

# COVID-19 and Municipal Water Use: A Preliminary Assessment of State and Nationwide Impact

Tirusew Asefa, Ph.D., P.E., D.WRE., F.ASCE

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# Survey Result: National

- All Respondents
  - Had Shelter-in-place or similar orders
  - Had non-essential businesses closed
  - Expect reduced water demand
- Most Respondents
  - Have residential (single & multi) sales in the 60-70% range
  - See a reduction in total water use (57% of respondents)
  - No change in residential water use (60% of respondents), 40% have seen an increase

# Survey Result: National

- See a reduction in non-residential water use (60% of respondents), 40% have seen no change
- Expect to see a decrease in outdoor water use (86%), little support for increased outdoor water use
- Expecting revenue reductions, 10 – 15%
- Experienced demand reductions in the Great Recession, but some outliers (one negligible reduction, two greater than 10% reduction)
- Seen no distribution system operational impacts (86%)

# Survey Result: Florida

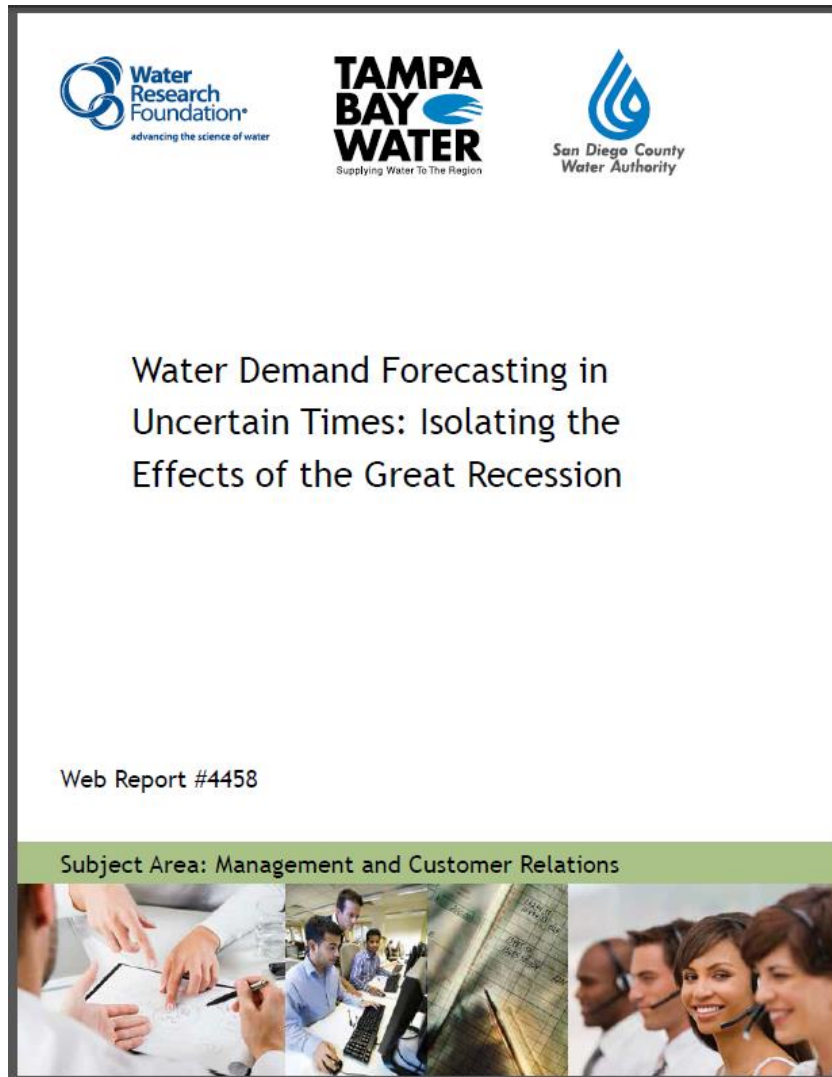
- All had stay at home or similar measures and phased back
- Residential customers
  - 52% to 96%
  - Average 73%
- Tourism a significant component?
  - 50% yes (one with 10 to 15 % level)
- Has water used increased?
  - Residential increase and commercial decrease
  - Over all increased water use by majority respondent (>80%)

# Survey Result: Florida

- Unemployment:
  - 1/3<sup>rd</sup> not sure or don't track
  - 2/3<sup>rd</sup> estimate about an average of 8.5% ( 3.5 to 10%)
- Do you anticipate revenue reduction
  - > 87% No (few flat but others no)
  - If there is?
    - Majority delay or reduce capital investments or assess as priority
- Creating scenarios for 3 to 18 month outlook?
  - Overwhelming said No.

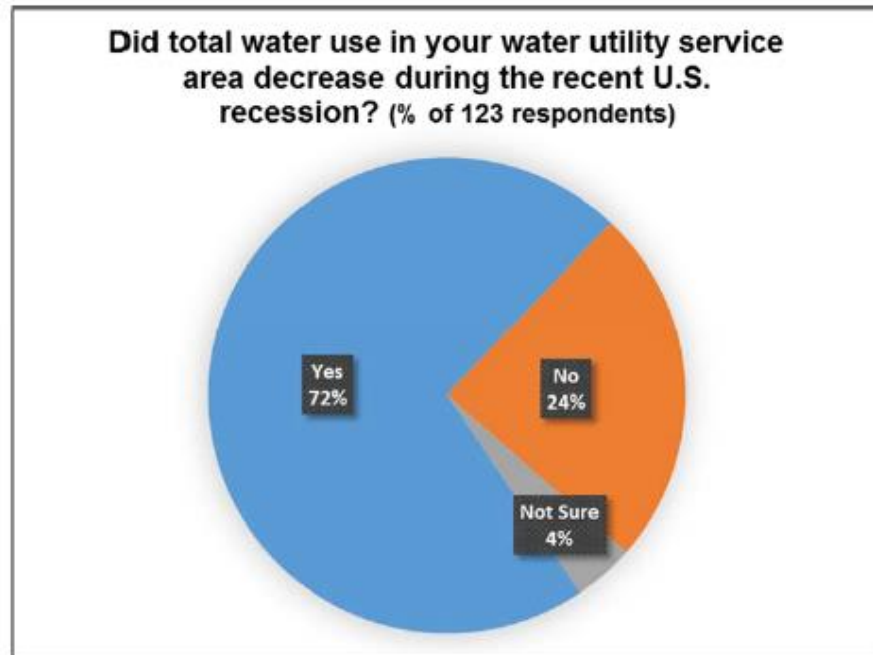


# 4458, Great Recession, by Jack Kiefer, H&S, 2016

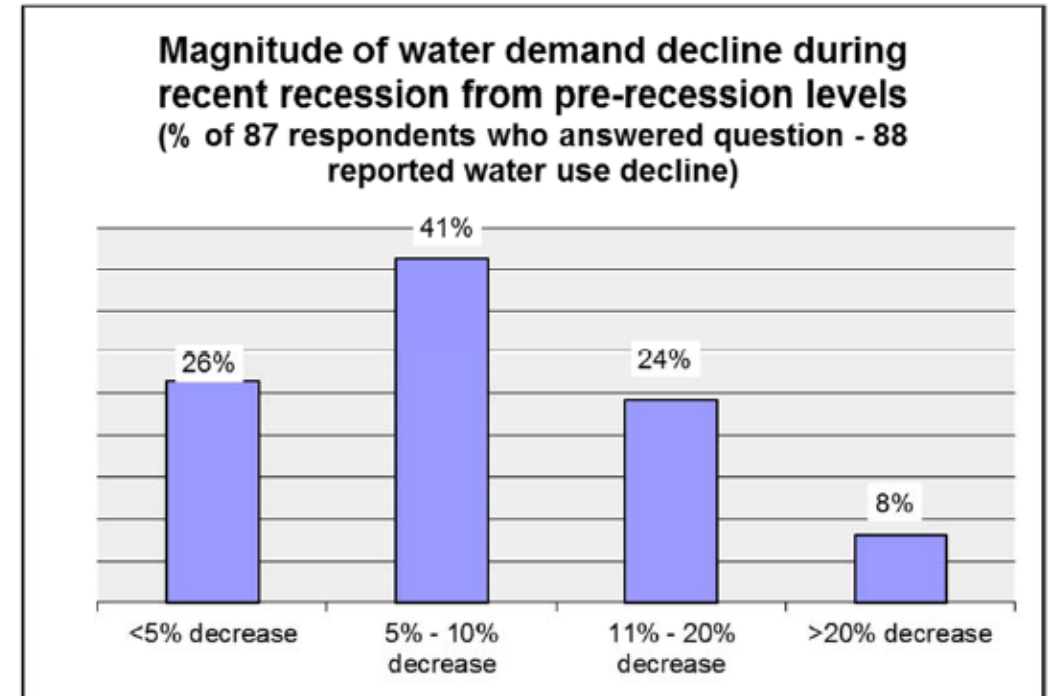


- Survey, n=123 responses. The majority of respondents (72%) experienced a decrease in water demand during the Great Recession (December 2007 to July 2009) and 25% saw demands decline > 10%. Declines were associated with reduced revenues, slower population growth, and a drop-off in new customer accounts. A majority of surveyed utilities that had planned to increase water treatment or raw water capacity before the recession scaled-back, delayed, or eliminated the plans altogether.
- 4 case studies - Macroeconomic data were found to be highly correlated with regional water consumption patterns, for example, recessionary forces attributed to 5-15% water use reductions in 4 case studies. Such as national composite indices which can be purchased from The Conference Board or regional university or government economics' offices
- The results point to both short-run and long-run influences of the macro-economy on water demand, which imply advantages of using economic factors in support of both short-run and long-run forecasts of water demand.

# WRF 4458 Select Survey Questions



**Figure 4.3 A Majority of Survey Respondents Indicate a Decrease in Water Use During the Recent Recession.**



**Figure 4.4 Reported Observed Declines in Water Use**

# Key Take Away

- COVID-19 has increased overall demand for water
  - Non-residential slow down has been compensated by increase in residential water use
  - Even those who have tourism as a significant component either stayed flat or increased
- Utilities expect higher unemployment but no reduction in revenue, if there is:
  - Delaying or prioritizing CIPs
  - Majority has not yet factored in unemployment in their water delivery projections



# Question?

[tasefa@tampabaywater.org](mailto:tasefa@tampabaywater.org)