



## DNR 2018 Water Conservation Report

Carmelita Nelson

MN DNR Water Conservation Consultant

Leo Steidel **ESP**<sup>®</sup>

CEO of Energy Platforms, LLC

# NEW Water Conservation Reporting System



- 1<sup>st</sup> comprehensive report on water conservation
- Specialized software
- Initially 348 water suppliers
- 2018 analysis shows MN met statewide goals

# Why do we need this information?

Water Conservation Program required under M.S. §103G.10

Program to guide permit issuance and appropriation of water

EWR Division Strategic Plan 2018-2028 Strategy – water status & trends data

Water Supply Plans require conservation



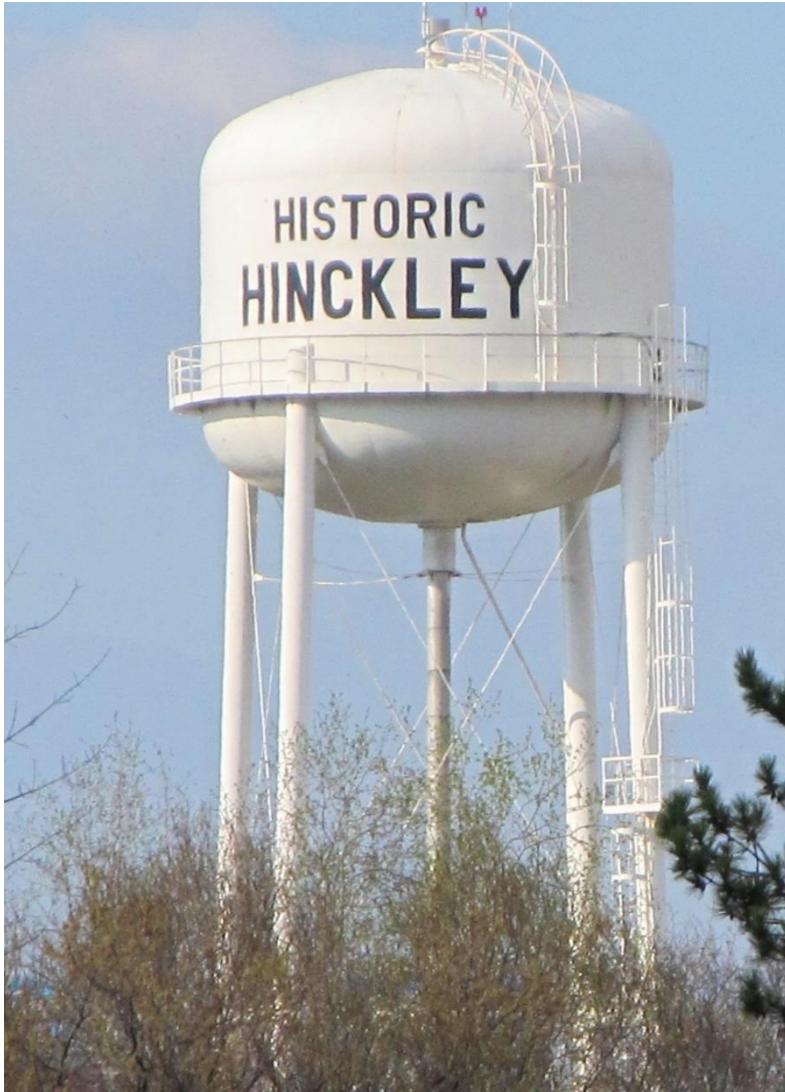
# Need for Conservation in Minnesota

- Growing population & economy
- Uneven statewide availability of groundwater
- Groundwater withdrawn faster than recharge can occur
- Energy savings and changing climate
- Degraded water quality
- Great Lakes Compact



*If you can't measure it, you can't improve it*

# DNR Water Conservation Reporting System

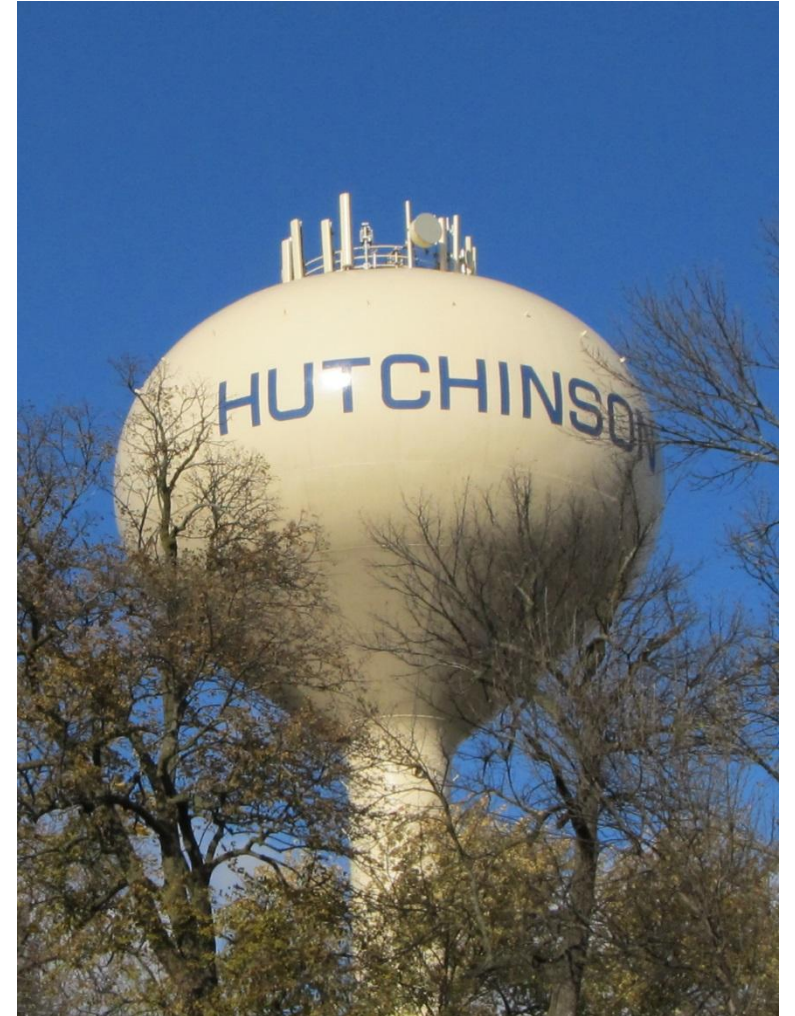


## Goals

- Determine the impact of water conservation
- Encourage water supplier best practices
- Analyze trends

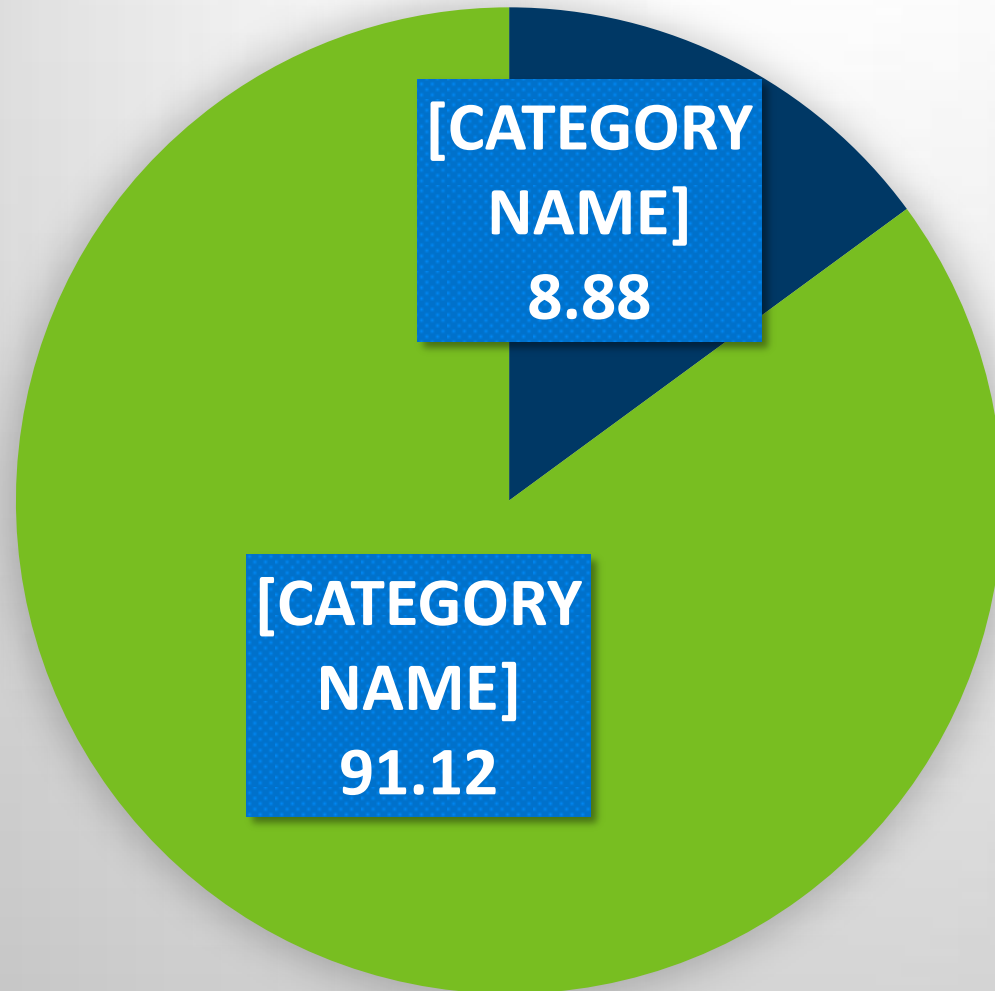
# 2017 Data Reporting Results

- 348 Reporting Utilities (100%)
- 327 Created an account (94%)
- 230 Entered “reasonable” data (70%)
- These utilities account for 80% of water use
- The 2017 data indicated good performance overall for Minnesota utilities.



# Objective 1: Reduce Unaccounted Water Loss to Less than 10%

## Distribution

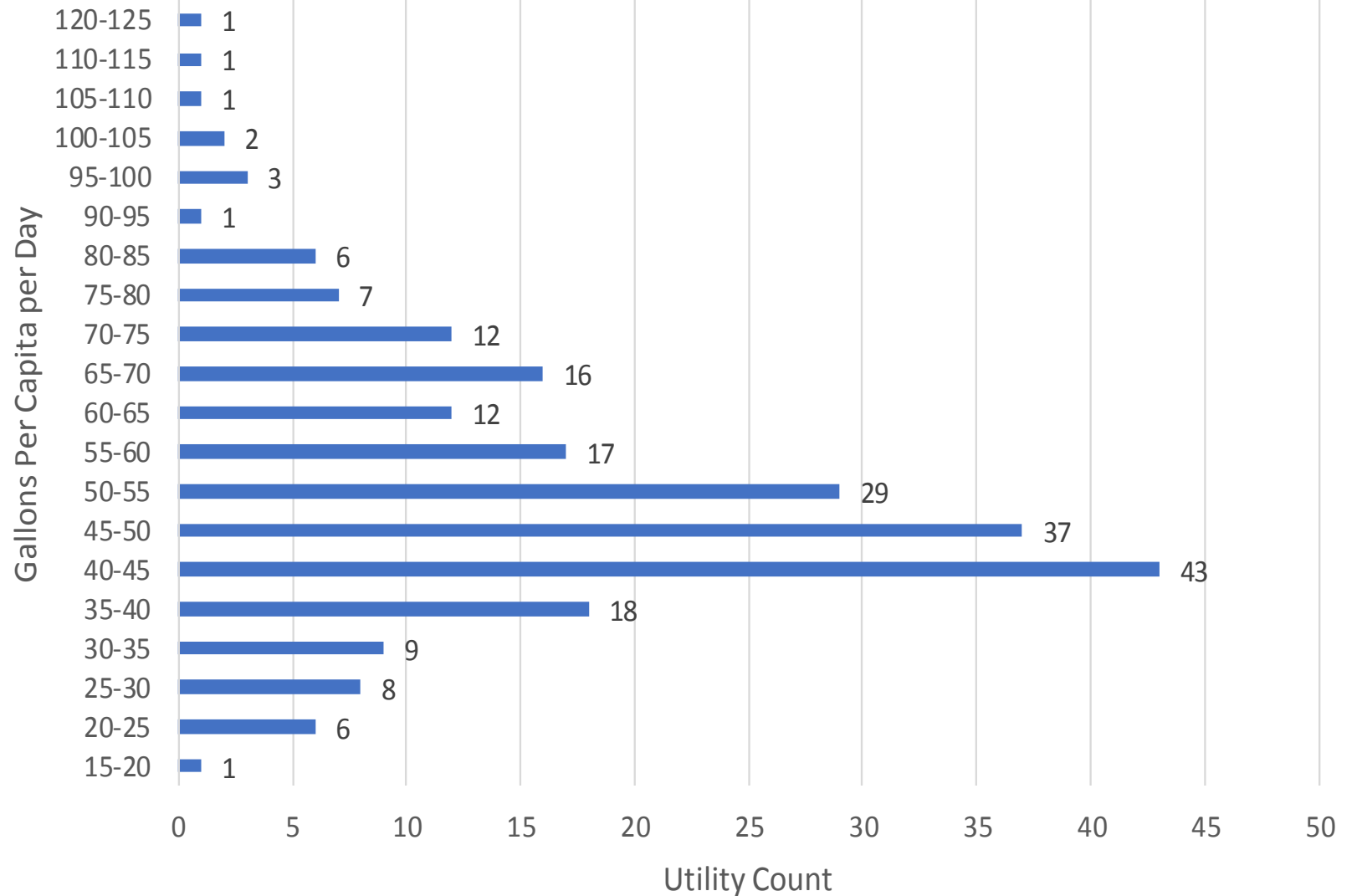


- Distribution Losses
- Authorized Consumption



# Objective 2: Achieve Less than 75 residential GPCD

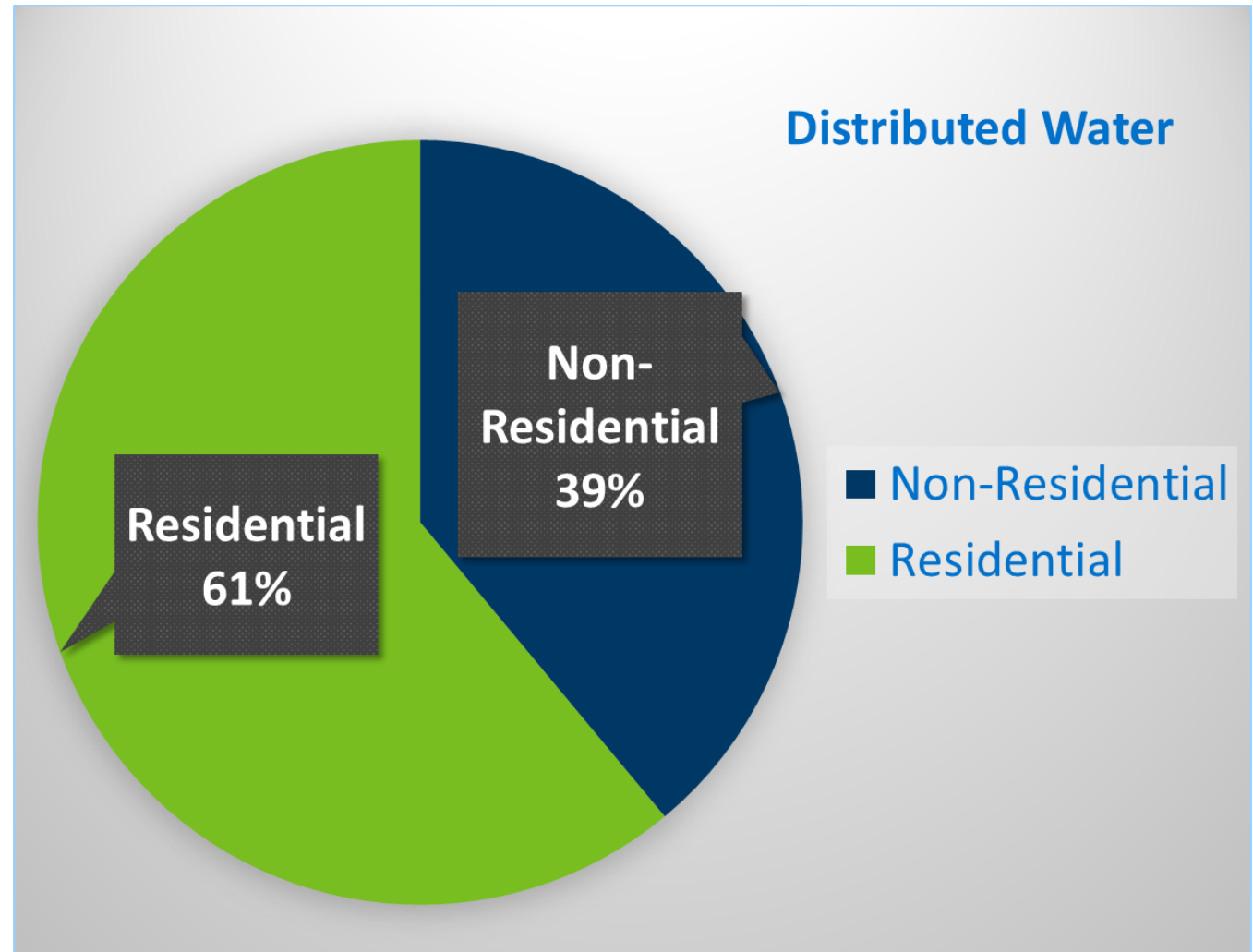
- Statewide GPCD is 52
- 90% of utilities met the goal





# Objective 3: Achieve at least 1.5% reduction in non-residential GPCD

- Not reported in 2017
- Will be reported in 2018



# Objective 4: Achieve a decreasing trend in total per capita demand

- Will start measuring next year when there is two years of data
- For every measure, you will be able to see the previous year's data



# Objective 5: Reduce Ratio of Max. day to Ave. Day to $<2.6$

- The total daily peaking factor for the filtered set of utilities is **2.37**
- 75% of the utilities met the 2.6 peak day use



# Objective 6: Implement Demand Reduction Measures

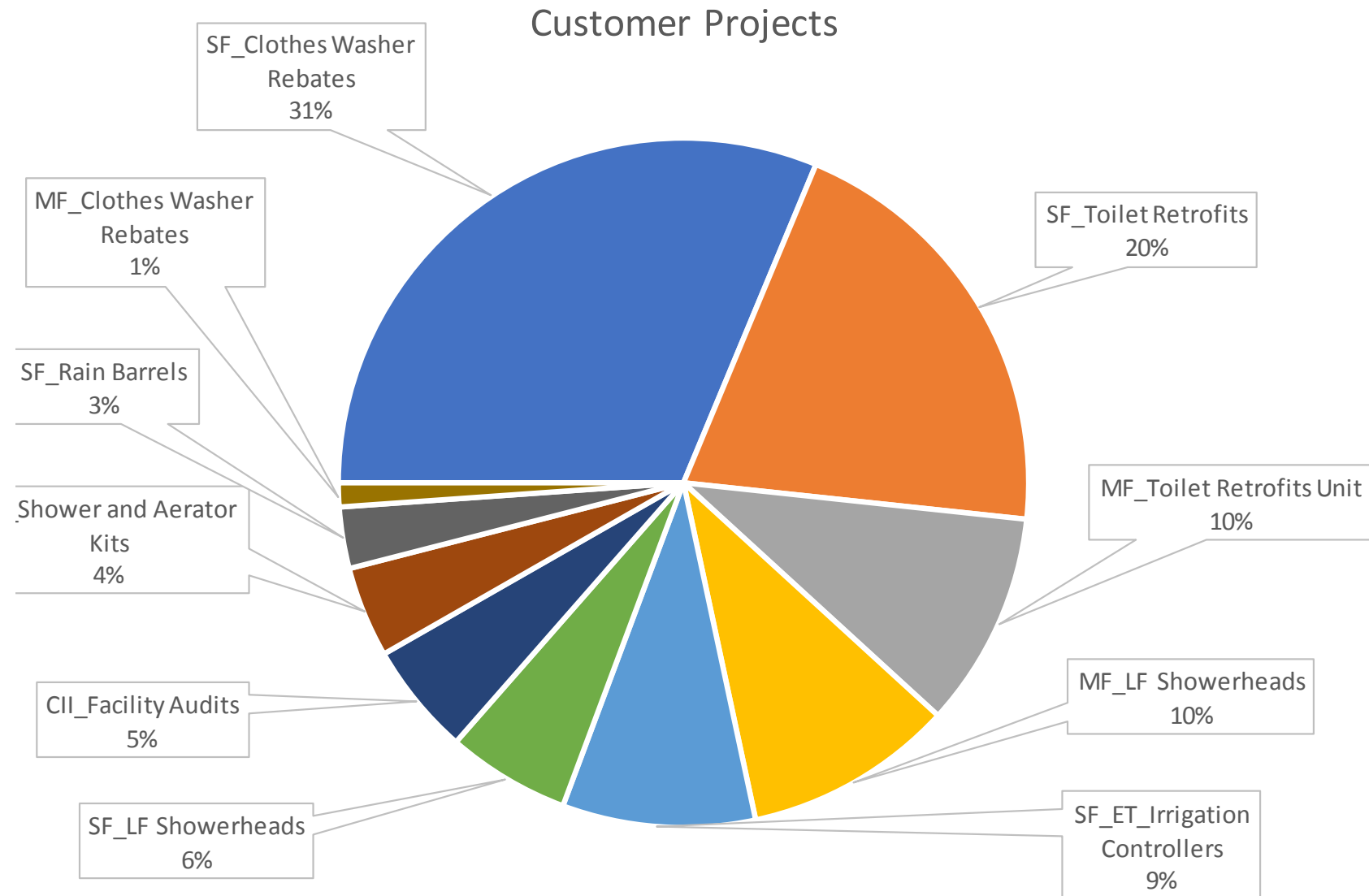
## Conservation – Direct Infrastructure Projects

- Results based on all 348 reporting utilities.
- 211 (61%) reported direct conservation projects **Before** the customer meter.
- This includes leak detection and repair, meter and hydrant repair and replacement.



# Demand Reduction – Customer Projects

- 190 utilities (55%) reported projects
- Total of 8,773 customer projects
- Resulted in over 70 million gallons of water saved
- 13 water reuse projects resulted in over 75 million gallons saved annually



# Objective 7: Reduce Water Use & Support Wellhead Protection

Indirect Conservation are activities that promote water conservation, but that cannot be measured in gallons saved.

Indirect Conservation Measure include:

- 74% Ordinances
- 77% Education & Outreach
- 58% Collaboration Efforts



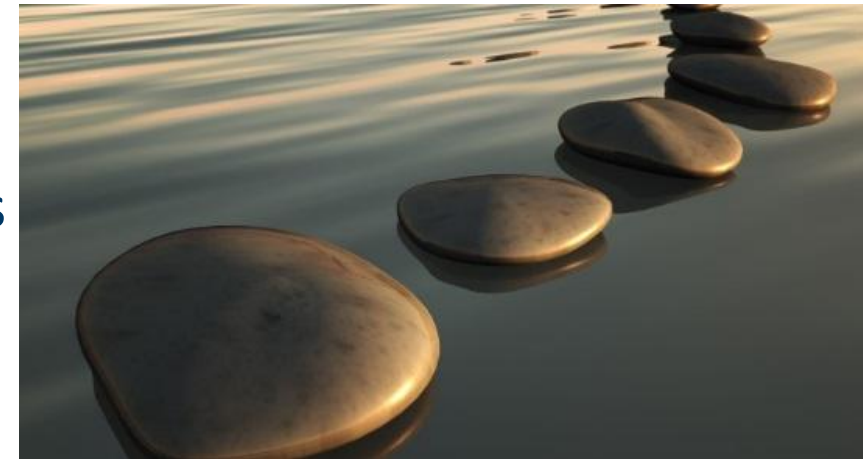
# Objective 8: Monitor and Track Water Conservation Success

This objective is accomplished by the utility entering annual water conservation data into **ESPWater**



# Next Steps

- Encourage water suppliers to review their data & submit corrections
- Encourage peer learning
- Make improvements to the Water Conservation Reporting System
- Work with Commercial, Industrial and Institutional permittees to begin reporting (2019 small cities; 2020 agriculture)
- Work with partner agencies and organizations to provide AWWA Water Audit M36 training
- Work with MnTAP and others about how to improve water efficiencies and conservation for Commercial, Industrial and Institutional water users





# Thank you

Carmelita Nelson

[mndnr.gov](http://mndnr.gov)

Leo Steidel

[www.espwater.org](http://www.espwater.org)