

September 23, 2022

Texas Association of Clean Water Agencies (TACWA)

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# BREAKING NEWS

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PLUMMER

**TCEQ DECLARES TDS A SOURCE  
SUBJECT FOR DISCHARGERS;  
SAWS RESPONDS WITH A  
SALTY SOLUTION**

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**Tres Koenings**, *Senior Project Manager*

**Kristin Arnold**, *Project Scientist*

# TODAY NEWS

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239/8

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## BREAKING NEWS

## BREAKING NEWS



LONDON + NEW YORK

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# WORLD NEWS

# HEADLINES

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# World News

FAKE NEWS  
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## BREAKING NEWS

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## FAKE NEWS

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# BREAKING NEWS



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# TCEQ DECLARES TDS A SOURCE SUBJECT FOR DISCHARGERS

The permittee shall conduct a TDS and chloride source identification and reduction study. Within 180 days of permit issuance, the permittee shall submit a TDS and chloride source identification and reduction study work plan to the TCEQ Compliance Monitoring Team (MC-224) and cc the Standards Implementation Team (MC 150). The TCEQ may disapprove or modify the work plan within 60 days of receipt, with no response being equivalent to approval. The work plan shall include identification of influent TDS and chloride sources, control options, (e.g. BMPs, pretreatment requirements), effluent sampling at a minimum frequency of once per week, reduction goals, and annual progress reporting. Sampling shall be conducted during periods representative of typical influent TDS and chloride concentrations. The duration of the study shall be 3 years from the date of implementation and annual progress reports shall be submitted by December 31st of each year to the TCEQ Compliance Monitoring Team (MC-224) and cc the Standards Implementation Team (MC 150).

*TCEQ, June 2020*

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*TCEQ, June 2020*

# THE USUAL SUSPECTS ARE ROUNDED UP

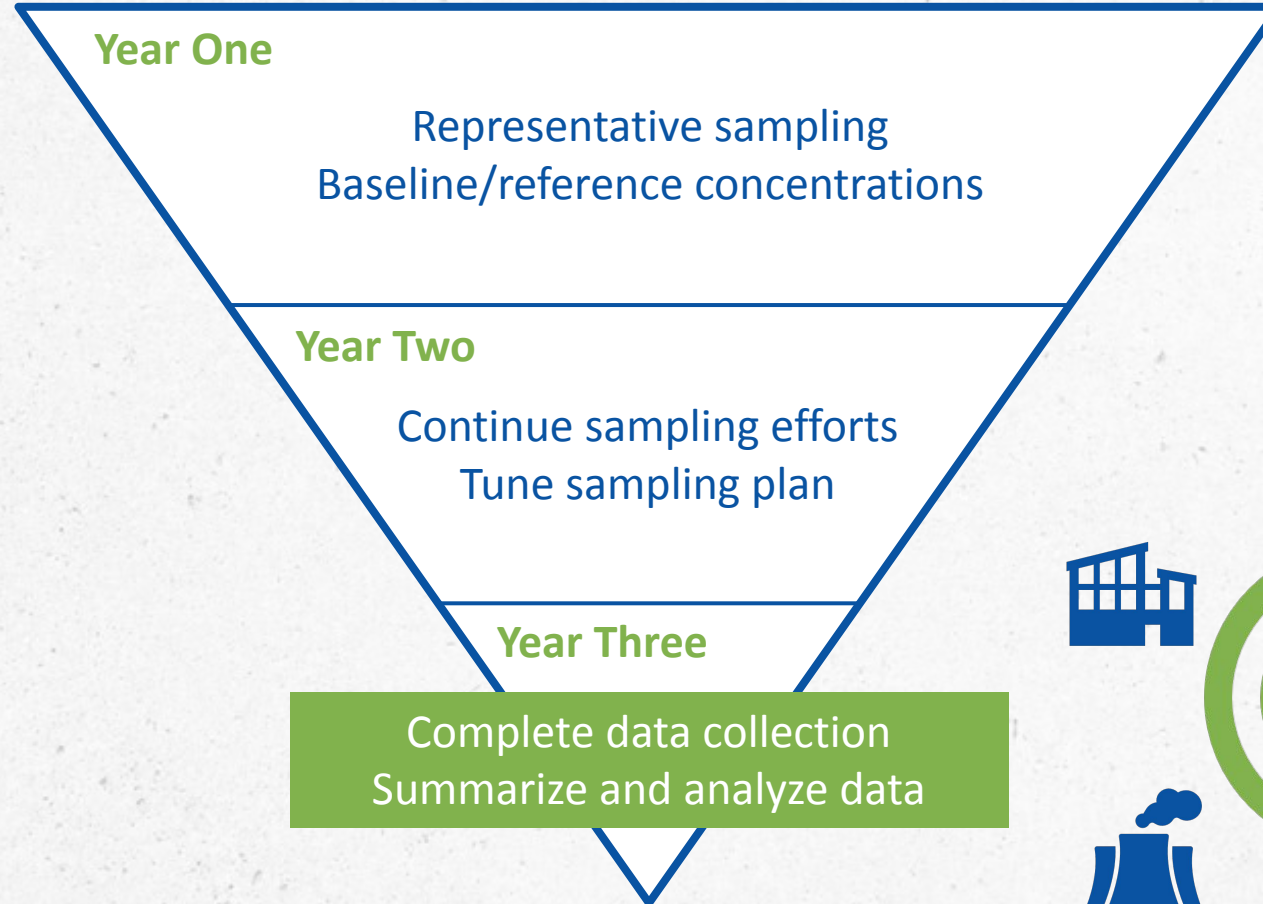
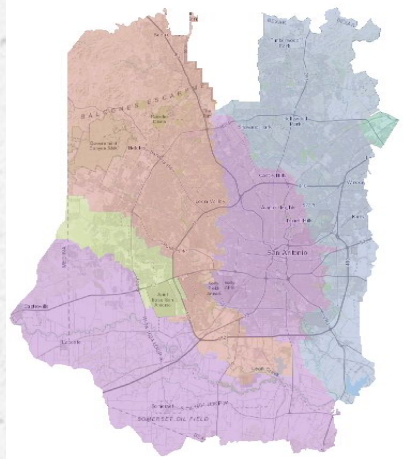


# SAWS RESPONDS WITH A SALTY SOLUTION

-  Meet SMC WRC TPDES Permit Requirement.
-  Understand TDS and chloride sources.
-  Identify contribution by category/user:
  - Water supply
  - Commercial
  - Industrial
  - Residential
-  Determine TDS and chloride concentrations upstream and downstream of WRC outfalls.
-  Predict future TDS and chloride concentrations.
-  Identify control options.

# SAWS RESPONDS WITH A SALTY SOLUTION

## Study SAWS Sewer Area



Identify TDS and Chloride Sources





# **SAWS RESPONDS WITH A SALTY SOLUTION**

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## **Sample Location Selection**

- Coordinate with SAWS Staff
- Desktop analysis
- Site visits/field reconnaissance
  - Confirm access, safety, traffic control, flow, depth, configuration, etc.
- Identify alternative sampling locations
- Follow up site visits/field reconnaissance



**TRAFFIC**

# SAMPLE LOCATIONS DISTRIBUTED ACROSS SOURCES

53 Total  
Sampling  
Locations

10

Residential customers likely to use water softeners

10

Residential customers likely to NOT use water softeners

10

Commercial customers

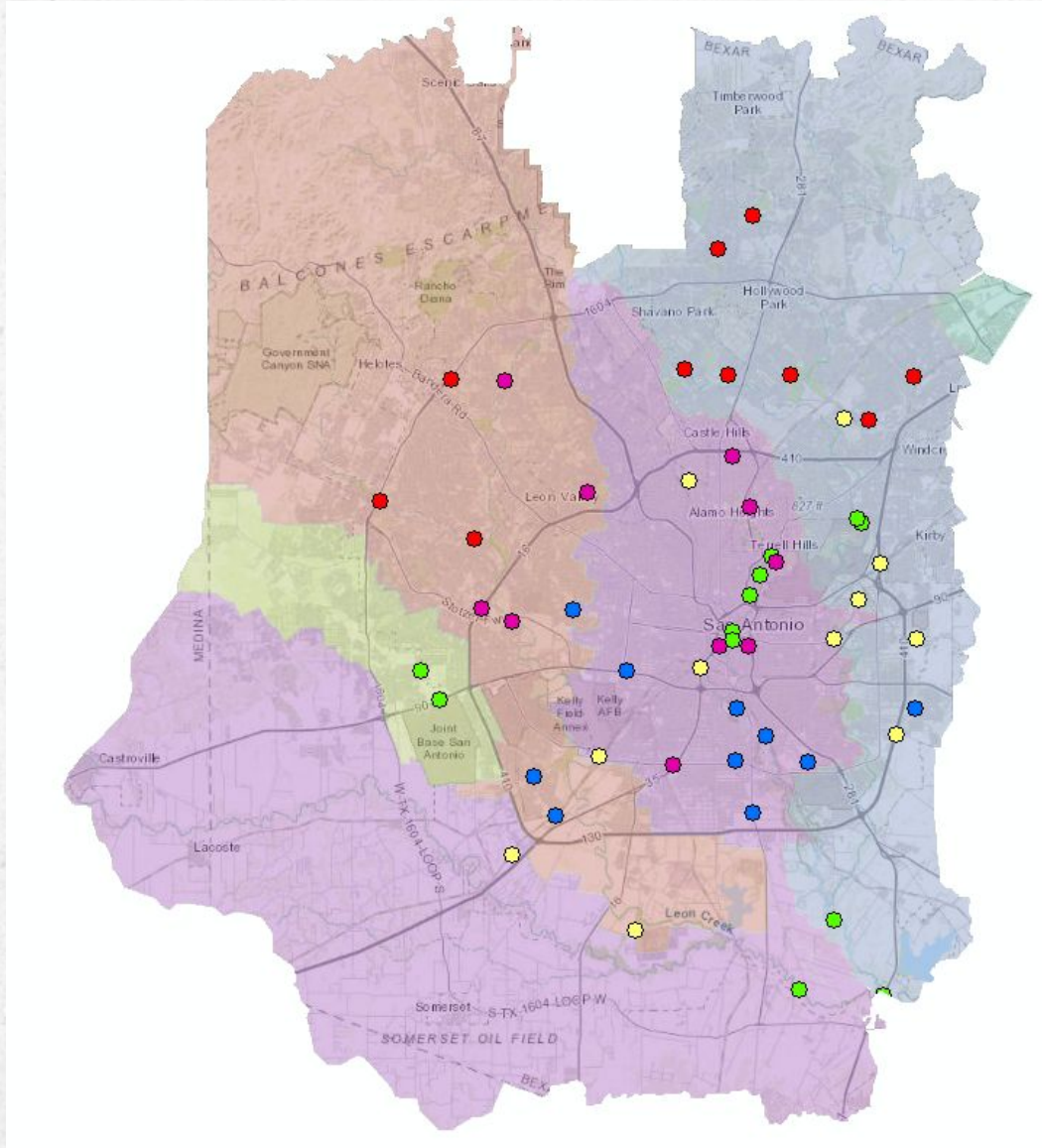
11

Industrial customers

12

Upstream and downstream of outfalls

# SAMPLE LOCATIONS DISTRIBUTED BY LOCATION



- Residential – Water Softener
- Residential – No Water Softener
- Commercial
- Industrial
- Stream

# BOOTS ON THE GROUND FIND SOLUTIONS AMONGST THE ISSUES

## Site visits/field reconnaissance

- Confirm access, safety, flow, depth, manhole/channel configuration, etc.
- Unforeseen sample location issue.....



# WEATHER



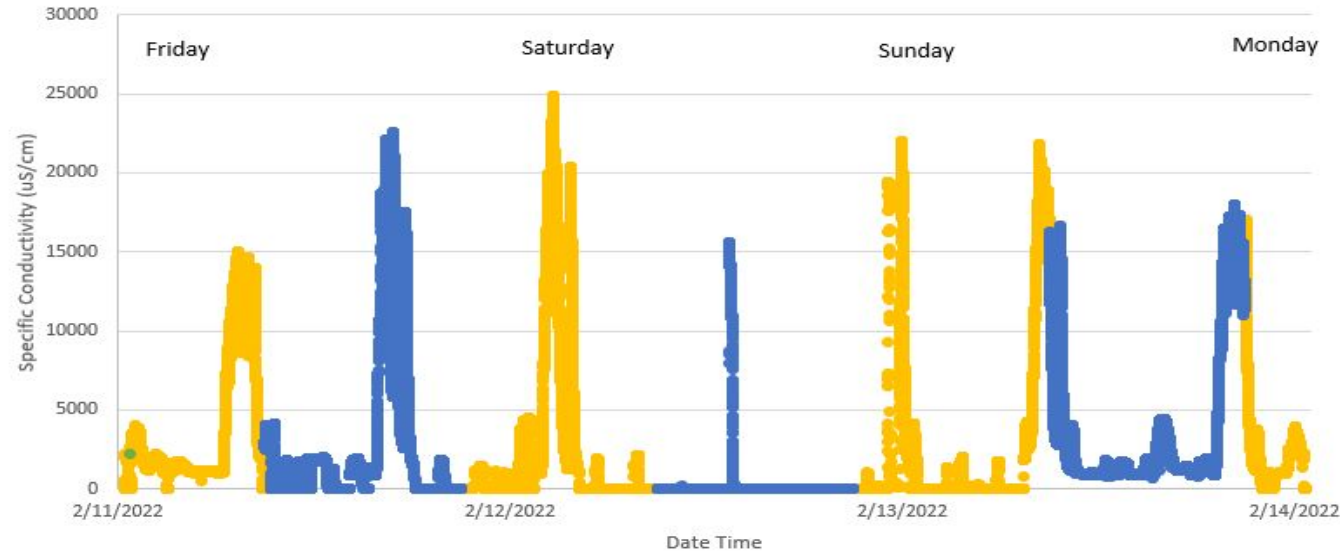
# CONTINUOUS DATA PROVES TO BE VALUABLE

- **Total Number of samples: 228**
  - Continuous: 23
  - Grab: 228
- **A site-specific conversion factor may be appropriate**
  - TDS = Conductivity \* 0.65 ← default
  - TDS = Conductivity \* 0.53 ← site-specific

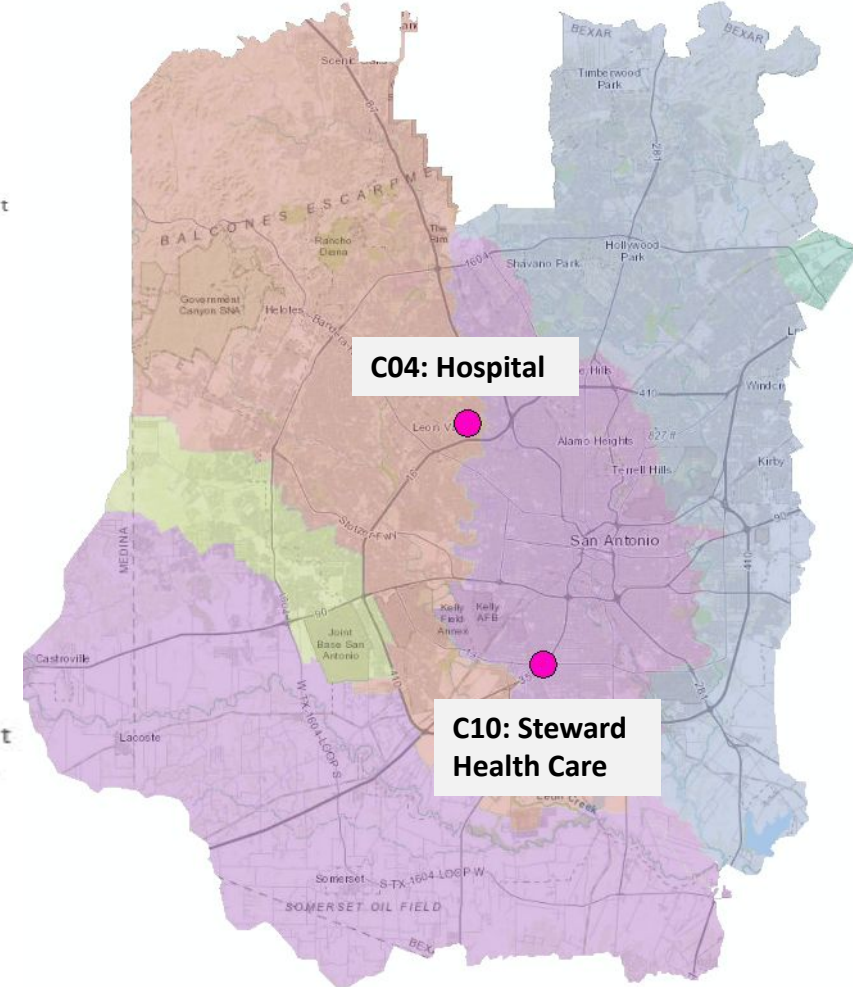
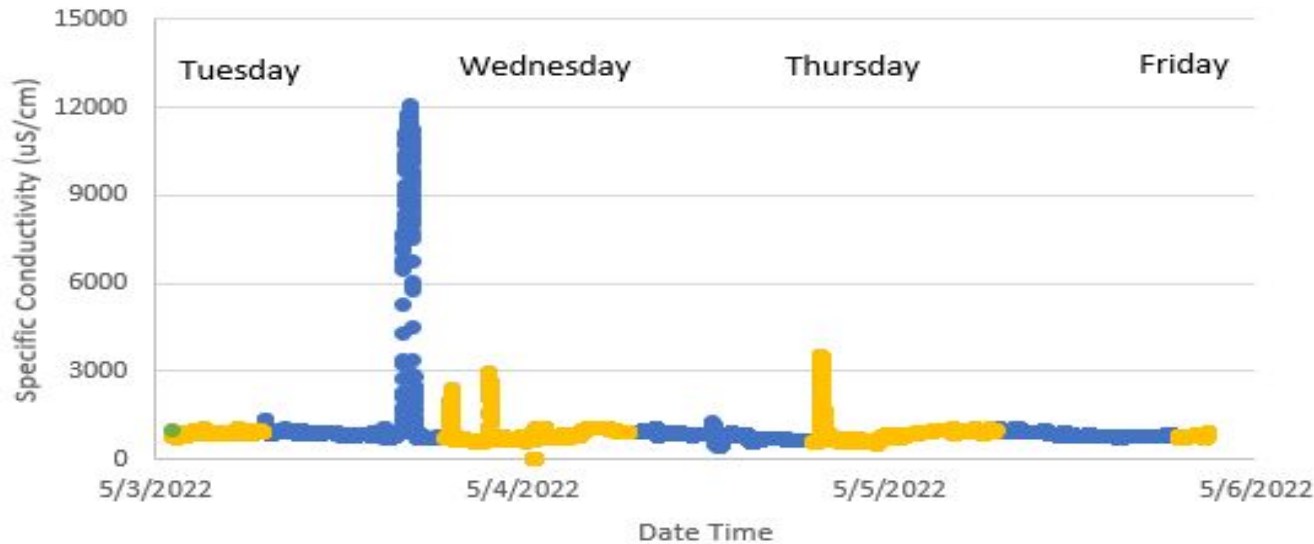


# COMMERCIAL STATIONS WEATHER

C04



C10



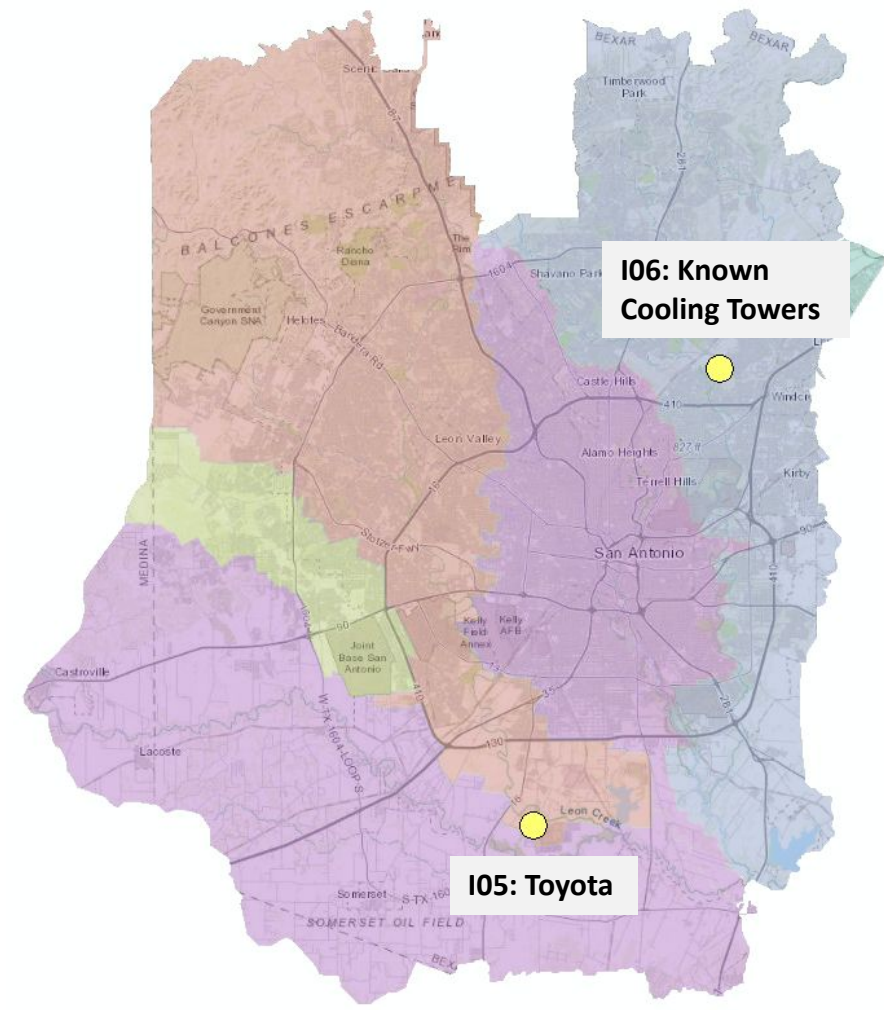
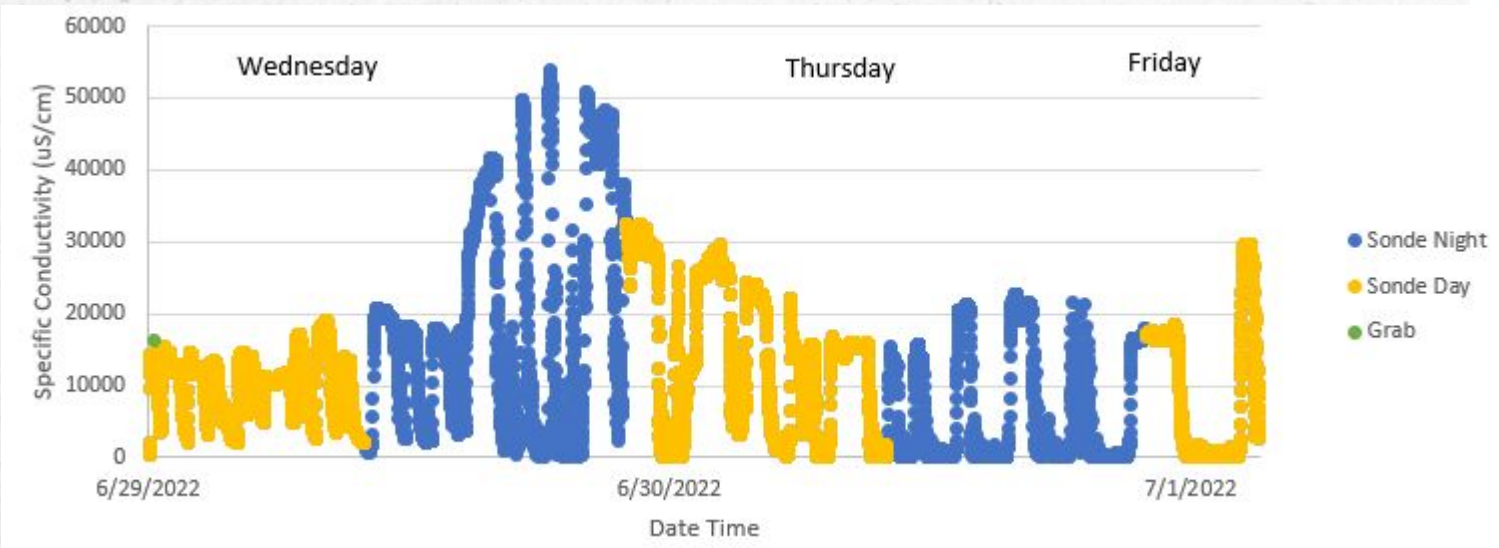


# INDUSTRIAL STATIONS WEATHER

I05

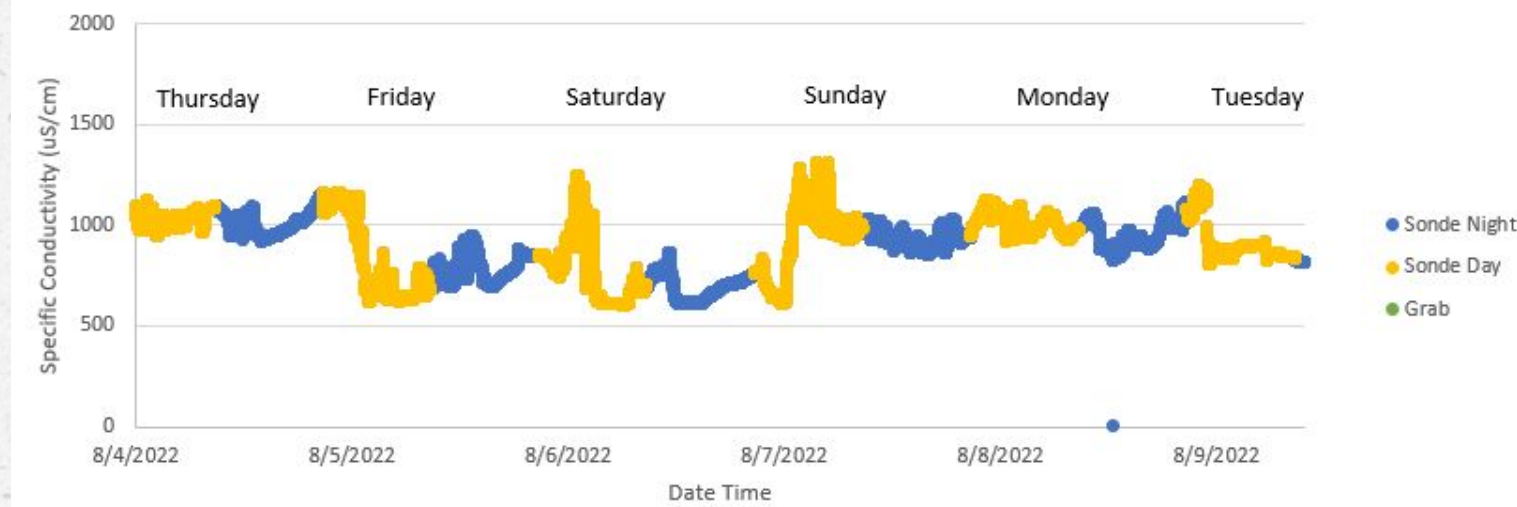


I06

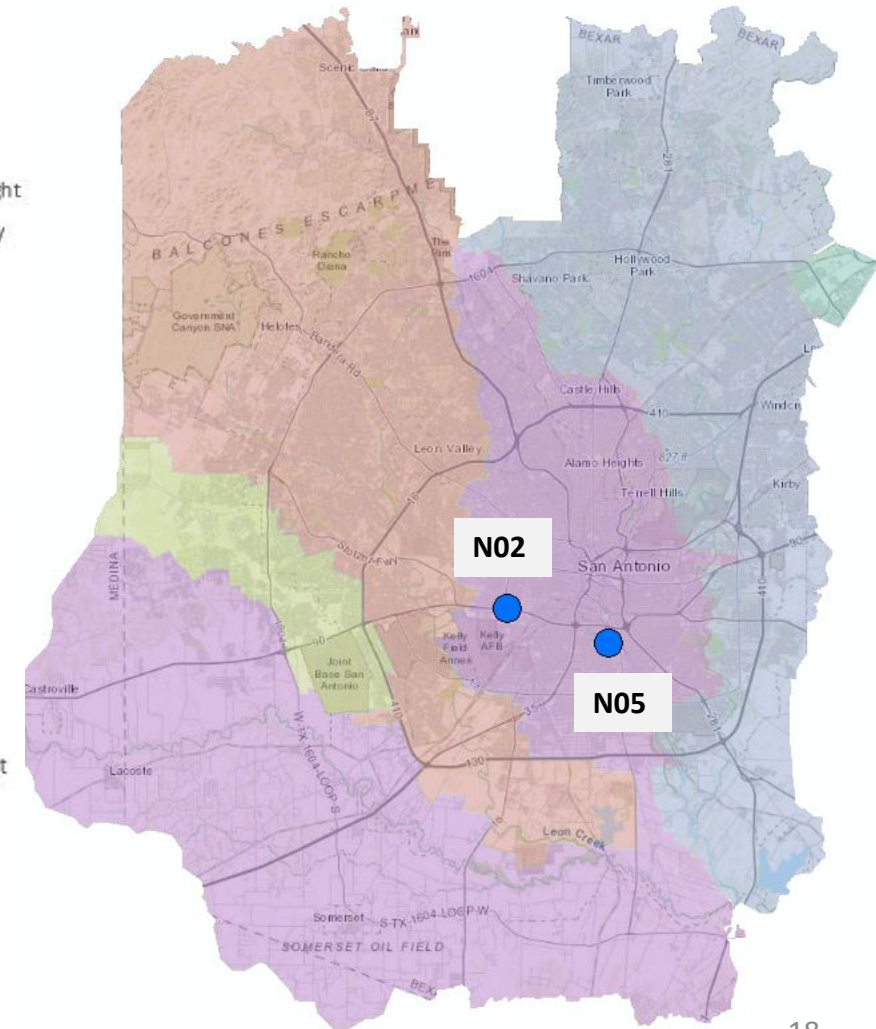
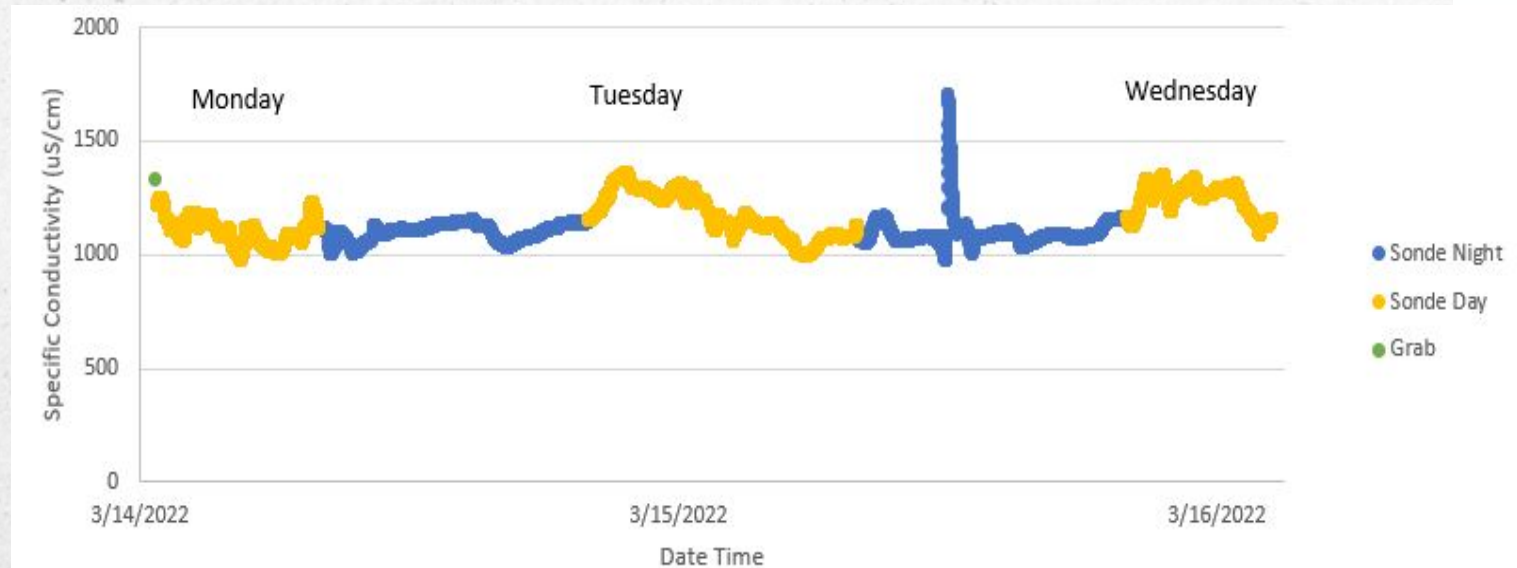


# RESIDENTIAL (LIKELY NO SOFTENERS) STATIONS WEATHER

N05

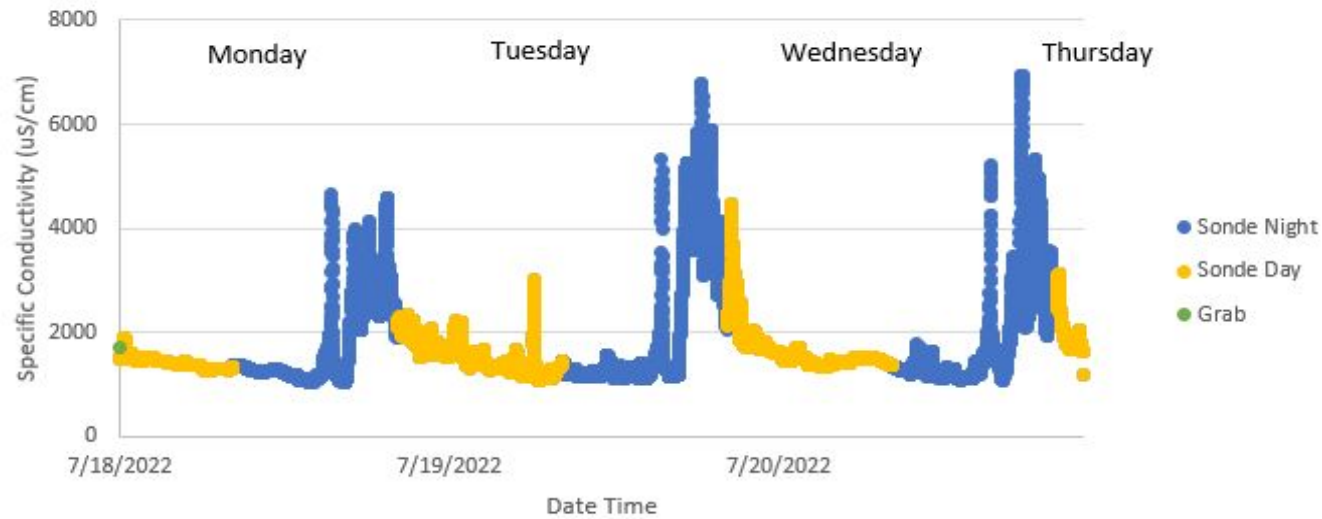


N02

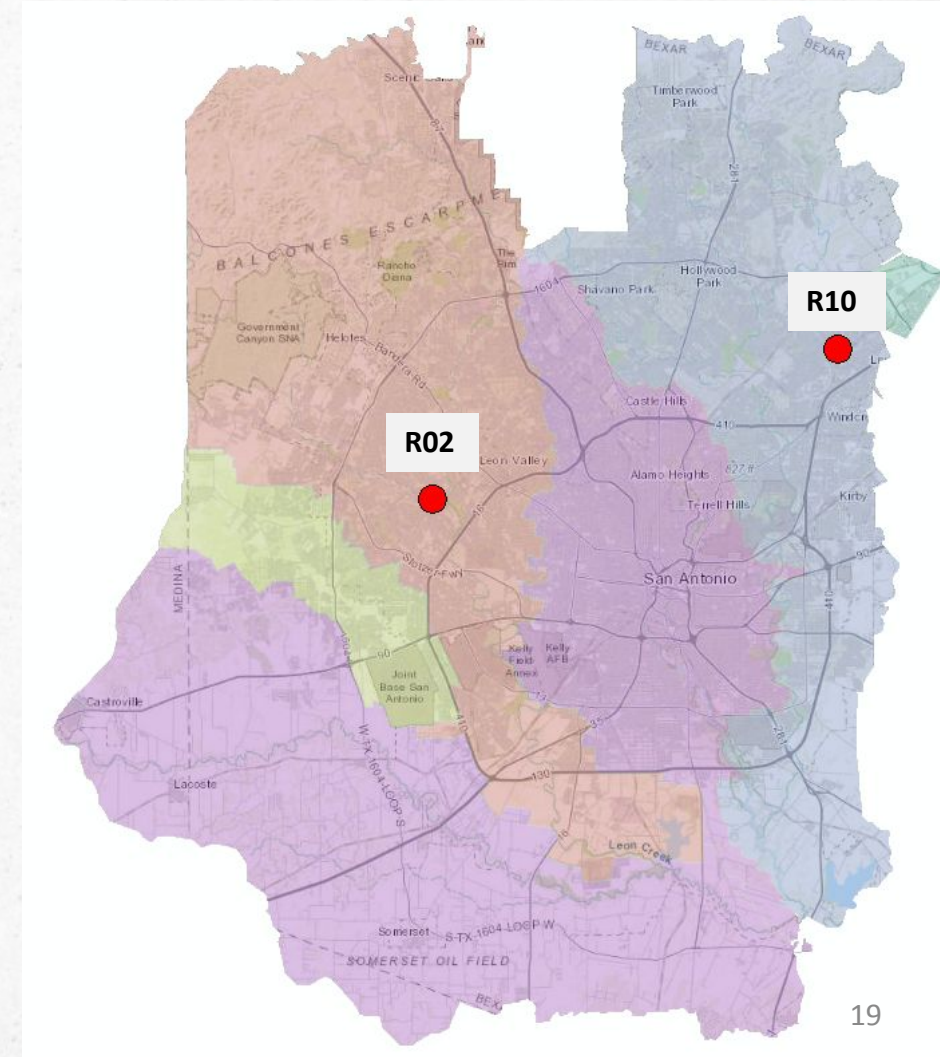
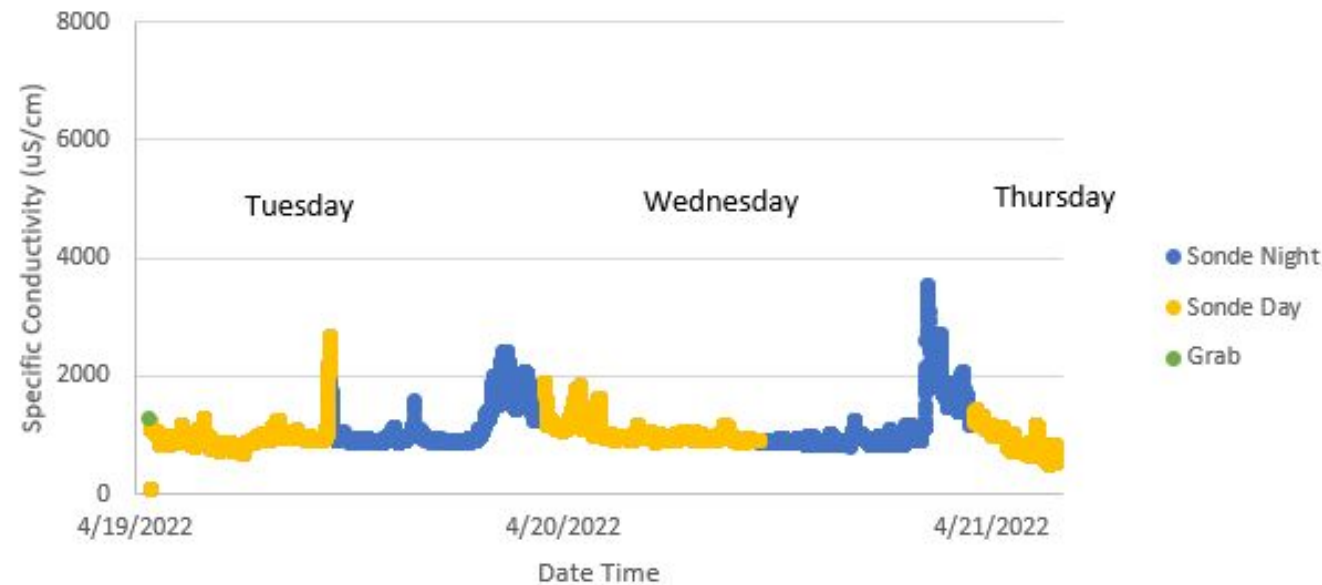


# RESIDENTIAL (LIKELY SOFTENERS) STATIONS WEATHER

R02

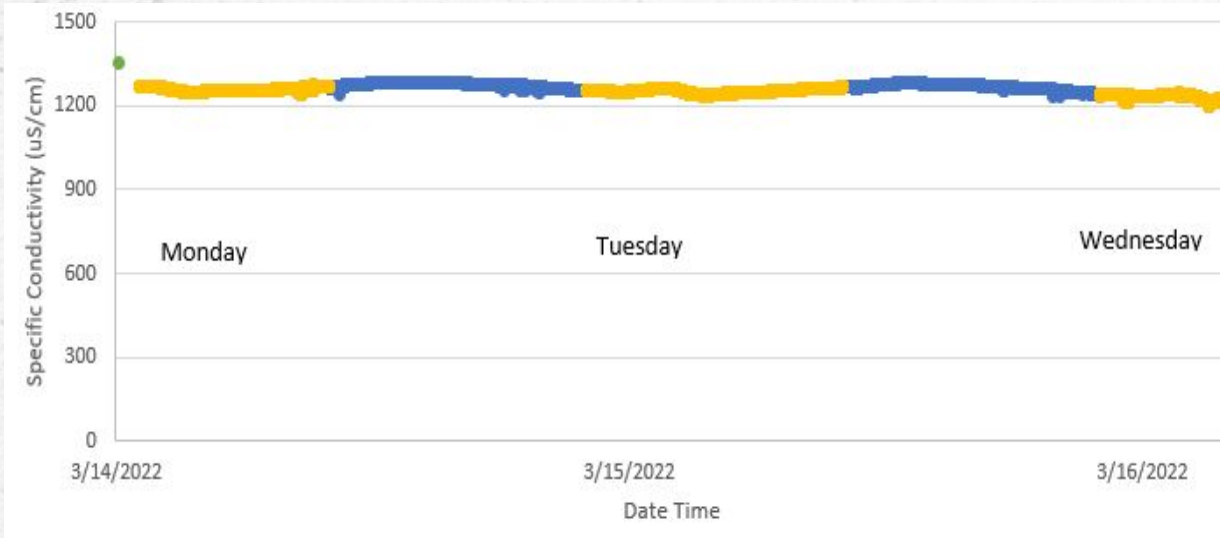


R10

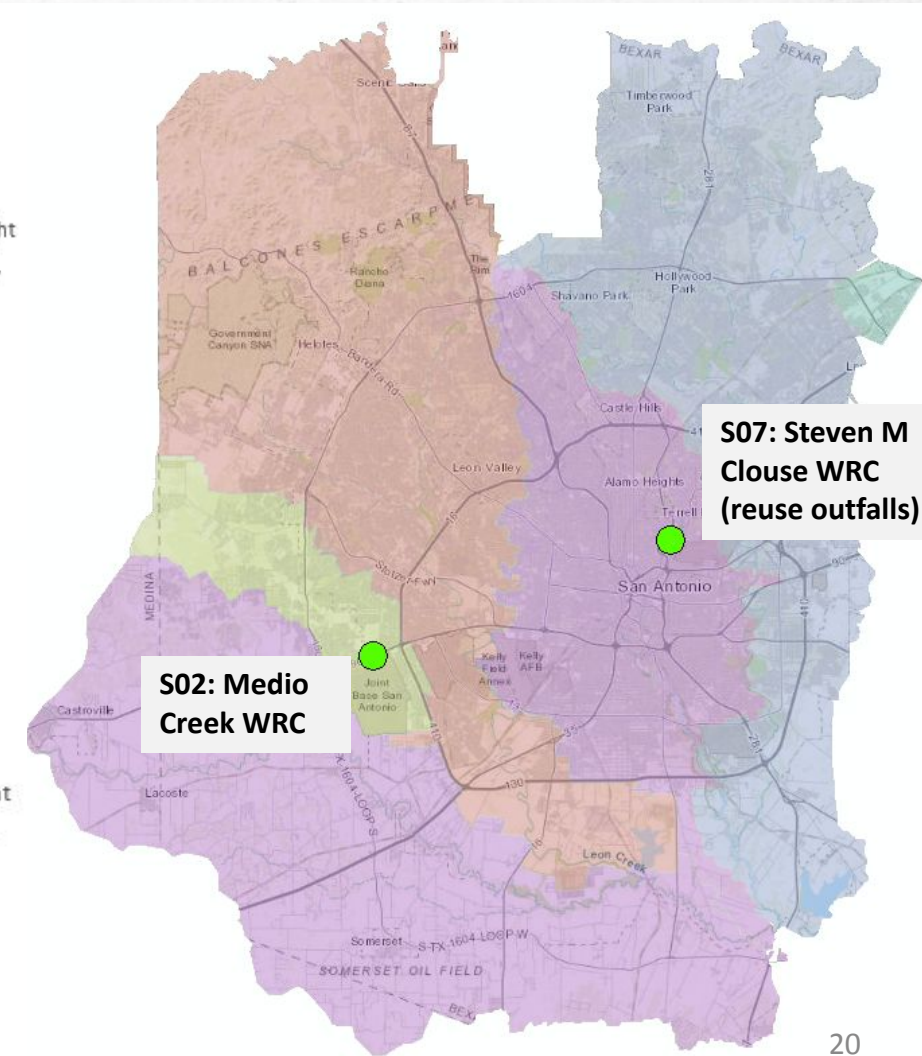
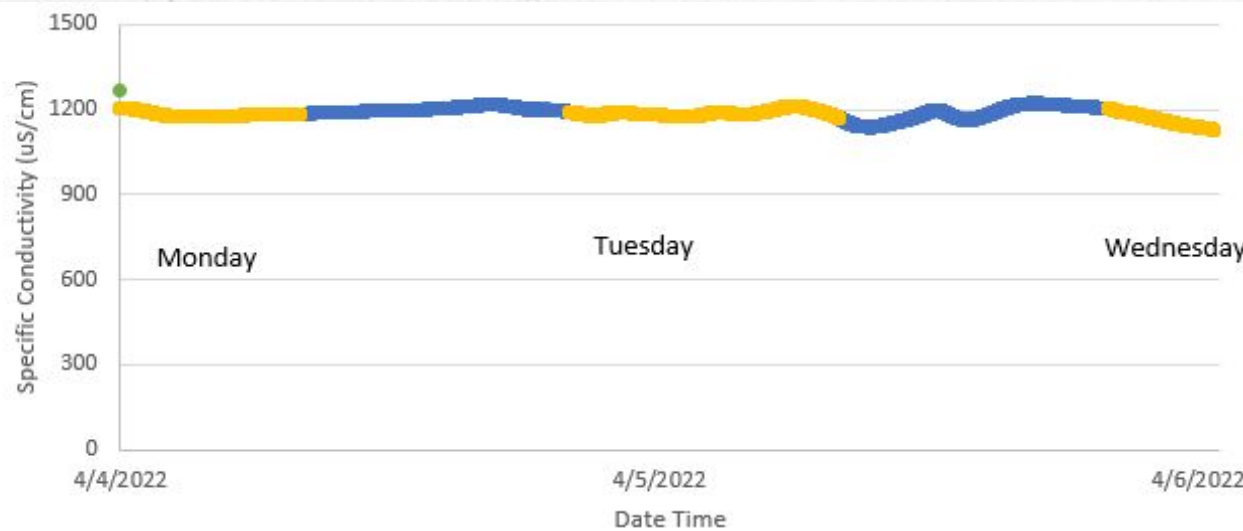


# STREAM STATIONS WEATHER

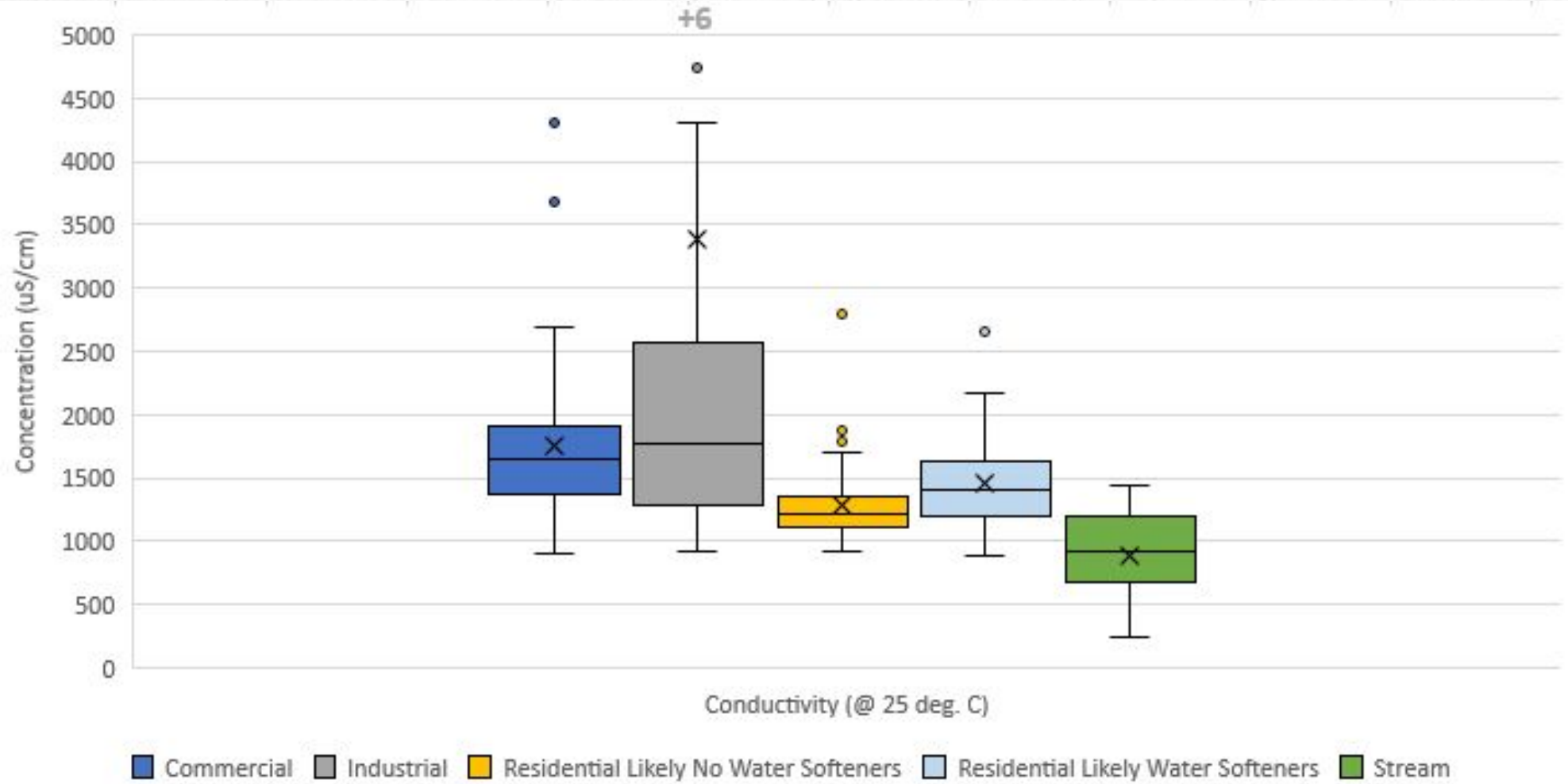
S02



S07



# WEATHER RECAP





# ADVICE COLUMN

# ADVICE COLUMN – ASK PLUMMER

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- Continuous data are valuable
- Some manholes go dry
- Significant peaks raise questions and may require further investigations of the watershed
  
- Determine specific contributors to peaks and troughs
- Continue to collect new data
- Investigate differences between sewersheds
- Investigate seasonal impact on stream and sewer samples
- Investigate first flush
- Flume



**PLUMMER**

## QUESTIONS?

*Tres Koenings* |

*Kristin Arnold*

*TKoenings@Plummer.com*

*KArnold@Plummer.com*



# WHAT IS FLUME?

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- Flume tracks water usage
- 6200 + devices in the SAWS service area
- Water softeners increase water usage in homes and increase the salt concentration in the effluent
- SAWS conducted a study
  - Flume data coupled with survey responses showed 62.3% of homes have water softeners
- Informs SAWS management approach