  
Reclaimed meter – number of backwashes



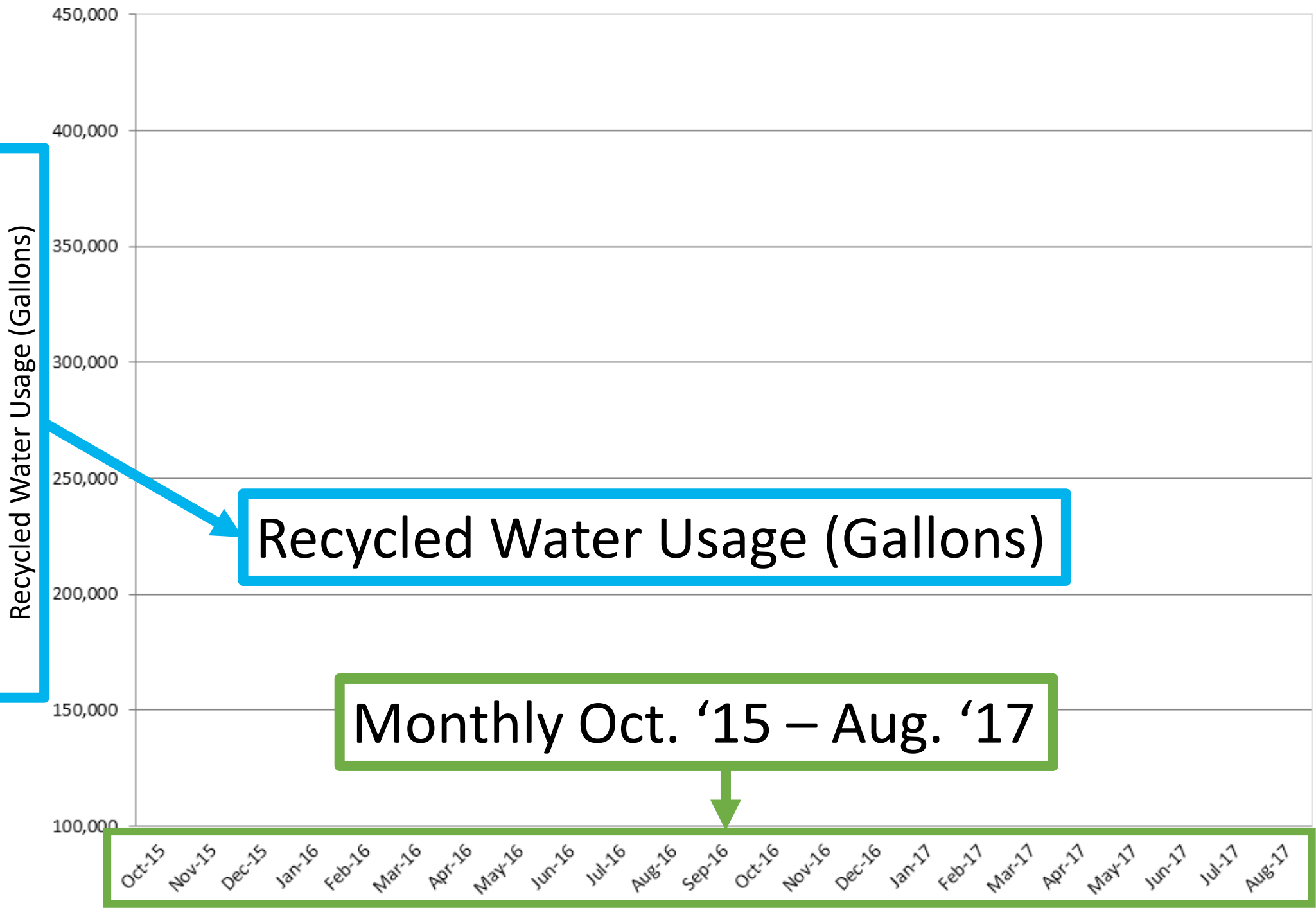


Filters, etc.

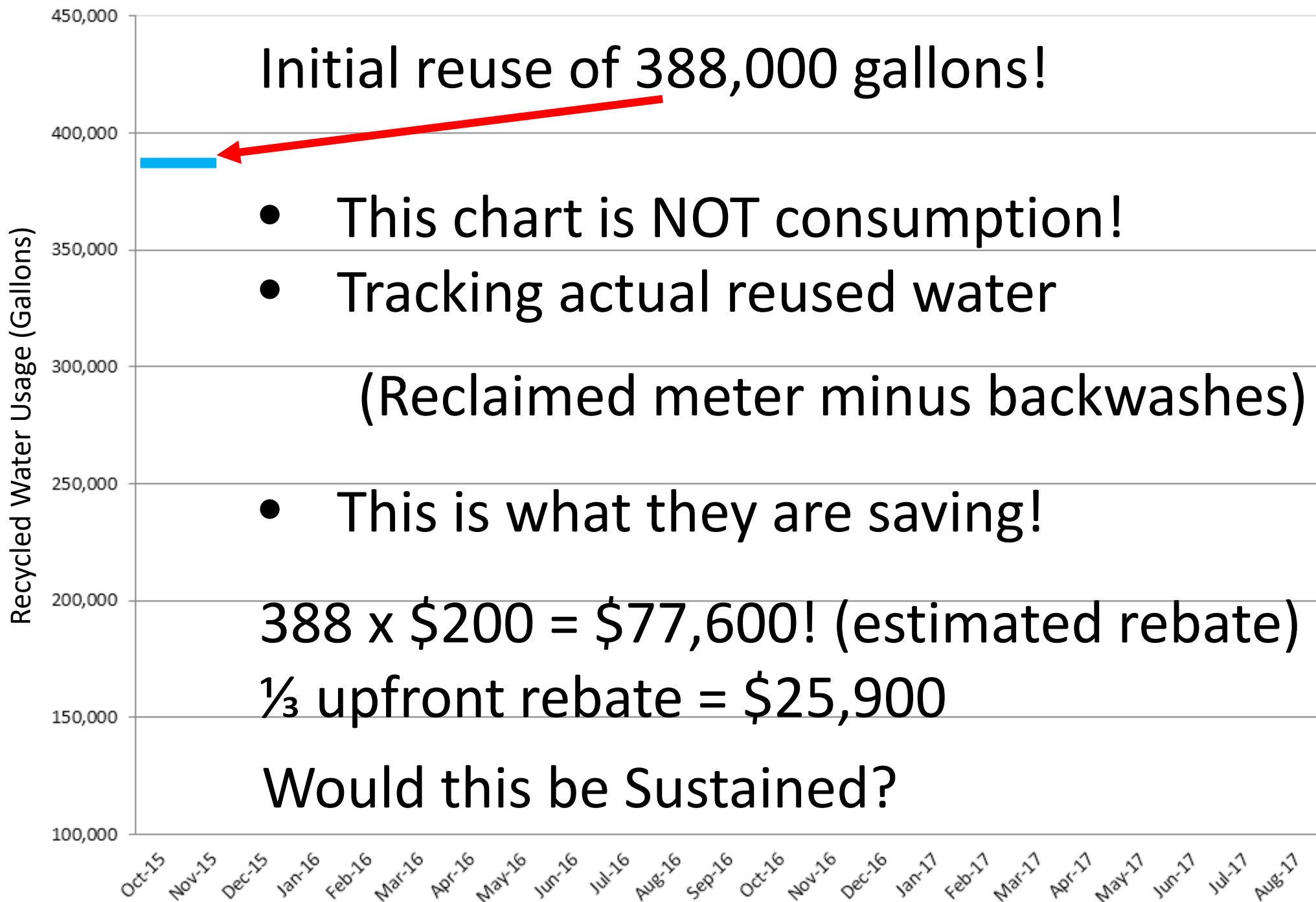
From effluent trench

Solids Separator

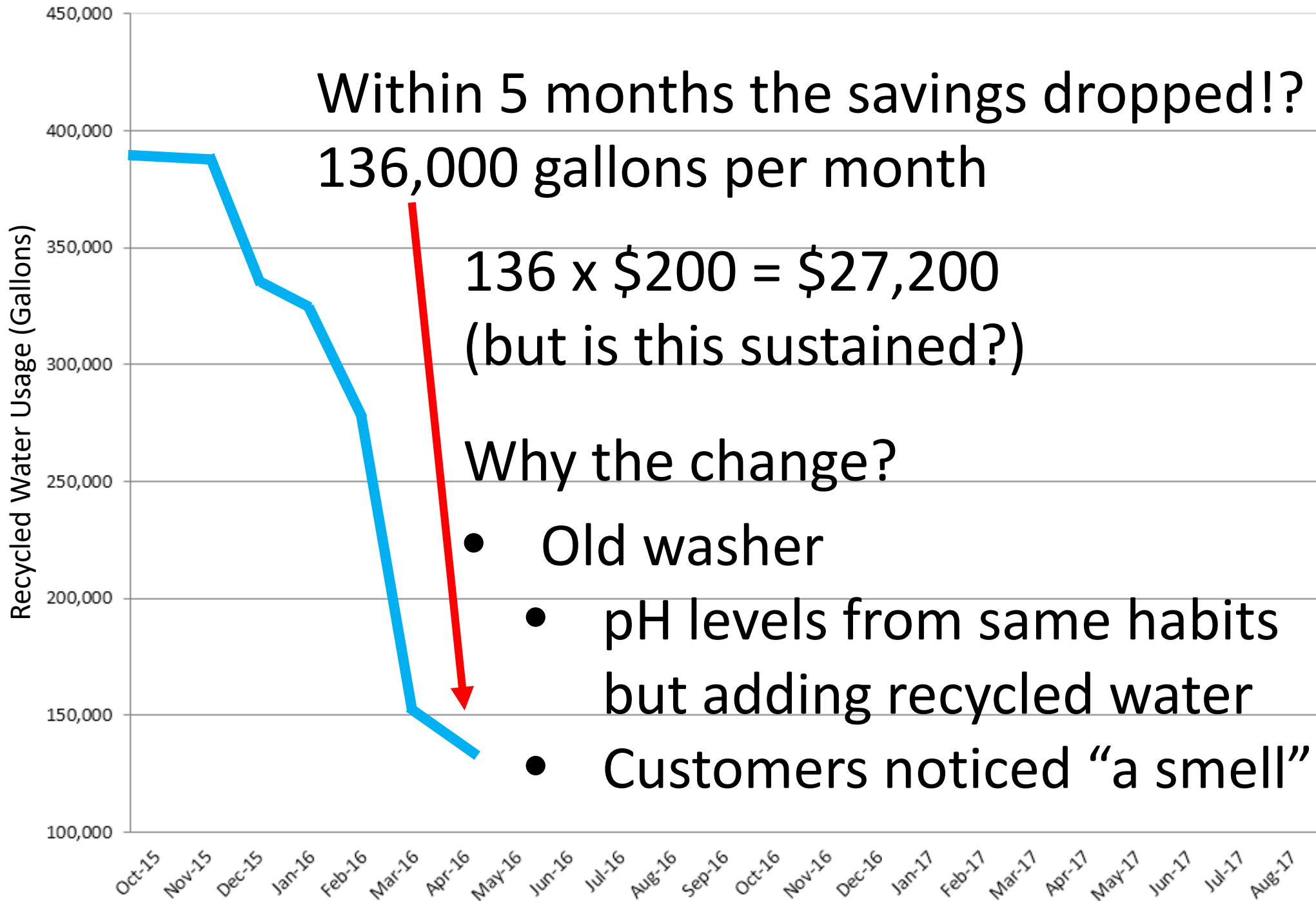
# Sunset Linen Recycled Water Generation & Use



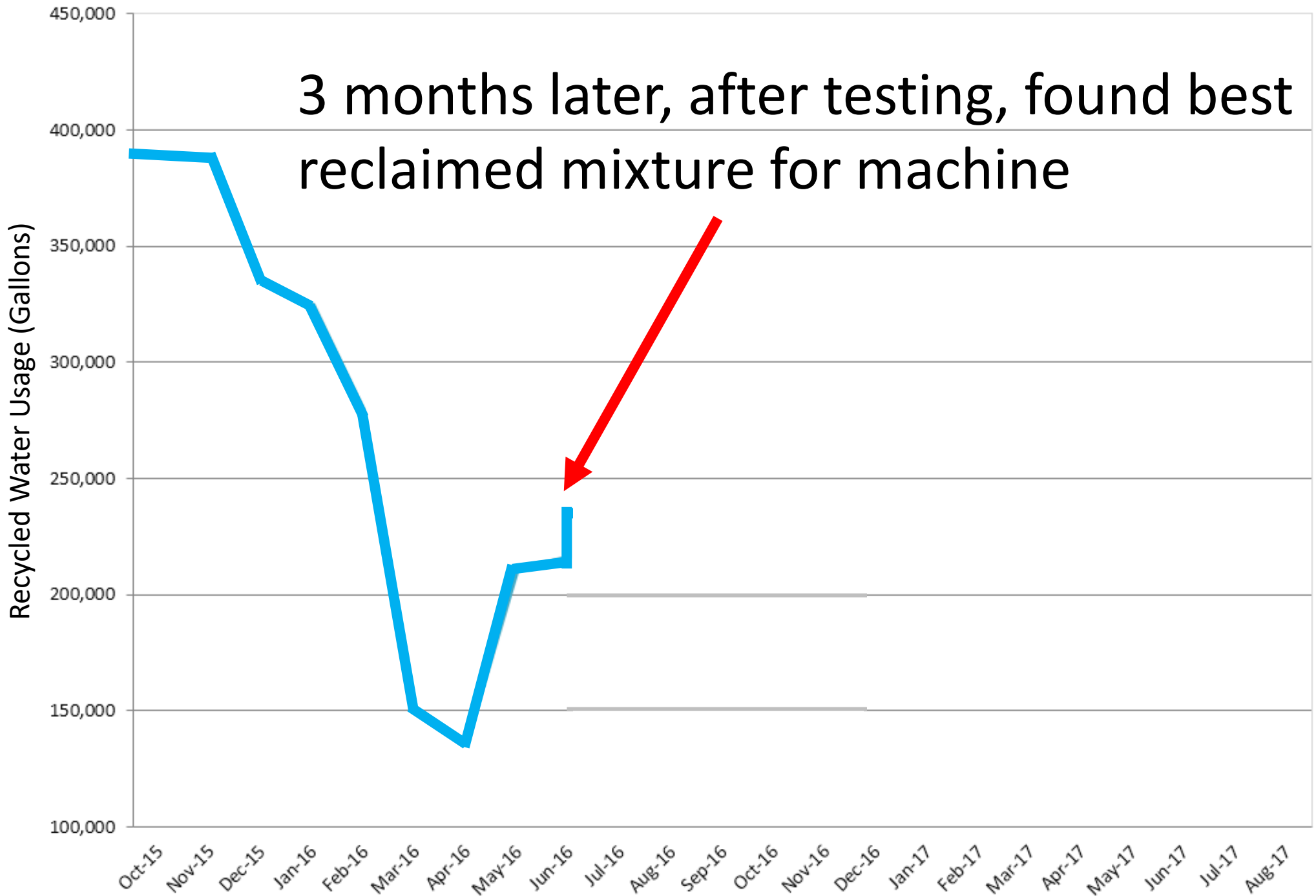
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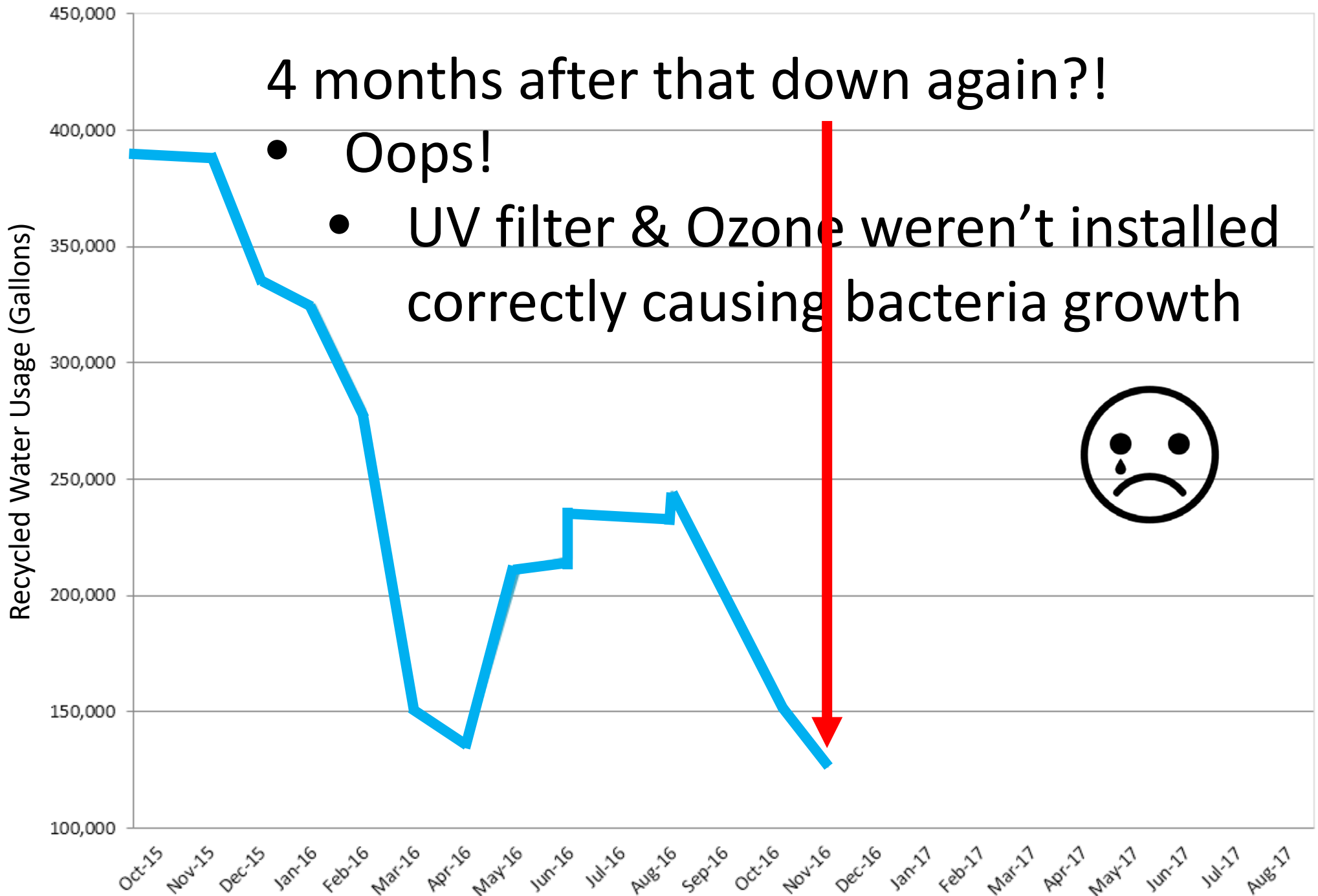
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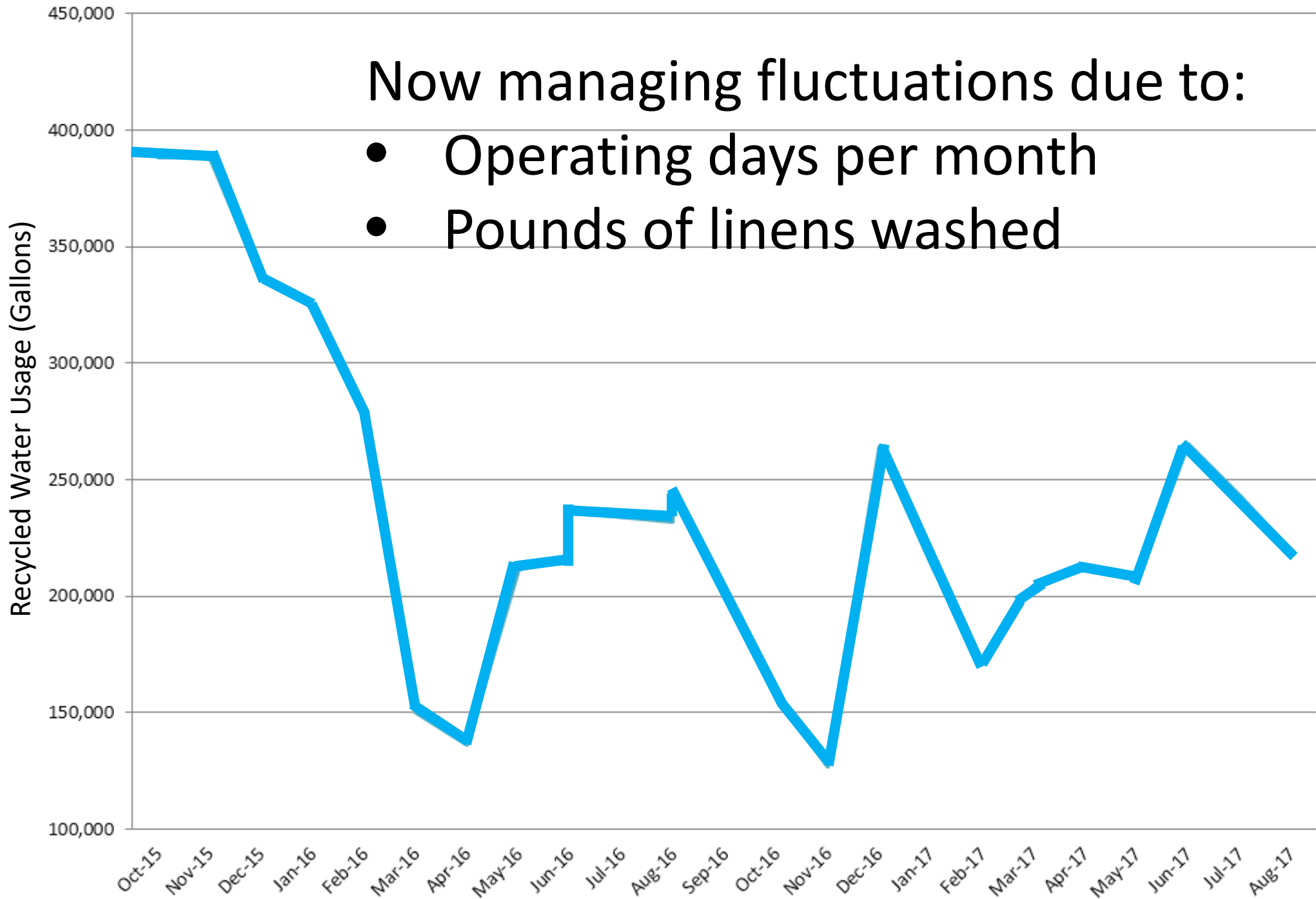


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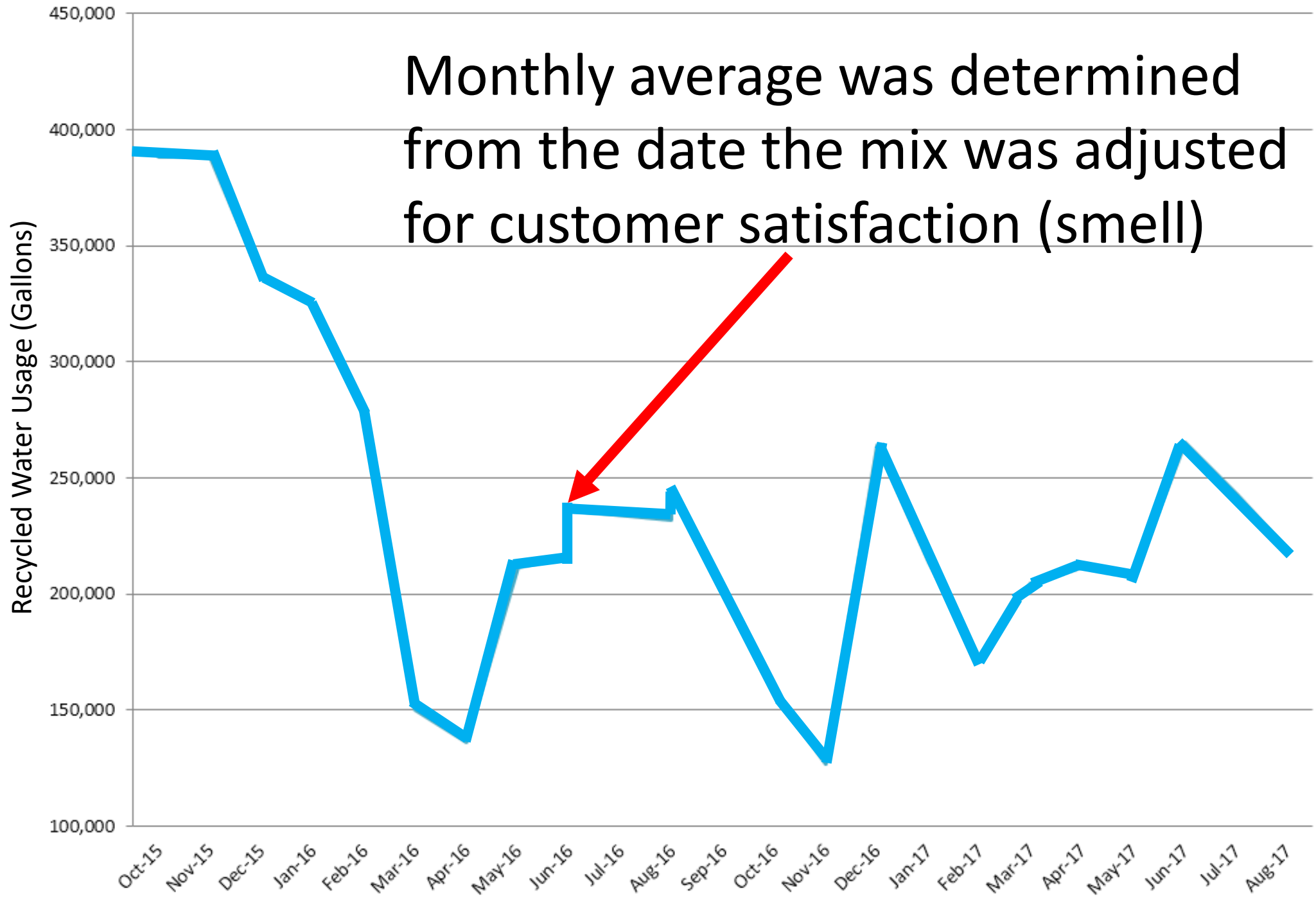




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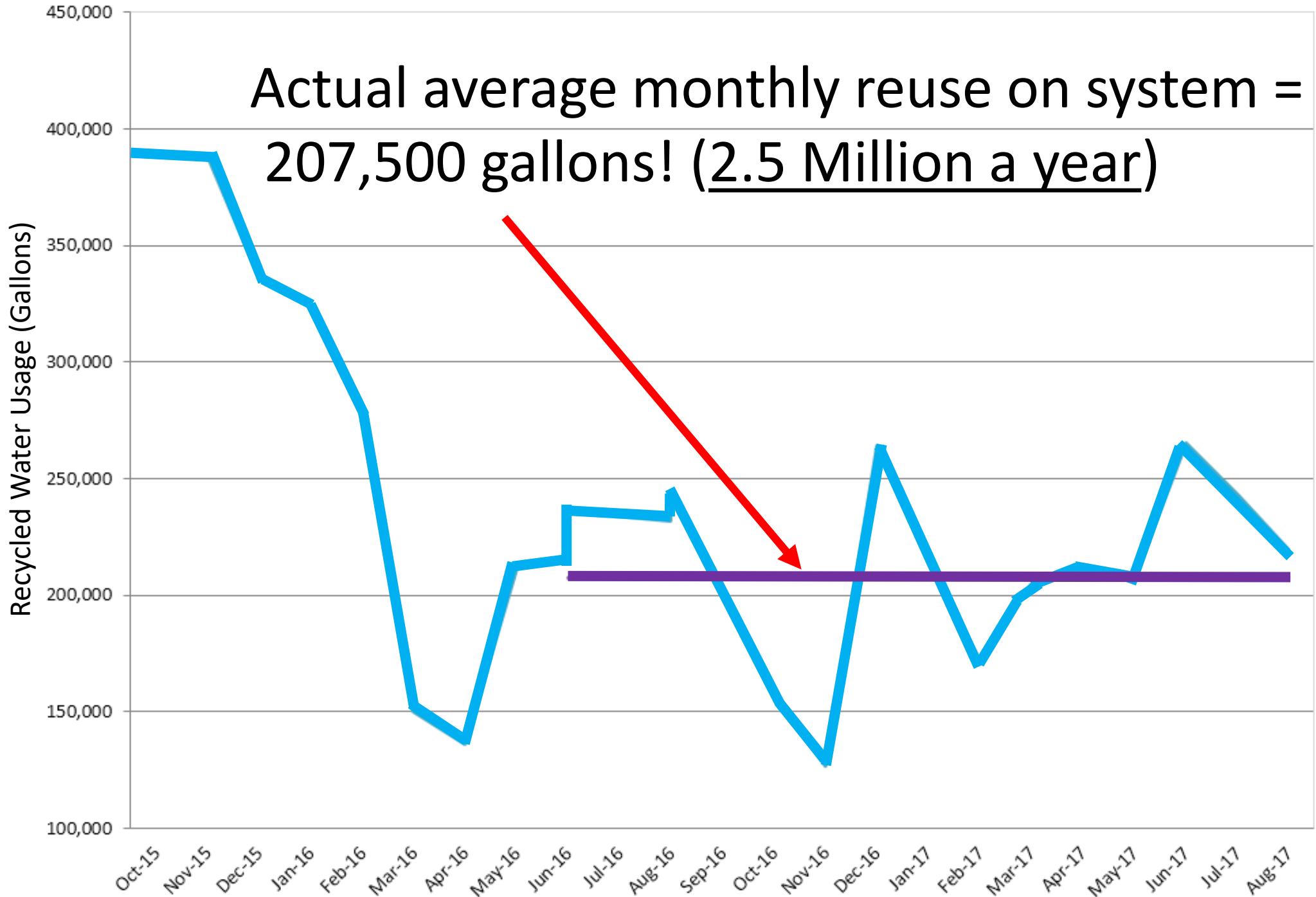


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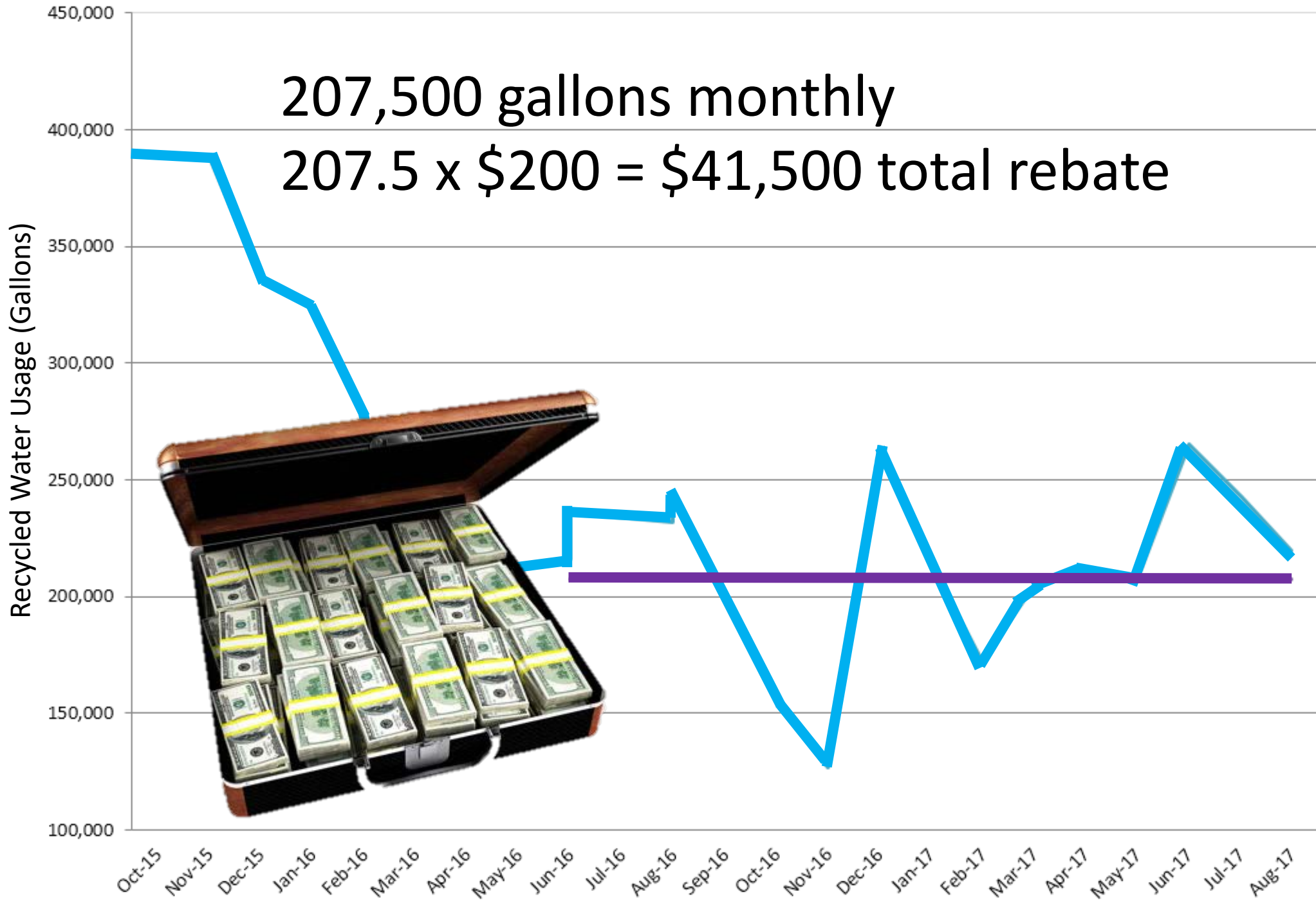


# Sunset Linen Recycled Water Generation & Use

Actual average monthly reuse on system = 207,500 gallons! (2.5 Million a year)



# Sunset Linen Recycled Water Generation & Use



Were we sure the Sustained Reduction formula was right?

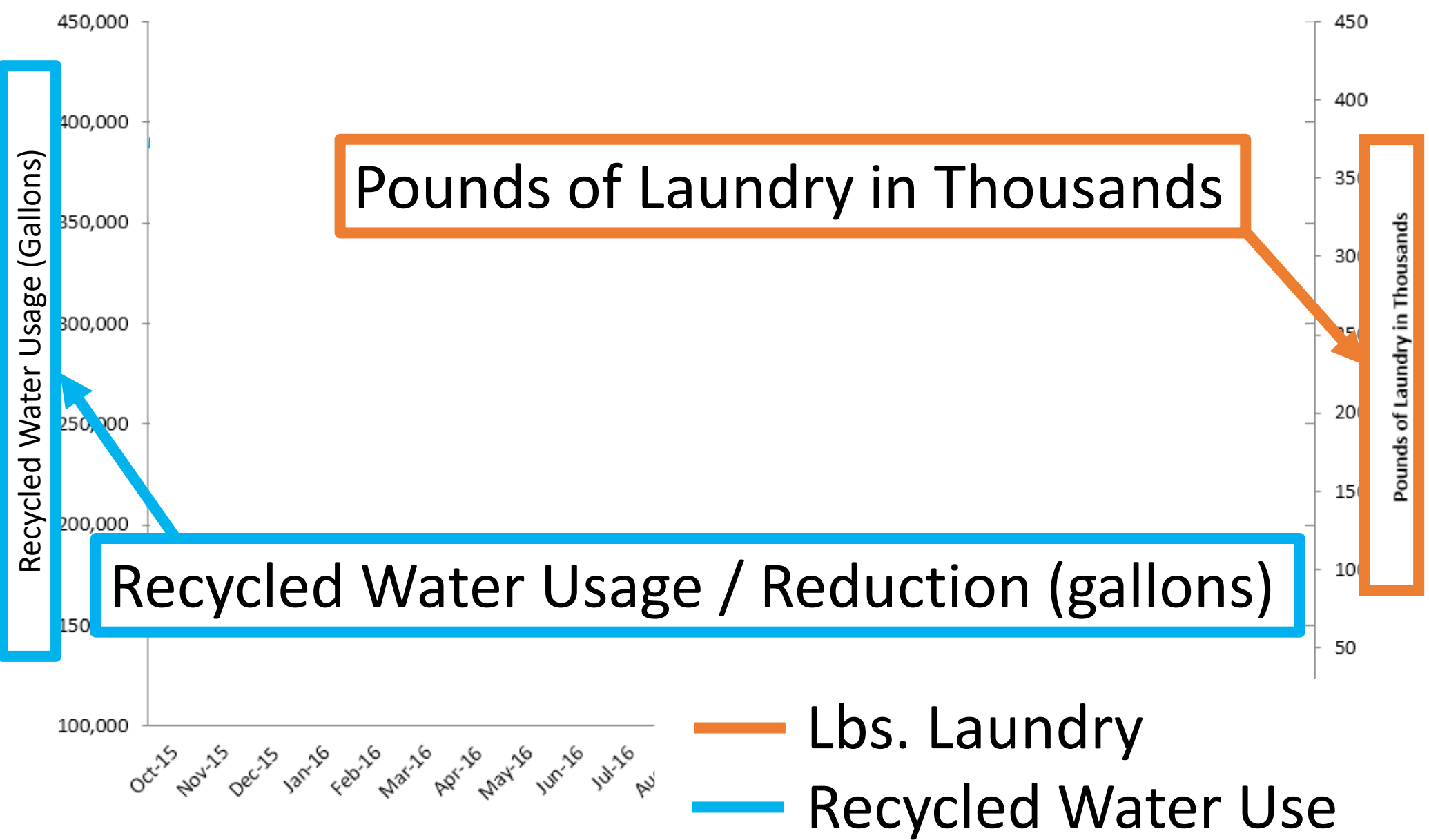
Could we rely on those sub-meters since they're from the company who sold the product?

Manufacturers reclamation claims need to be validated.

Two methods to validate were performed.

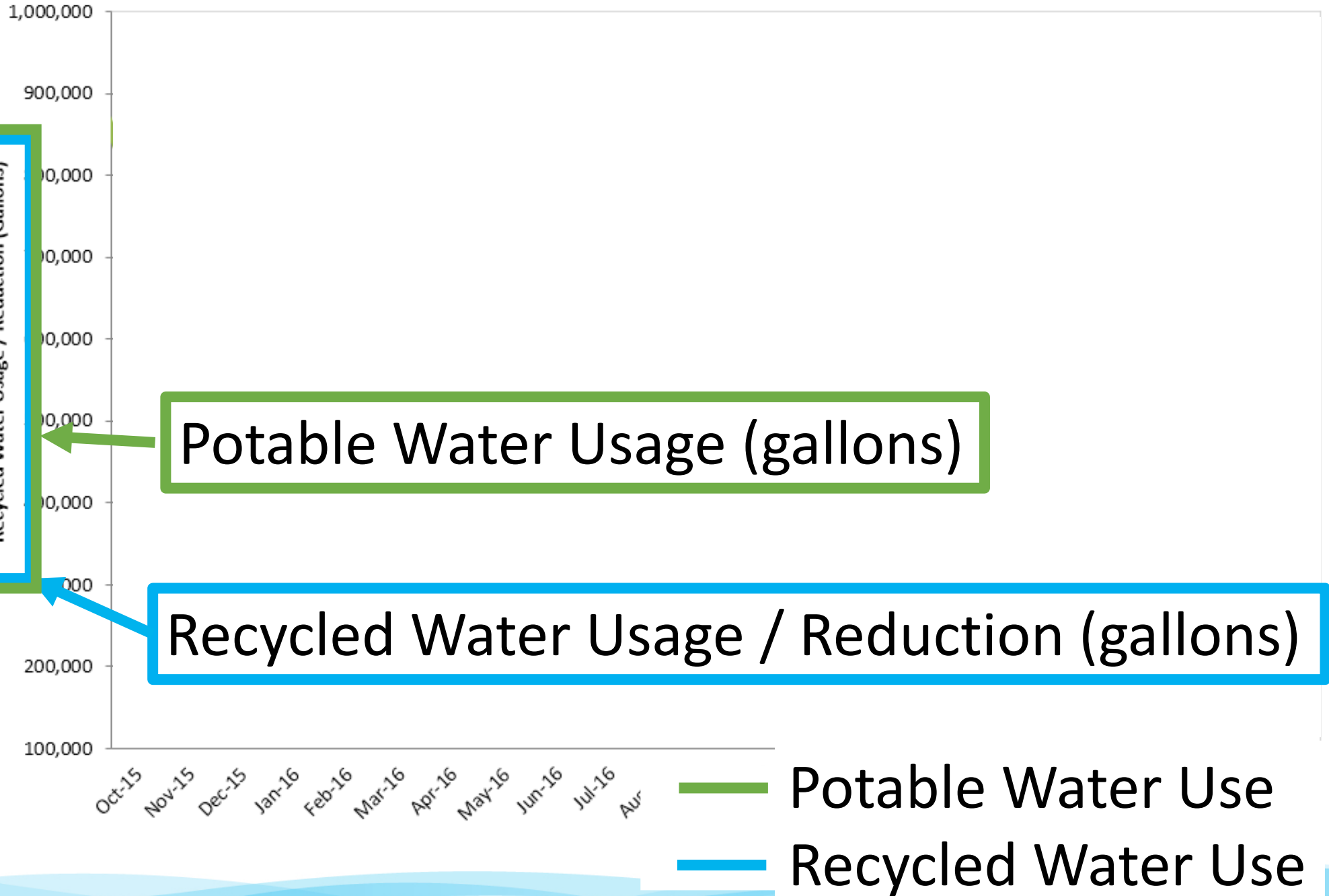
# Sunset Linen Recycled Water Generation & Use

## Validation #1:



# Sunset Linen Recycled Water Generation & Use

## Validation #2:



# Lessons Learned

- Recycling systems work
- Data collection types = site specific
- Retrofitting new with old = learning curve
  - Ph levels, chemical adjustments, etc.
  - Verify install (Ozone / UV filters)
- Customer satisfaction may limit water savings



# Sunset Linen Project

- Sustained Reduction =
  - 207,500 gallons monthly
  - 2.5 million yearly
- \$41,500 rebate
- QUESTIONS?

# Connect with us!

Call: 707.543.3985

Email: [WaterSmart@srcity.org](mailto:WaterSmart@srcity.org)

Visit: [srcity.org/water](http://srcity.org/water)



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