# Department of Health

## Research Review & Advisory Committee (RRAC) Meeting

# Onsite Sewage Program

Environmental Health Staff

Florida Department of Health
Disease Control and Health Protection
Bureau of Environmental Health
Onsite Sewage Programs

April 14, 2021

# Agenda

| | |
|---|---|
| 1:00 – 1:10 | Introductions and housekeeping |
| 1:10 – 1:30 | Old business & research program news |
| 1:30 – 2:00 | Updates on research projects prioritized by the Research Review and Advisory Committee (RRAC) |
| 2:00 – 2:20 | Approach to evaluate the impacts from onsite sewage treatment and disposal system (OSTDS) on regional water quality |

# Agenda – DOH Staff Provides Updates on Several Research Projects

| | |
|---|---|
| 2:20 – 2:40 | Public comments. |
| 2:40 – 3:10 | Summary of the draft final report for the continued monitoring of nitrogen reducing OSTDS installed during the Florida Onsite Sewage Nitrogen Reduction Strategy (FOSNRS) study. |
| 3:10 – 3:30 | Public comments |
| 3:30 | Adjourn |

# Introductions & Housekeeping

- Committee roll call
- Identification of audience
- Will overall mute when presentation starts
- Unmute phone line = *2
- Do not put phone on hold
- Download meeting material:

  http://www.floridahealth.gov/environmental-health/onsite-sewage/research/rrac.html

# Onsite Sewage Program

## Old Business & Research Program News

# Onsite Sewage Program

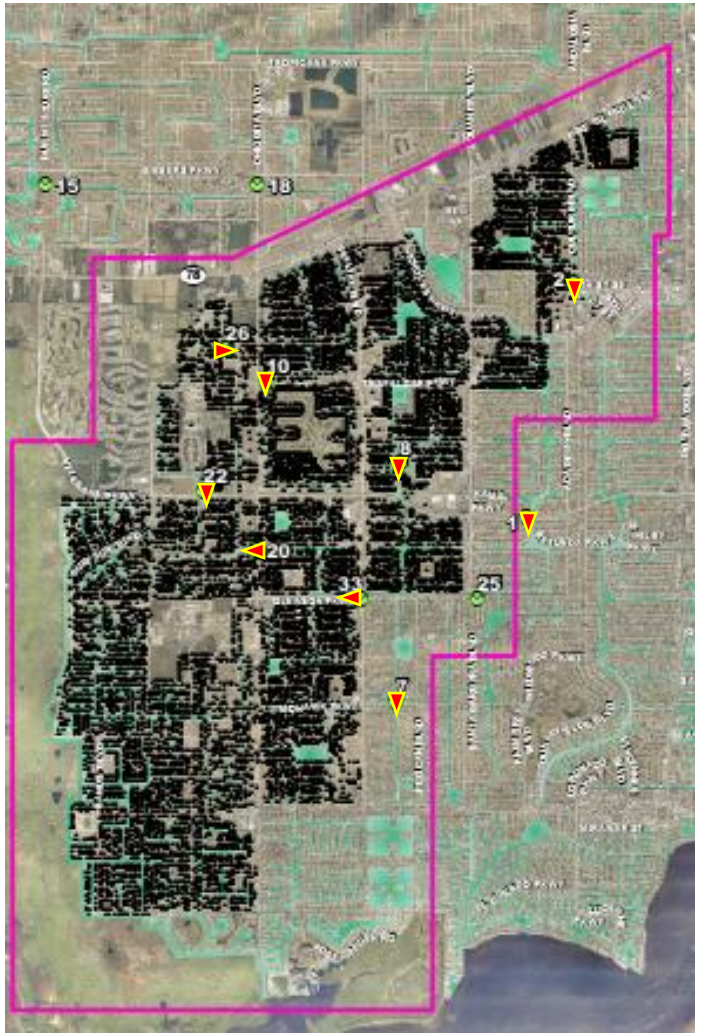
## Review of Meeting Minutes from December 10, 2020 Web Conference

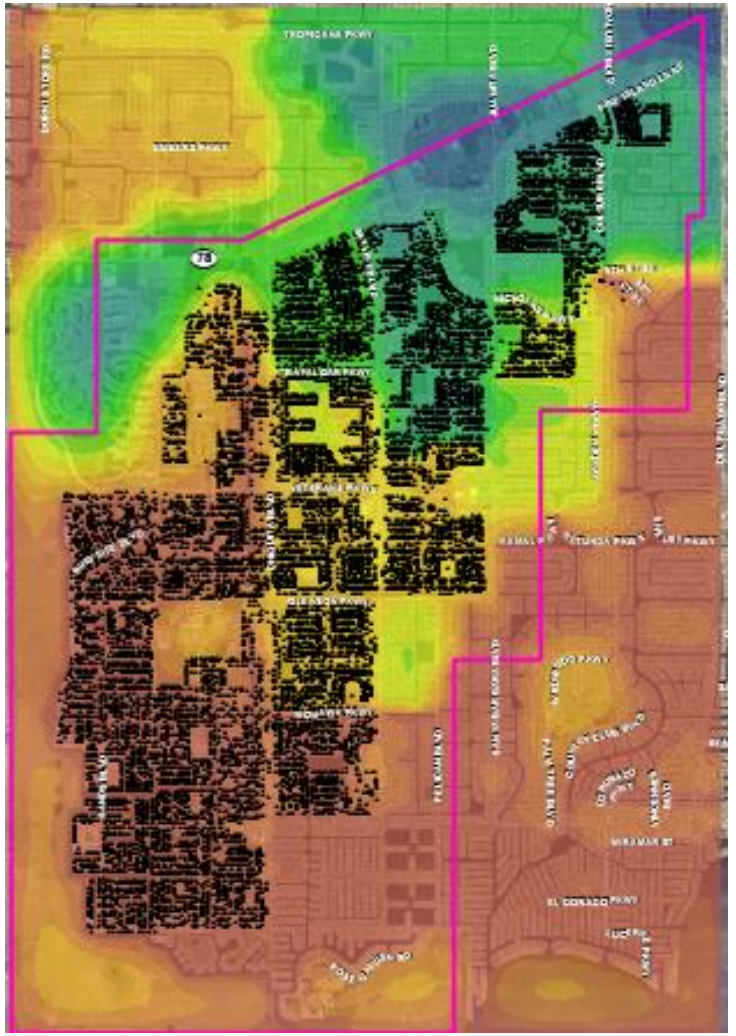
# Discussion with City of Cape Coral about the Utility Extension Project (UEP)

1. Met with City of Cape Coral on December 18, 2020 to better understand:
   1) The change of spatial distribution of OSTDS in the project area (GIS shapefiles for SW 6&7 area with connection date obtained)
   2) The hydrology of the project area (locations of weirs and water level spatial distribution in project area obtained)
   3) The impact of pumping the Southwest Aggregates Reservoir into the canal systems on the canal hydrology.
   4) The water quality for the reclaimed water.
   5) The ground water water-quality condition.

# Discussion with City of Cape Coral about the Utility Extension Project (UEP) - Hydrology

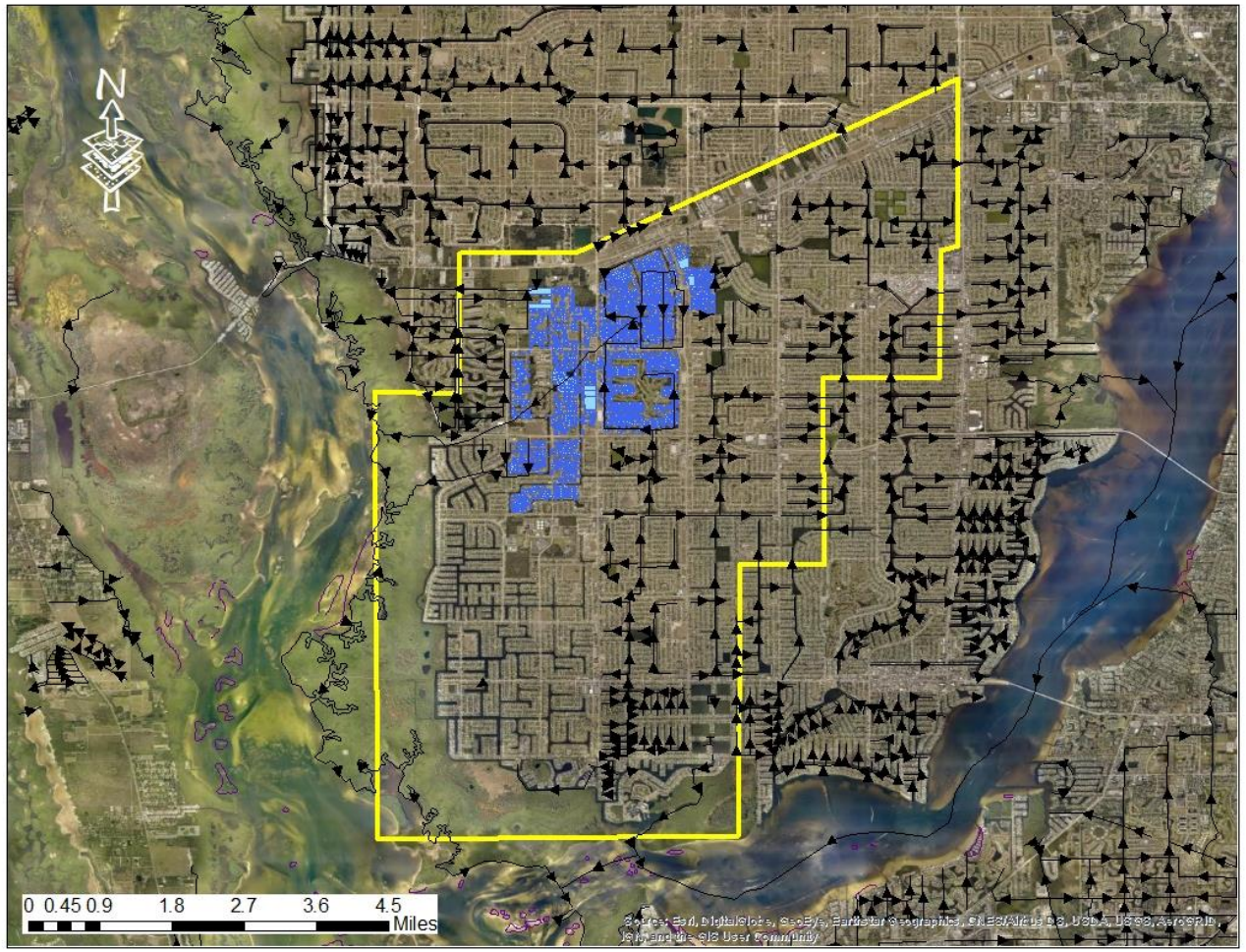
Canals and Location of Weirs



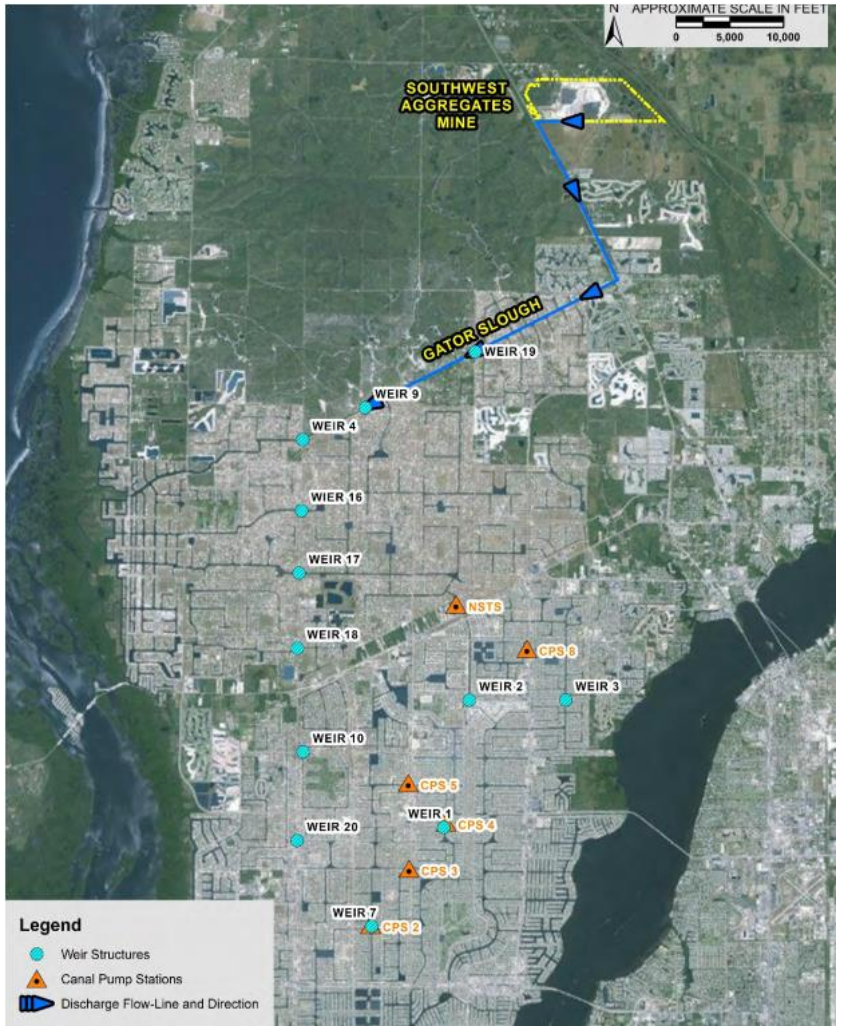
Ground Water Levels

# Location of Project Area and General Flow Direction




- Blue area – Southwest 6&7 area.
- Yellow boundary – Cape Coral Study Area.
- Black lines with arrows – 100 K National Hydrographic Dataset with flow direction.

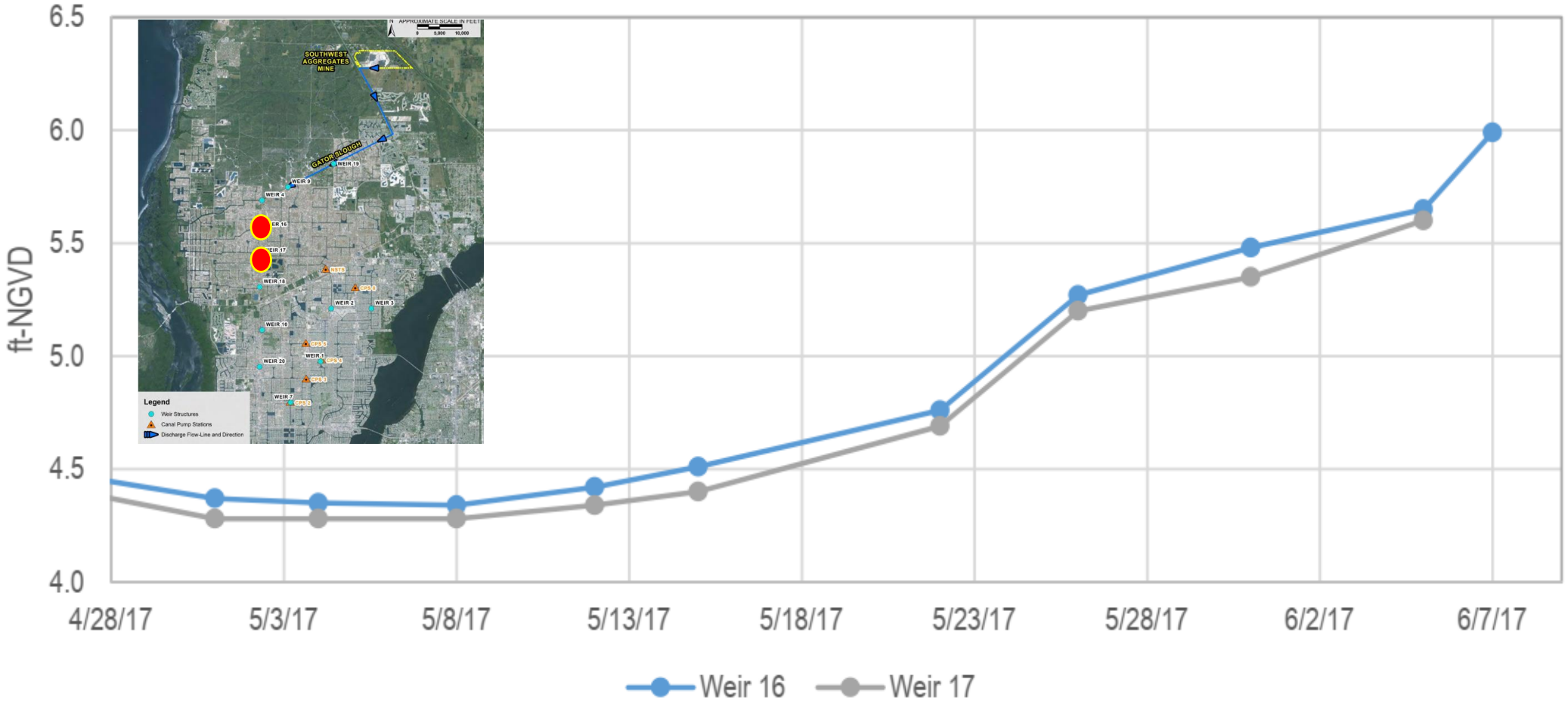
# Discussion with City of Cape Coral about the Utility Extension Project (UEP) – Reservoir Pumping



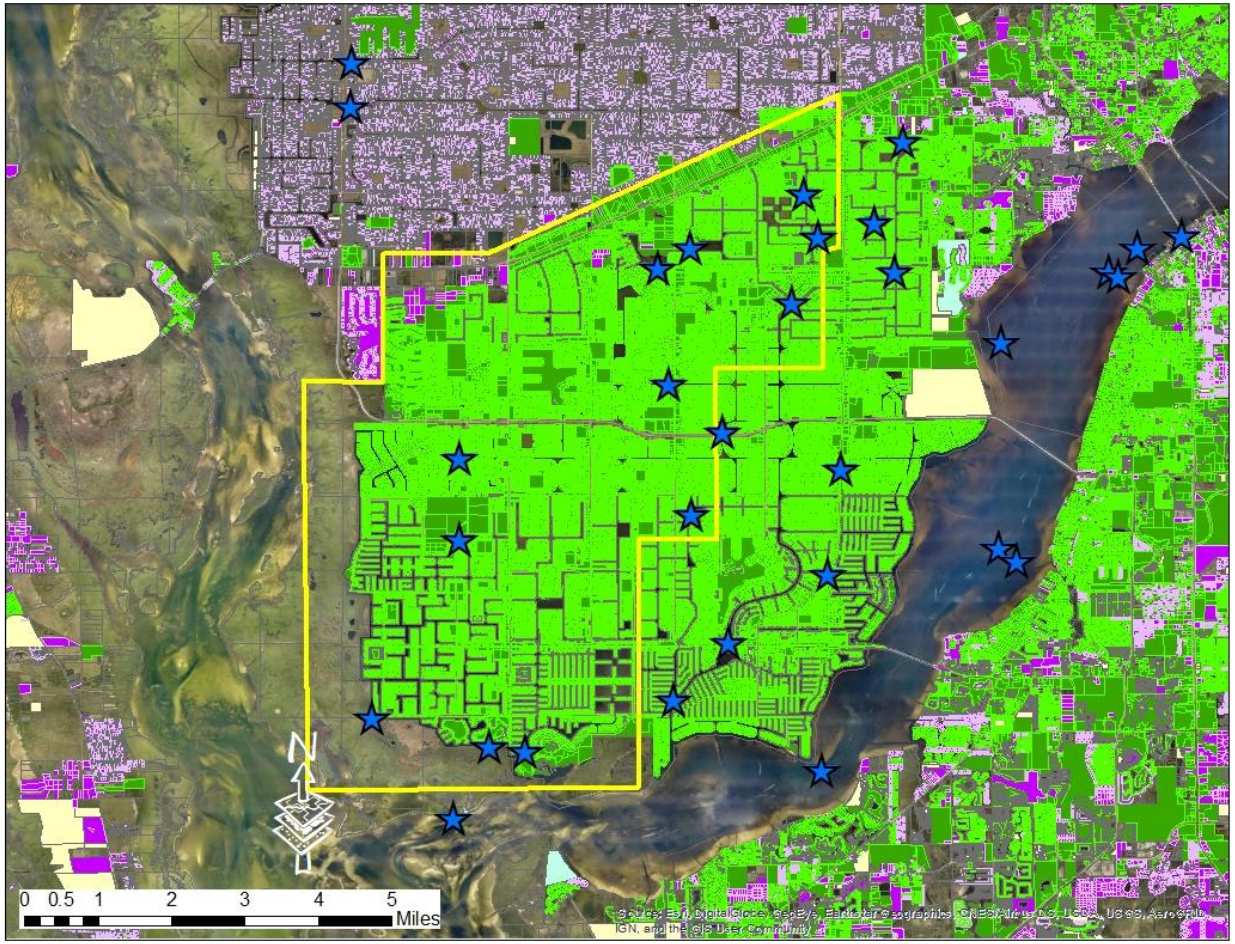

2017 Pilot pumping test of the Southwest Aggregates Reservoir.

- Using the Southwest Aggregates Mine as a surface water source to supply water to the Cape Coral Canals.
- Pumping about 17 million gallon per day into the canal system between late April and early July to address the dry season irrigation water supply.
- Evaluating water level change in canals.

# Discussion with City of Cape Coral about the Utility Extension Project (UEP) – Reservoir Pumping

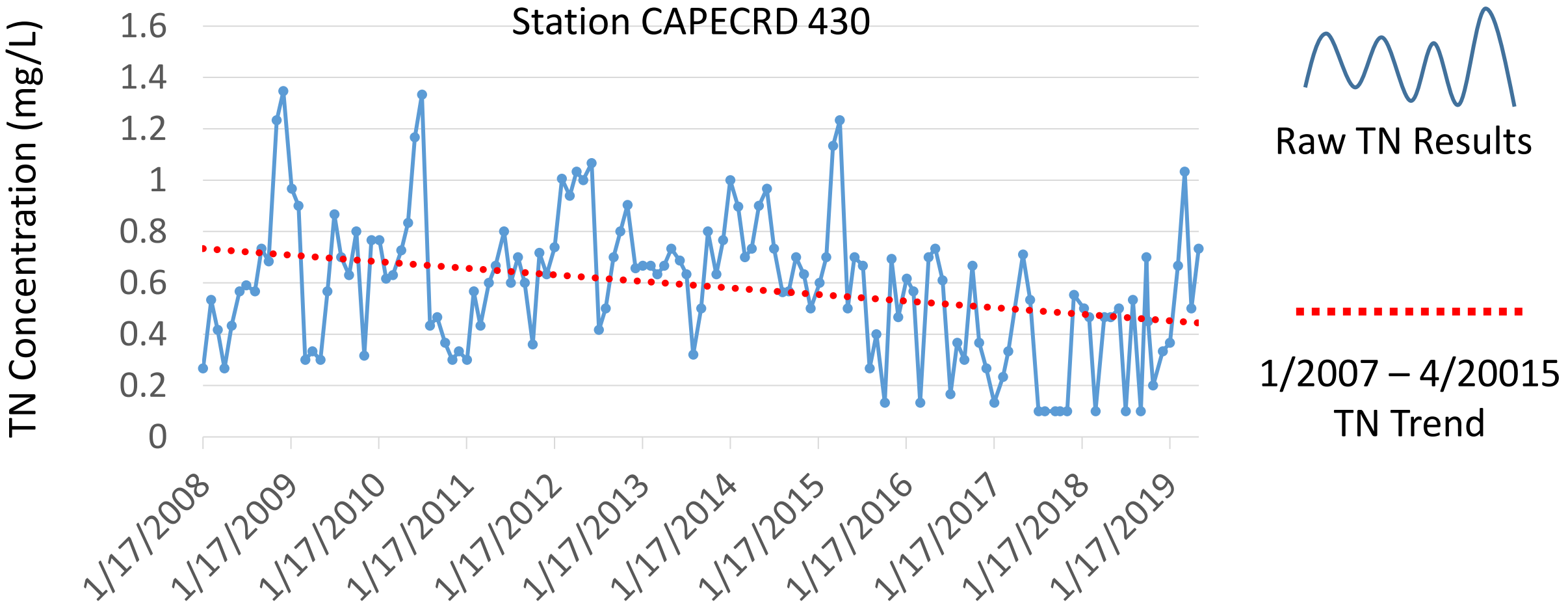


# Location of Project Area and Water Quality Stations Selected

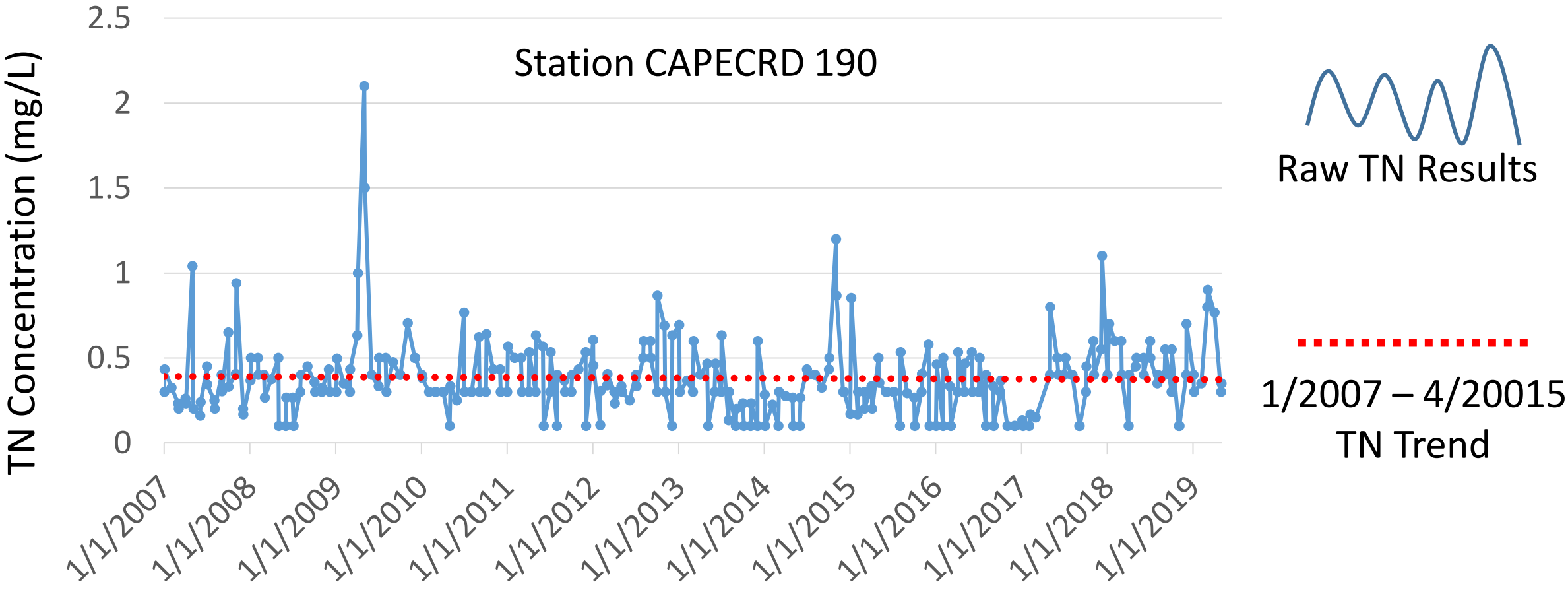



- Yellow polygon - project area.
- Green areas now (2018) sewered
- Purple areas now (2018) OSTDS
- Blue stars are locations for selected water quality stations.

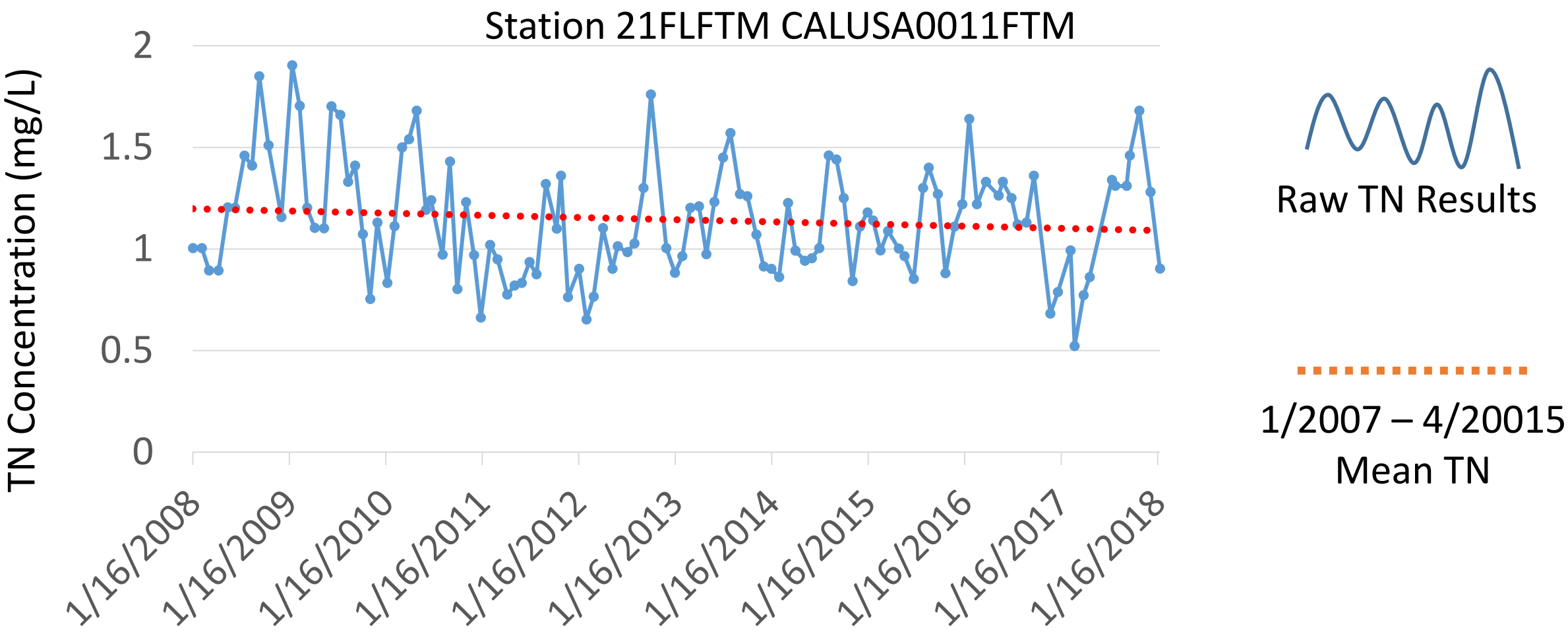
# Total Nitrogen (TN) over Time at Station in Project Area



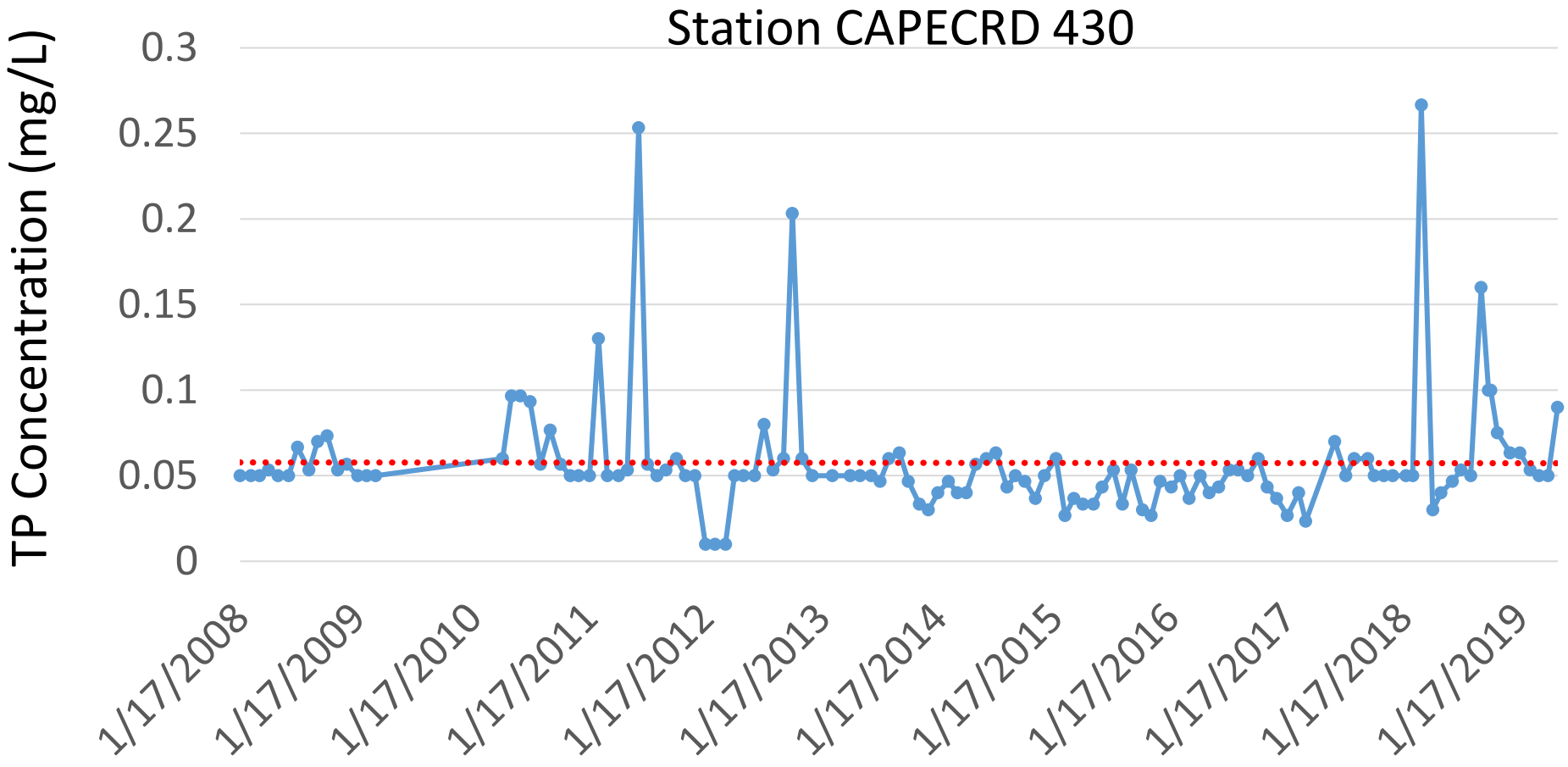
# TN over Time at Station Outside Project Area



# TN over Time at Station in the Caloosahatchee River



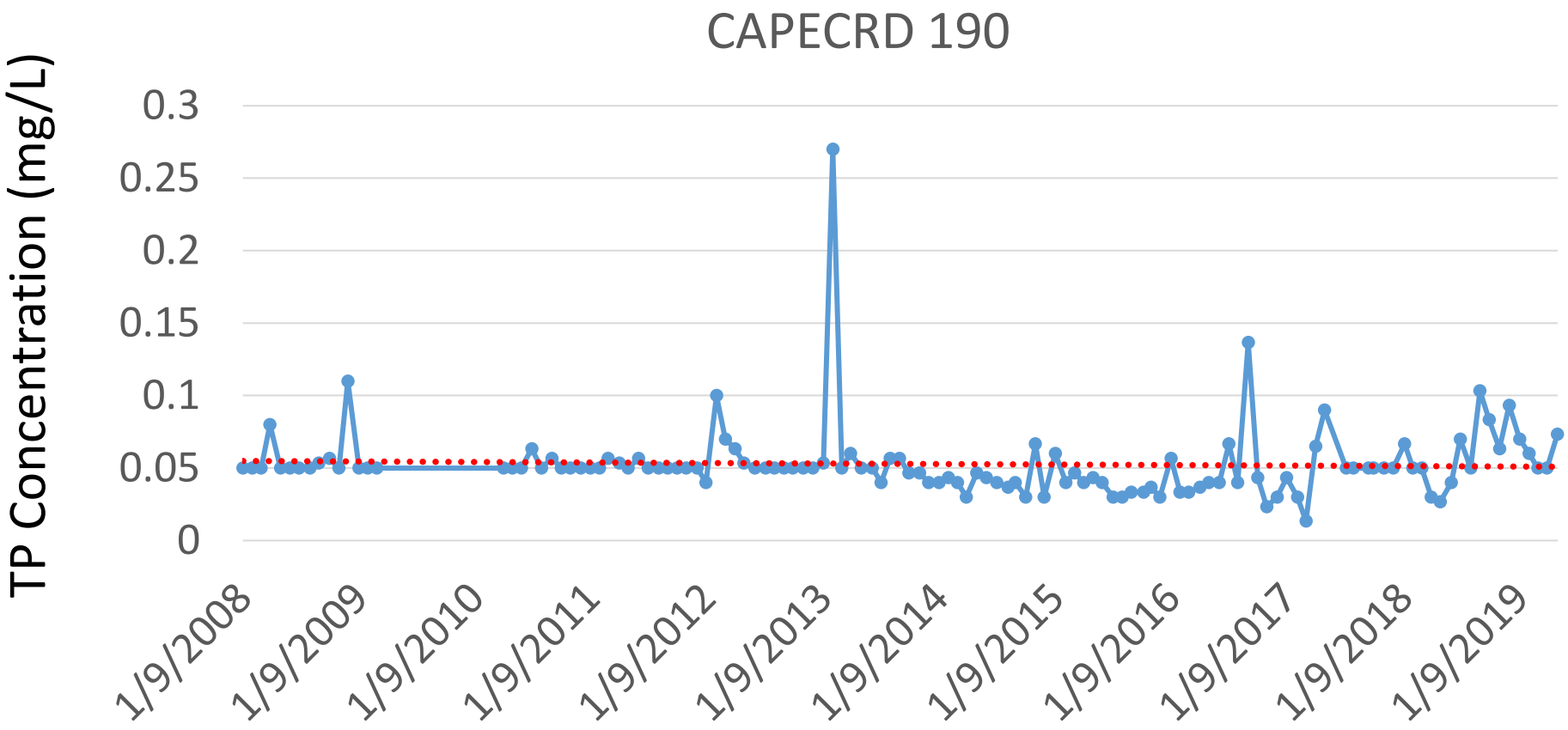
# Total Phosphorus (TP) over Time at Station in Project Area




Raw TP Results

1/2007 – 5/2019 TP Trend

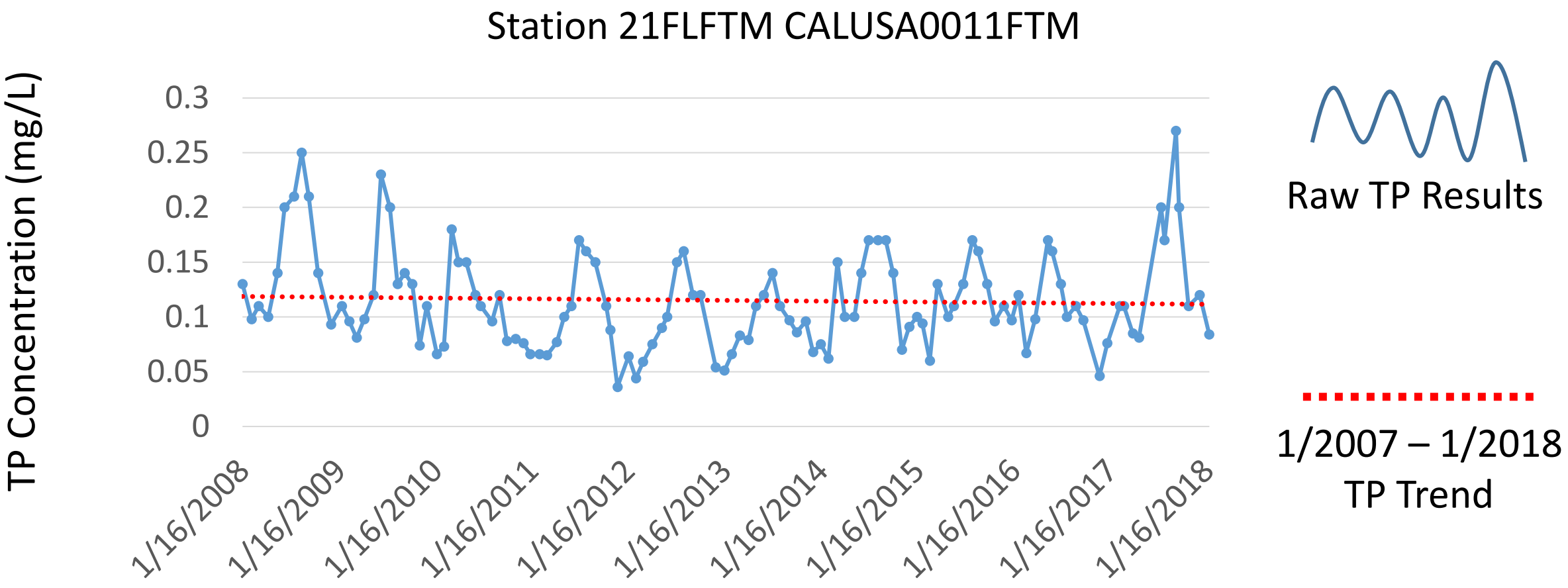
# TP over Time at Station Outside Project Area



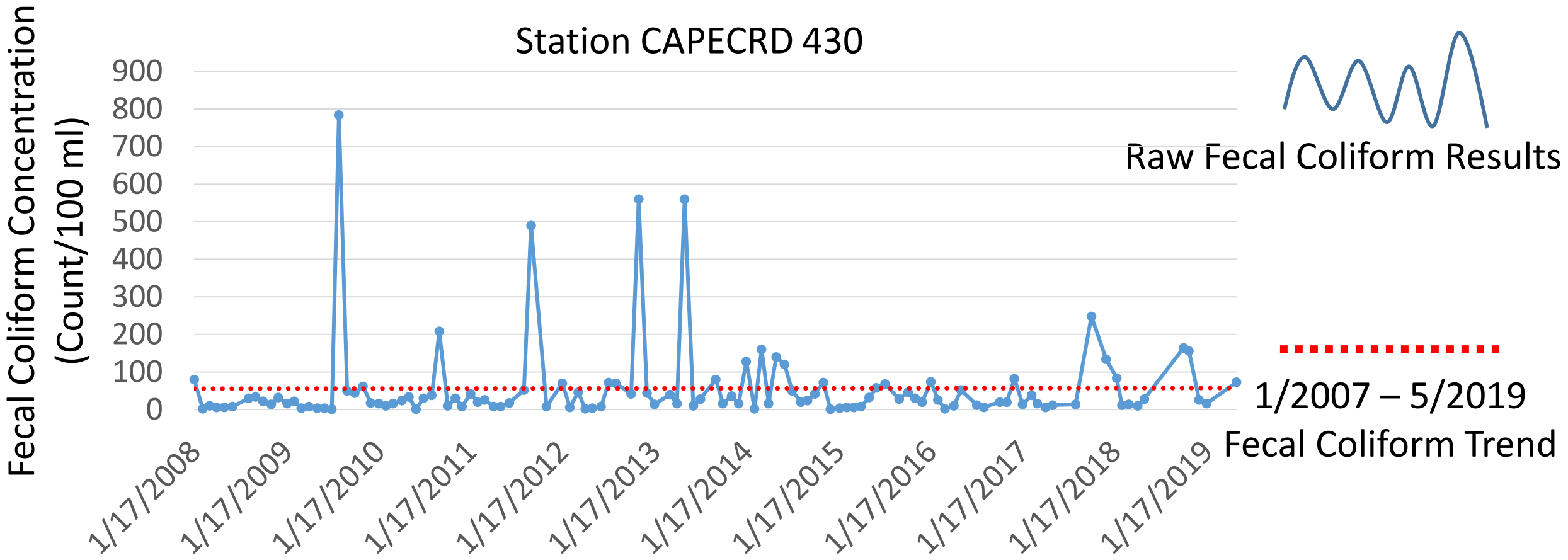

Raw TP Results

1/2007 – 5/2019 TP Trend

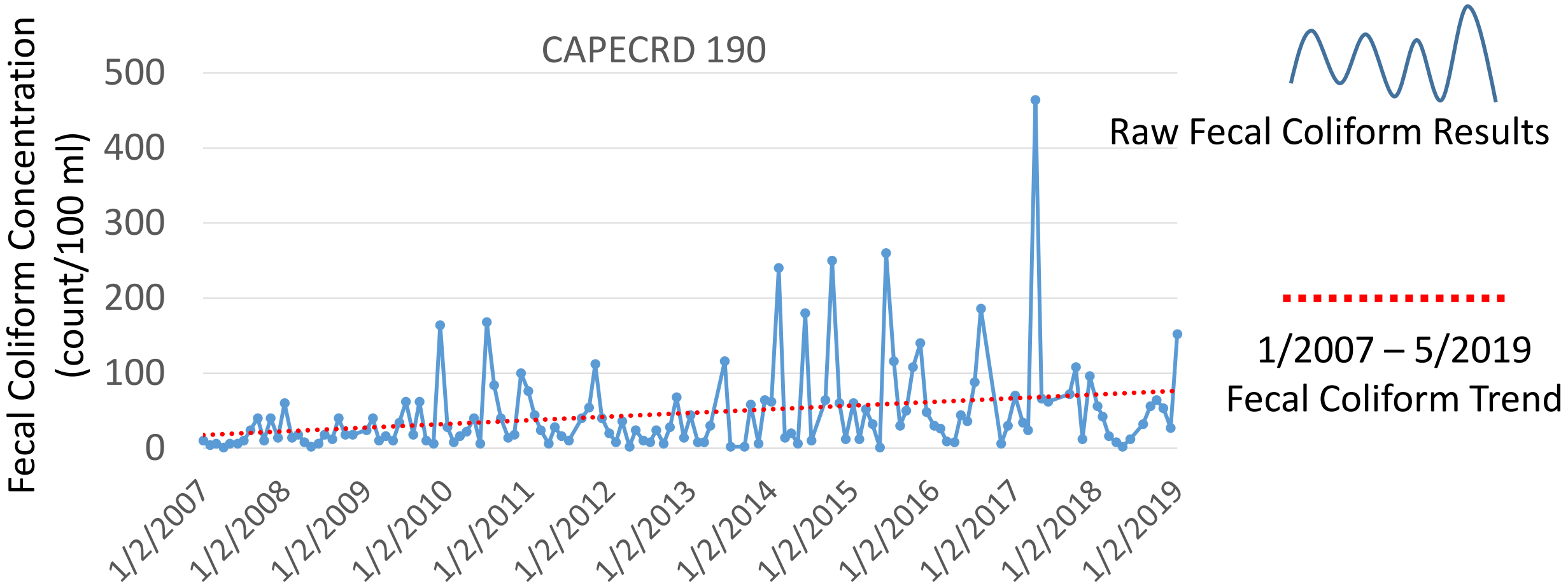
# TP over Time at Station in the Caloosahatchee River



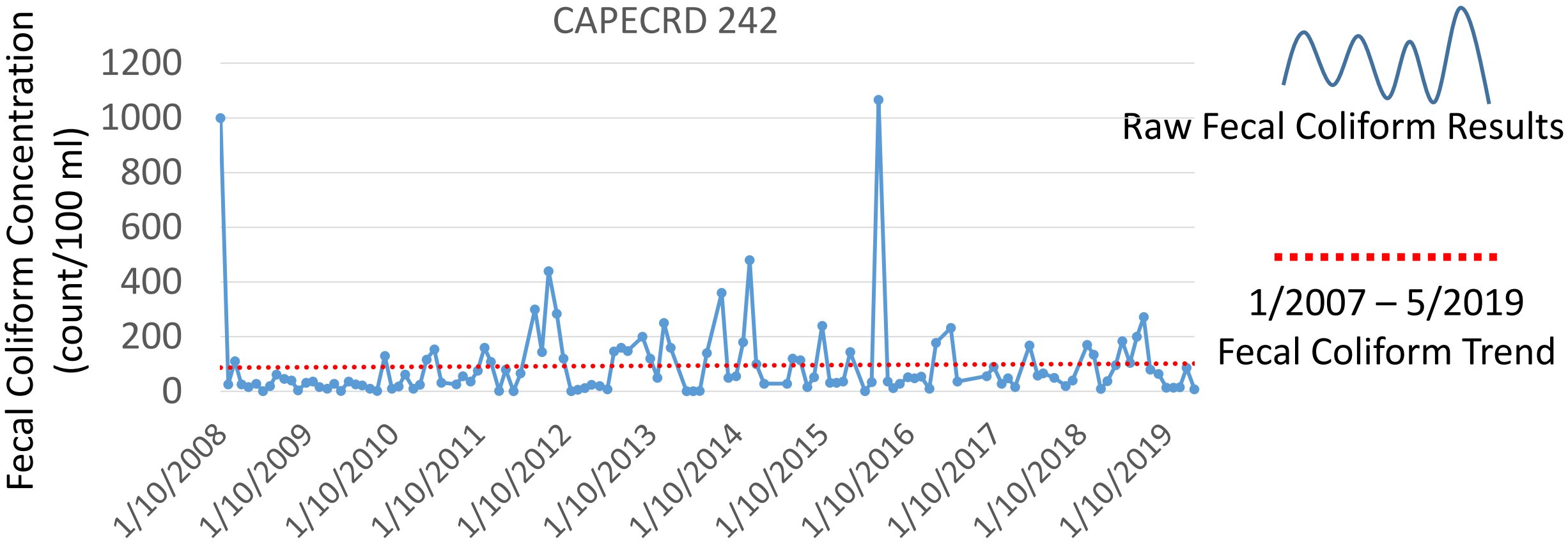
# Fecal Coliform Concentration over Time at Station in Project Area



# Fecal Coliform Concentration over Time at Station Outside Project Area



# Fecal Coliform Concentration over Time at Station in the Caloosahatchee River



# Other Old Action Items and Program News

2. The RRAC memberships expired on January 31, 2021 have been reappointed.
3. Request for quote for evaluating the OSTDS impact on the regional water quality condition (details to be provided in project update).
4. Mr. Alan Willet will leave the program.
5. Program transfer.
6. Septic folder update.

# Onsite Sewage Program

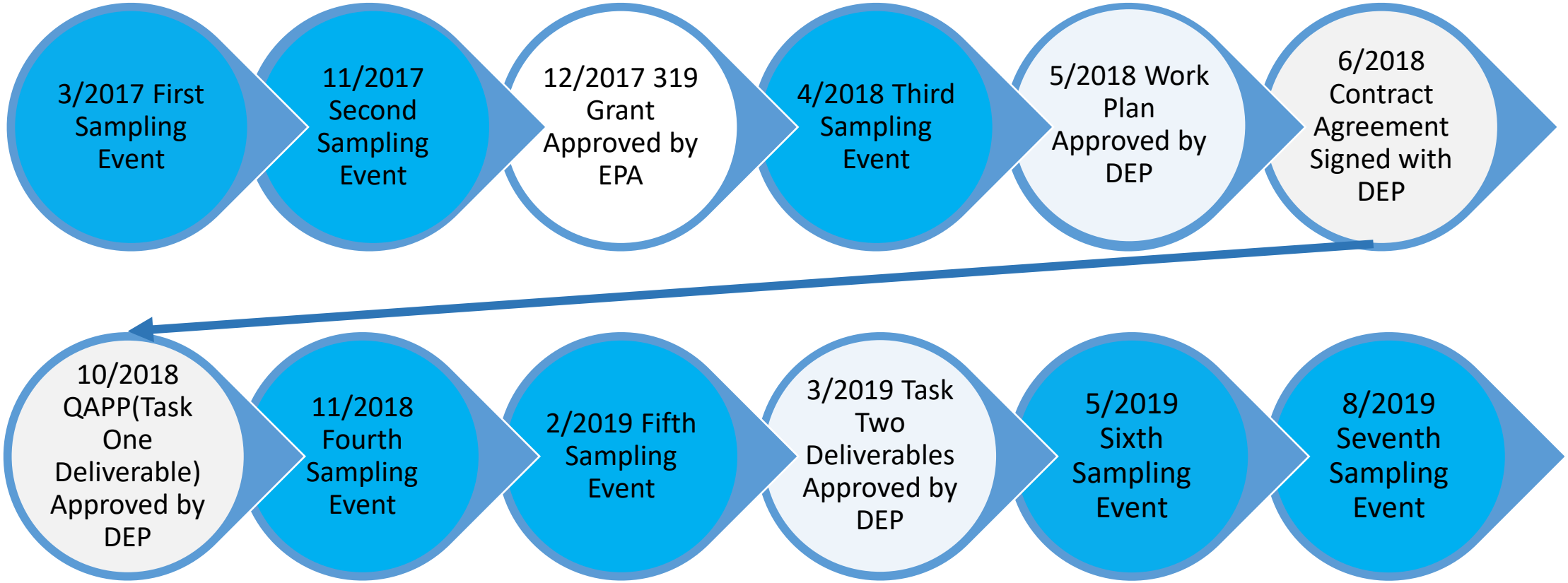
**Updates on research projects prioritized by the RRAC**

# High Priority Research Projects

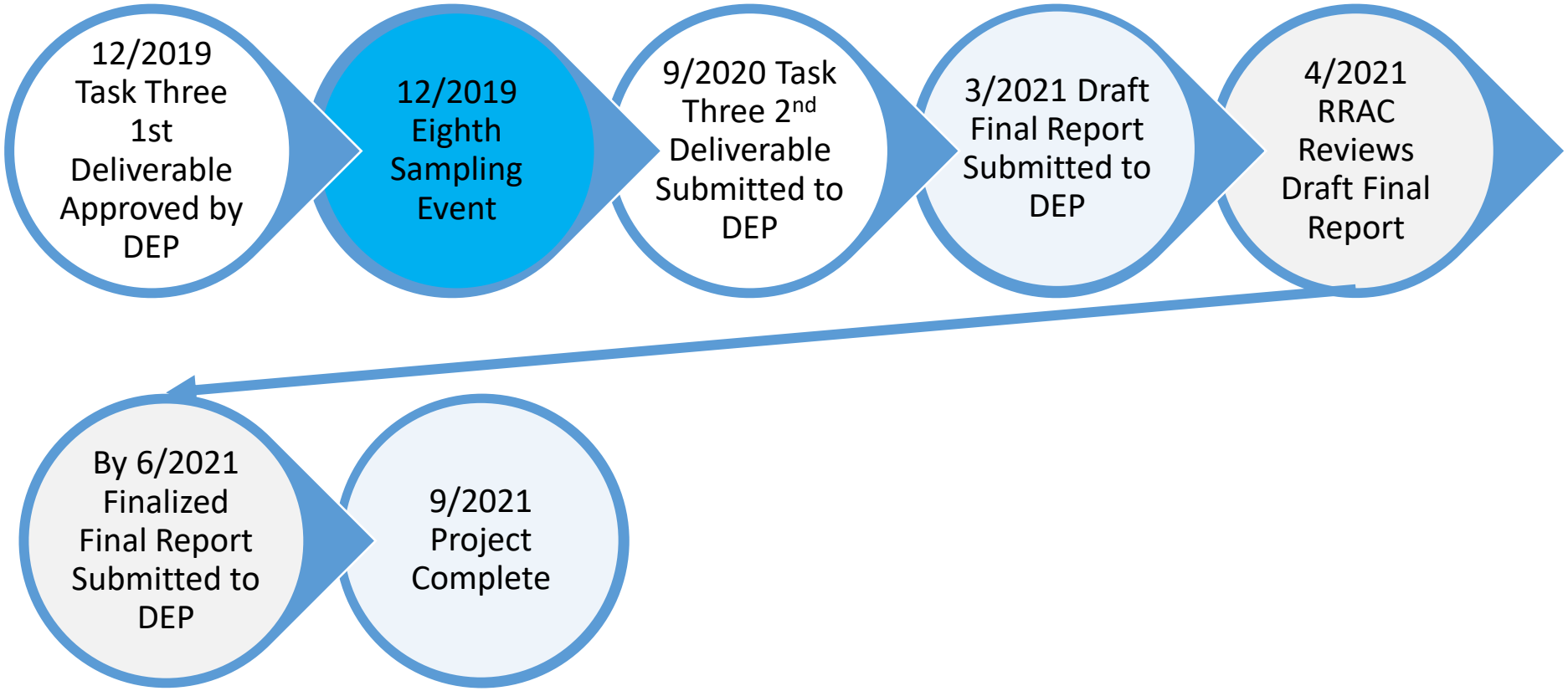
| Project Title | Total Project Score | Project Ranking |
|---|---|---|
| Continuation of Florida Water Management Inventory | 28 | 1 |
| Continued Monitoring on Passive Nitrogen-Reducing Onsite Systems | 28 | 2 |
| Development of Funding Mechanisms for OSTDS Remediation and Upgrades | 26 | 3 |
| Correlations between water quality, OSTDS, and health effects | 14 | 4 |
| Estimation of failure or non-conformance rates of OSTDS | 10 | 5 |

# Florida Water Management Inventory

# Continued Monitoring on Nitrogen Reducing Systems



# Continued Monitoring on Nitrogen Reducing Systems - Continued



# Investigation on Funding Mechanism for OSTDS Remediation and Upgrade

1. Investigated funding sources that can possibly be used for individual OSTDS remediation and OSTDS projects.

   1) The Springs Restoration Fund
   2) Septic Upgrade Incentive Program
   3) Nonpoint Source Program (NSP) Grants
   4) Clean Water State Revolving Fund (CWSRF)
   5) United Sates Department of Agriculture (USDA) Rural Development Program's Single Family Housing Repair Loans & Grants.
   6) Florida Small Cities Community Development Block Grant Program

# Investigation on Funding Mechanism for OSTDS Remediation and Upgrade - Continued

2. Internet Investigation on using the Clean Water State Revolving Fund (CWSRF) in 50 US States. Focusing on:

   1) Approaches used to distribute CWSRF to OSTDS owners
   2) Intermediate fund management entities and their responsibilities
   3) Eligibilities of OSTDS funding programs
   4) Recipients and timing of the OSTDS loan fund and the approaches to address the need of low-income households
   5) Maximum funding limit and approaches to address fund supply and demand issue
   6) Challenges of using CWSRF to assist OSTDS-related projects

3. A draft report was prepared and is now undergoing internal review.

# Evaluation of OSTDS Impact on Regional Water Quality

1. Onsite Sewage Program (OSP) staff continue analyzing the data collected from the Cape Coral Utility Expansion Project.
2. OSP solicited service providers to conduct the evaluation:
   1) OSP staff prepared a request-for-quote/scope of work document.
   2) RRAC reviewed the request-for-quote document and provided comments.
   3) OSP staff finalized the document and sent the document to more than 20 entities, including universities and consulting firms.
   4) OSP received three proposals.
   5) Proposals by Florida Atlantic University and University of South Florida were selected.
   6) The studies should be completed by June 30, 2021.

# Estimate of Failure or Non-Conformance Frequency of OSTDS

1. Data collection:
    1) St. Johns River Septic Enforcement Project – **Duval County**.
    2) Suwannee River Floodplain Onsite Sewage Disposal System Inventory study – **Alachua, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Madison, Union, Suwannee**.
    3) Point-of-sale septic inspection – **Escambia and Santa Rosa Counties**.
    4) Mandatory septic inspection required by **Charlotte County** ordinance.
    5) Mandatory septic inspection required by Lake and Polk County ordinances for systems in the Area of Critical State Concern (ACSC) in Green Swamp area – **Lake County and Polk County**.
2. Preliminary results from the data collection presented to RRAC in October 2019.

# Estimate of Failure or Non-Conformance Frequency of OSTDS - Continued

3. Obtained close to 7,000 point-of-sale inspection reports from Santa Rosa County.
   1) Classified all reports into compliance categories based on the inspection conclusions made in the letter from the County Health Department to customers.
   2) Identified some inconsistencies between the assessment conclusion and documentations on the inspection report.
   3) Student intern entered inspection documentation into an Access database and summarized data. Documentations of about 1,500 inspection reports were entered into the database.
   4) Next step: conduct quality control on the data and data analyses.

# Florida Atlantic University

**Approach to evaluate the impacts from onsite sewage treatment and disposal systems (OSTDS) on regional water quality in Taylor County**

# "Evaluation of Impacts of Onsite Sewage Treatment and Disposal Systems (OSTDS) on Surface Water Quality in Florida"

**Project Team: Dr. Hongbo Su, Dr. Daniel E. Meeroff, and Sanjaya Paudel**

*Department of Civil, Environmental & Geomatics Engineering*

*Florida Atlantic University*

# Project Goals

- Identify a geographic area in Florida with existing data on surface water quality adjoining an area before and after sewer conversion
- Assess if the sewer conversion is associated with a change in water quality and quantify the impact per OSTDS
- Analyze the relationship between OSTDS distribution characteristics and surface water quality conditions
- Identify the statistically significant spatial and/or temporal relationship between OSTDS distribution and water quality effects in an area with a sewer conversion

# Project Tasks

| Project Tasks | Task Deliverables |
|---|---|
| **Task 1. Finalize the research approach and gather identified and supplemental data** | A written research approach document identifying the proposed case study area where OSTDS were eliminated and describing the data to be analyzed, source of data, data quality control, and analytical approach. Discuss with OSP staff to get approval of the research approach report. |
| **Task 2. Collect and compile data** | A report summarizing the data collected and compiled, source of data, period of records, quality control results, and databases holding all the collected data. Provide the database to the Department as part of the deliverable. |

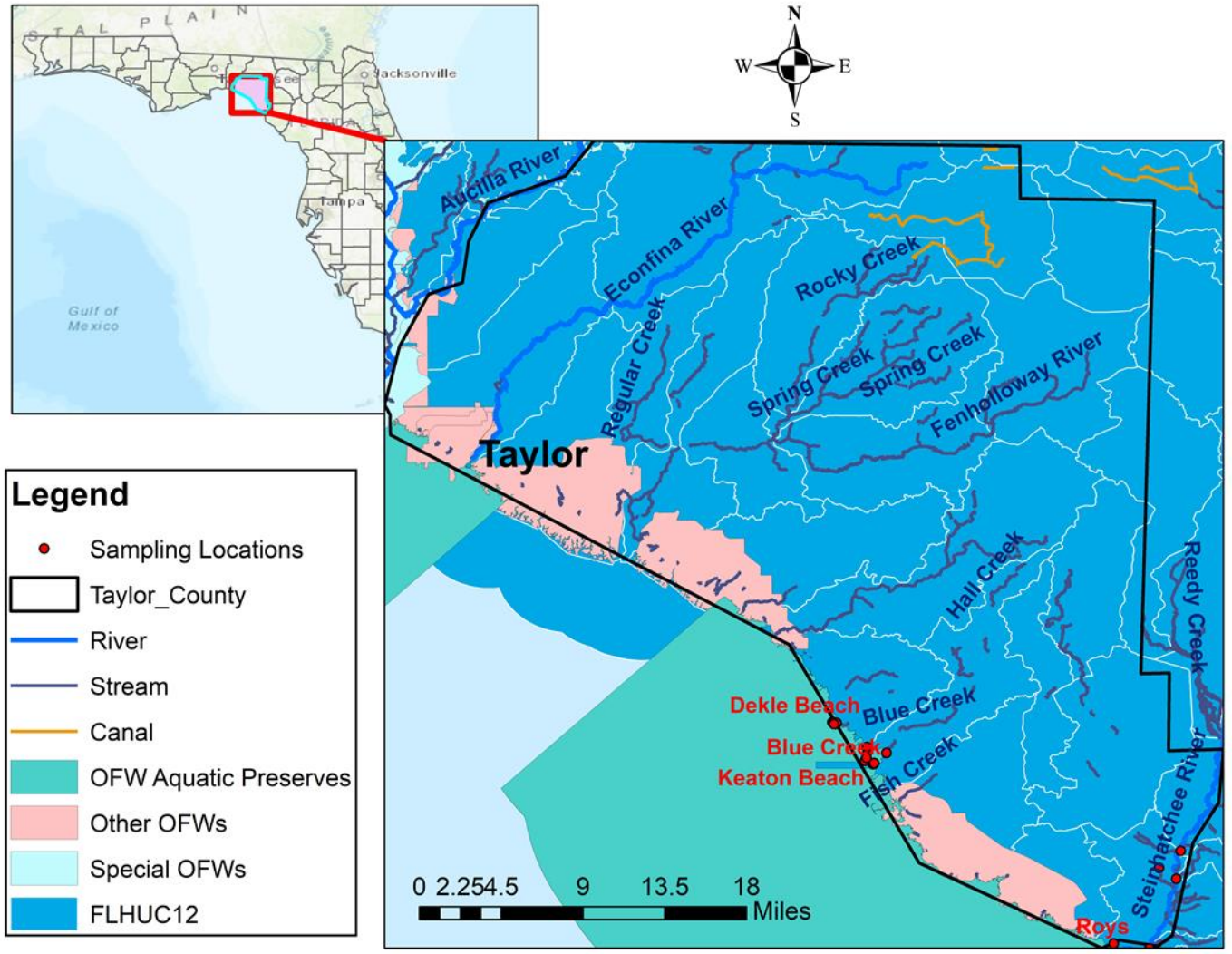
# Project Tasks

| Project Tasks | Task Deliverables |
|---|---|
| **Task 3. Analyze the collected data** | A report describing analytical methods, results, results interpretation, and evaluation of possible confounding factors, and data files for software applications. |
| **Task4. Develop and present draft final report** | Draft final report and presentation of preliminary results |
| **Task 5. Final report** | Final report. |

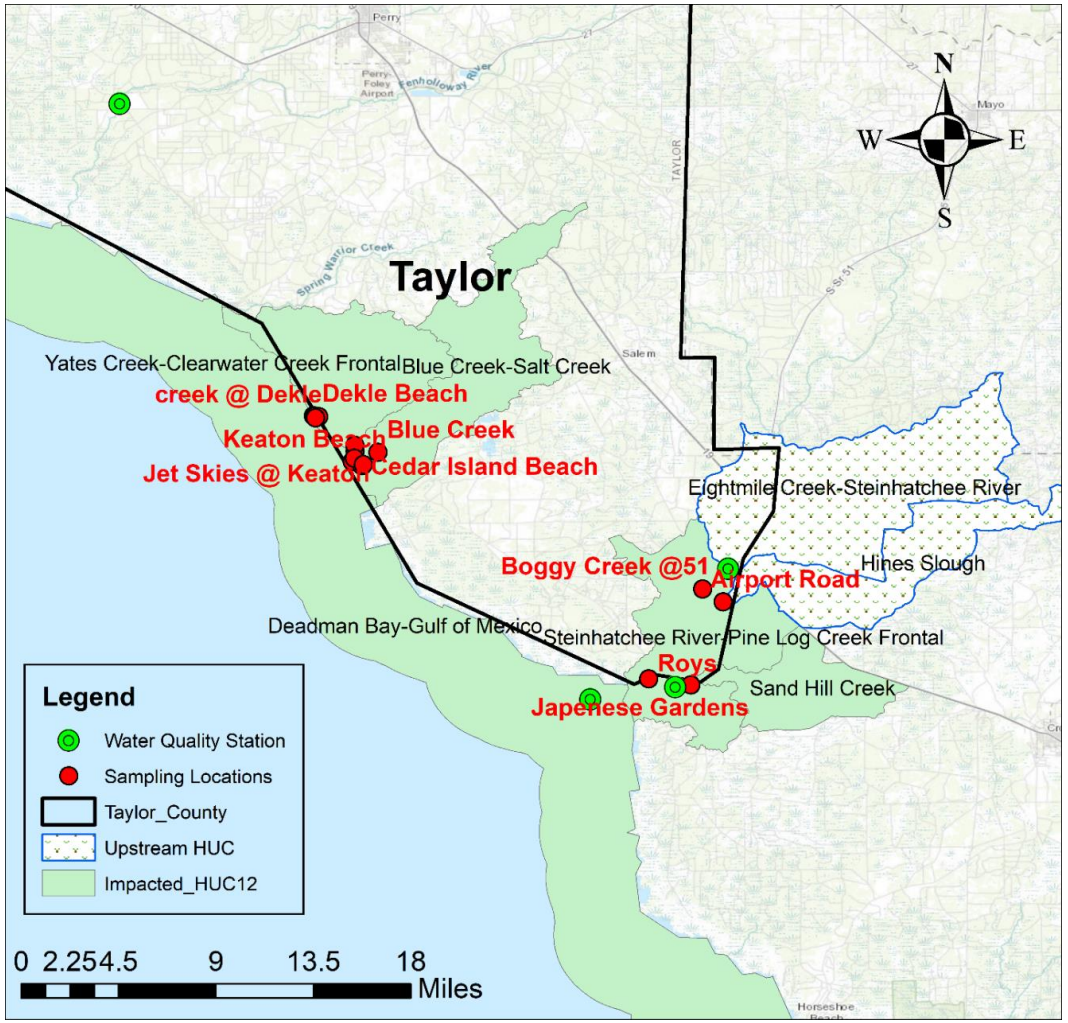
# Milestone Chart

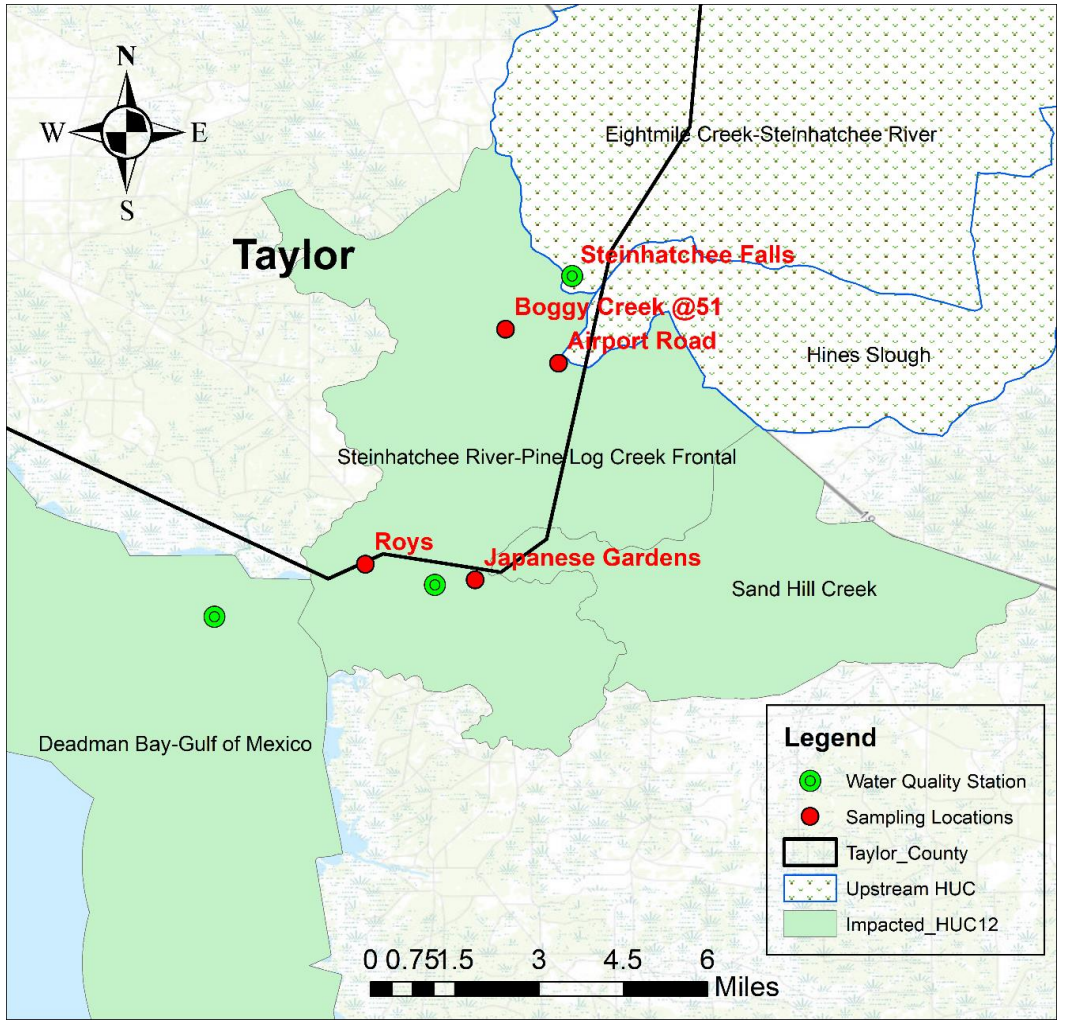
| Task | Mar. 30 | Apr. 24 | May. 24 | Jun. 13 | Jun. 30 |
|---|---|---|---|---|---|
| Task 1. Research approach | | | | | |
| Task 1 Review | | | | | |
| Task 2. Compile data | | | | | |
| Task 2 Review | | | | | |
| Task 3. Analyze data | | | | | |
| Task 3 Review | | | | | |
| Task 4. Draft final report | | | | | |
| Task 4 Review | | | | | |
| Task 5. Final report | | | | | |

# Study Area


N
W
E
S
Jacksonville
Tampa
Gulf of Mexico
Aucilla River
Econfina River
Rocky Creek
Regular Creek
Spring Creek
Spring Creek
Fenholloway River
Taylor
Hall Creek
Reedy Creek
Dekle Beach
Blue Creek
Blue Creek
Keaton Beach
Fish Creek
Steinhatchee River
Roys
0 2.254.5 9 13.5 18
Miles
Legend
Sampling Locations
Taylor_County
River
Stream
Canal
OFW Aquatic Preserves
Other OFWs
Special OFWs
FLHUC12

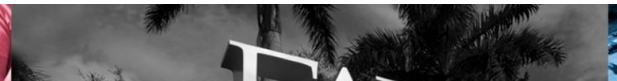
# Study Area and Sampling Points



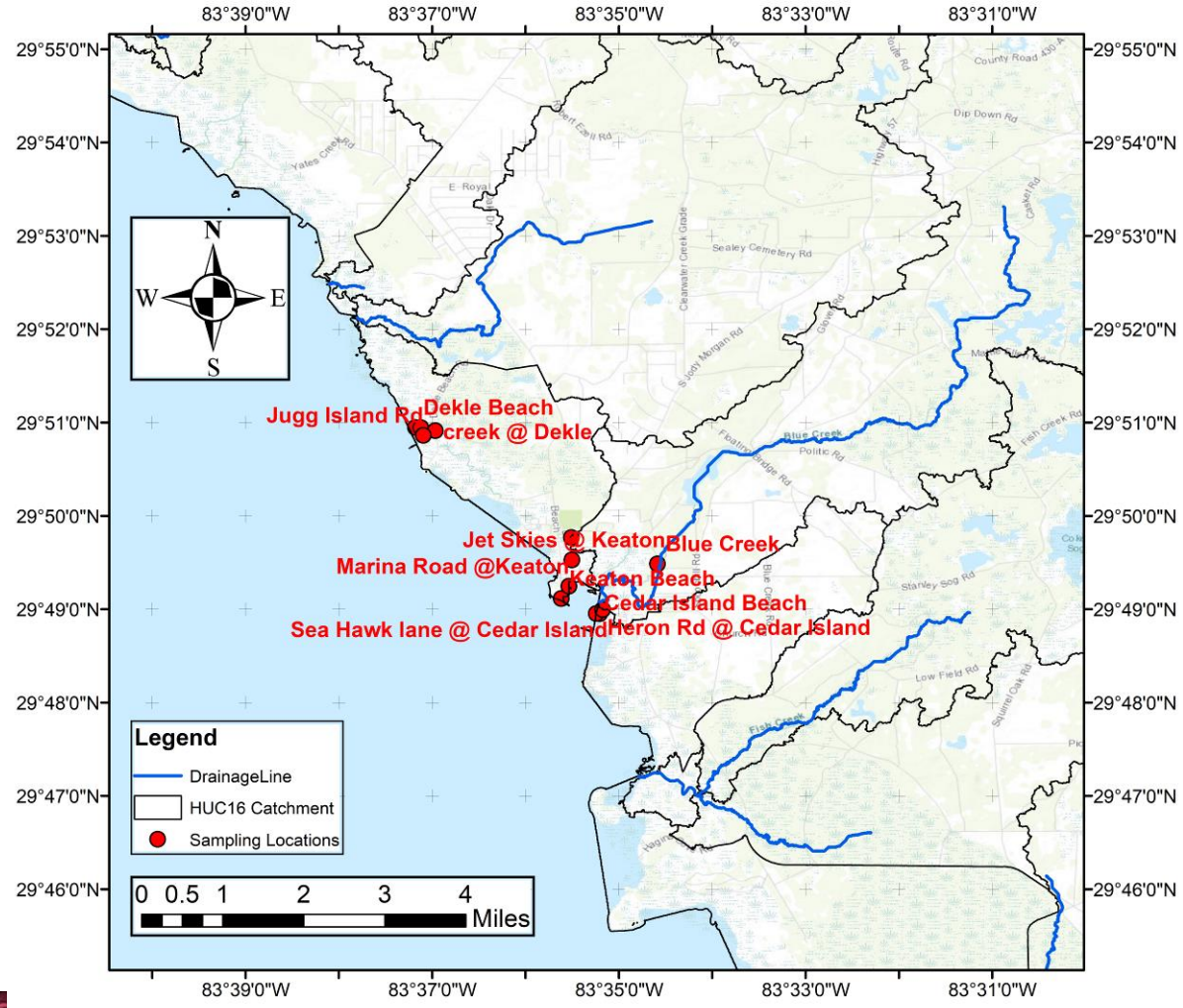



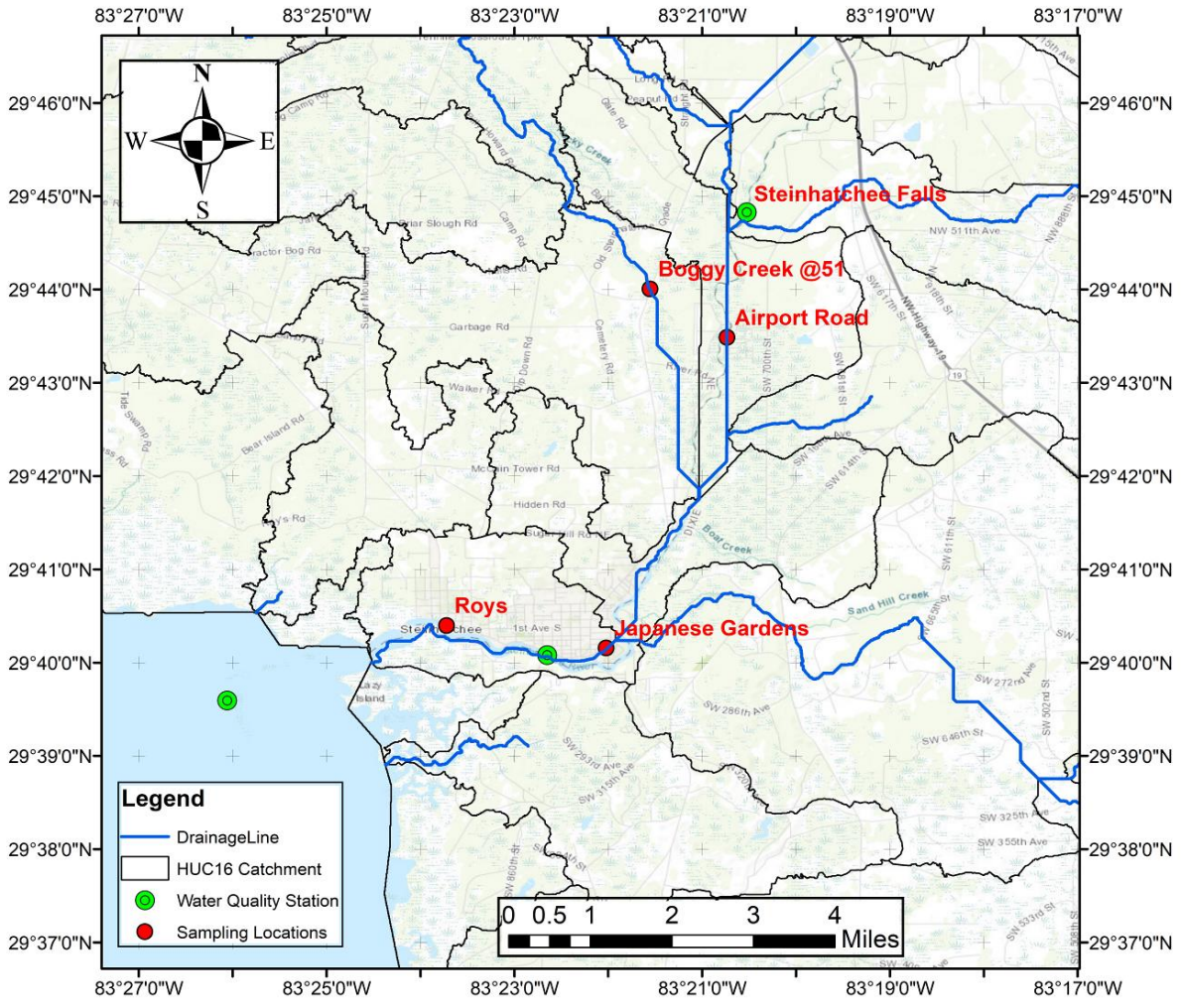
# Description of Sampling Sites

| Type | Location | Beach | Canal/Creek | Background |
|---|---|---|---|---|
| Developed without Sewer | Dekle Beach ($\rho$= low) | A. Dekle Beach (north)<br>JI. Dekle Beach (south at Jugg Island Road) | B. Dekle Beach Canal (Mexico Road) | C. Creek at Dekle |
| | Steinhatchee ($\rho$= high) | J. Main Street at the mouth of the Steinhatchee River | L. Boggy Creek @ 51<br>M. Steinhatchee at Airstrip Dr. upstream (east)<br>K. Third Avenue Fork downstream (west) | N. Steinhatchee Falls |
| Developed with Sewer Being Installed | Keaton Beach ($\rho$= medium) | F. Keaton Beach | E. Pump station pond<br>D. Cortez Road upstream (north)<br>MR. Marina Road downstream (south) | G. Blue Creek |
| | Cedar Island ($\rho$= medium) | I. Cedar Island Beach (south)<br>SL. Cedar Island Beach (north at Seahawk Lane) | H. Heron Road Canal | G. Blue Creek |


# Study Area and Sampling Points in HUC16



# Responsive Water Quality Parameters

| Nitrogen | | | Other Water Quality Constituents | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total Nitrogen (mg/L as N) | Ammonia-Nitrogen (mg/L as N) | Nitrate-Nitrogen (mg/L as N) | Enterococcus (MPN/100 mL) | Salinity (mg/L) | *E. coli* (MPN/100 mL) | Dissolved Oxygen (mg/L) | TOC (mg/L as C) | Total Phosphorus (mg/L) |

# Confounding Factor Analyses

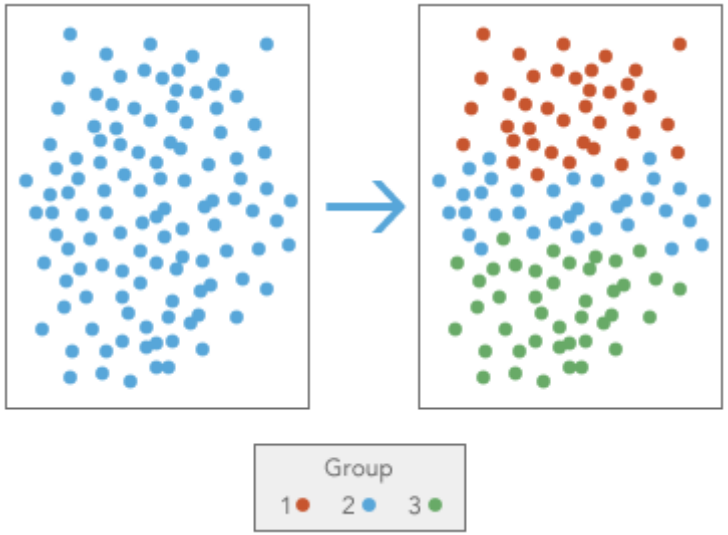
- Microbial indicator survival and regrowth potential
  - For example, *E. coli* and enterococci were found to persist over time and therefore did not always represent true comparisons of OSTDS and sewered areas between seasons (Meeroff et al. 2007; Meeroff et al. 2014)
- Development densities are not ideally paired between sewered and OSTDS locations (Meeroff et al. 2008)
- Seasonal variation of water table (Meeroff et al. 2007; Meeroff et al. 2008; Bloetscher et al. 2010; Meeroff et al. 2014; Carsey et al. 2015).
- Distance between the sampling site and the nearby water stream
- Land use changes

# Data Analysis Approach

- **Analysis of variance (ANOVA)** will be conducted on the monitoring data separated by confounding factors such as water table conditions, wastewater disposal practices, and land use types
  - It is expected to reveal whether the physical water quality parameters are significantly impacted by those confounding factors
  - The water quality monitoring data will be evaluated for background (undeveloped) sites, OSTDS, and sewered sites separately by ANOVA
- The **hypothesis test** will be based on unpaired two-sample t-test and paired two-sample t-test
  - Paired t-test will be conducted based on the water quality observations from the locations of residential area served by OSTDS exclusively (Dekle Beach and Steinhatchee), and the other locations converted to sanitary sewer (Keaton Beach and Cedar Island)
  - The unpaired two-sample t-test is used to compare the water quality observations from the same locations before the event of a conversion to sanitary sewer and after that event
  - During phase 1 conversion approximately 201 septic tanks were converted to sewer in Keaton Beach and 101 in Cedar Island

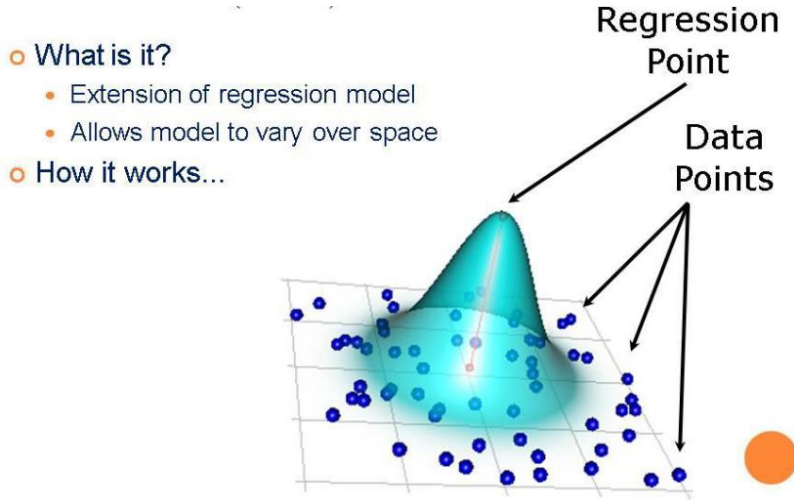
# Data Analysis Approach

- **Geospatial statistical analysis** will be used to demonstrate the effects of sewer installation on water quality at all sampling sites
  - We will use the Spatially Constrained Multivariate Clustering Tool in ArcGIS to create maps showing the different categories of water quality patterns
  - The Multivariate Clustering Tool in GIS is able to find natural clusters of features based solely on feature attribute values, however, it constructs nonspatial clusters
  - The Spatially Constrained Multivariate Clustering Tool can derive contiguous clusters of features based on a set of feature attribute values and optional cluster size limits, when using a spatial weights matrix



# Data Analysis Approach

- **Geographically Weighted Regression (GWR)** will be used to model spatially varying relationships and quantify the spatial impact of the change in OSTDS
  - In global regression models, such as Generalized Linear Regression, results are unreliable when two or more variables are redundant or together tell the same story
  - Instead, the GWR tool builds a local regression equation for each feature in the dataset
  - GWR evaluates a local model of the variable or process you are trying to understand or predict by fitting a regression equation to every feature in the dataset



# Additional water quality data

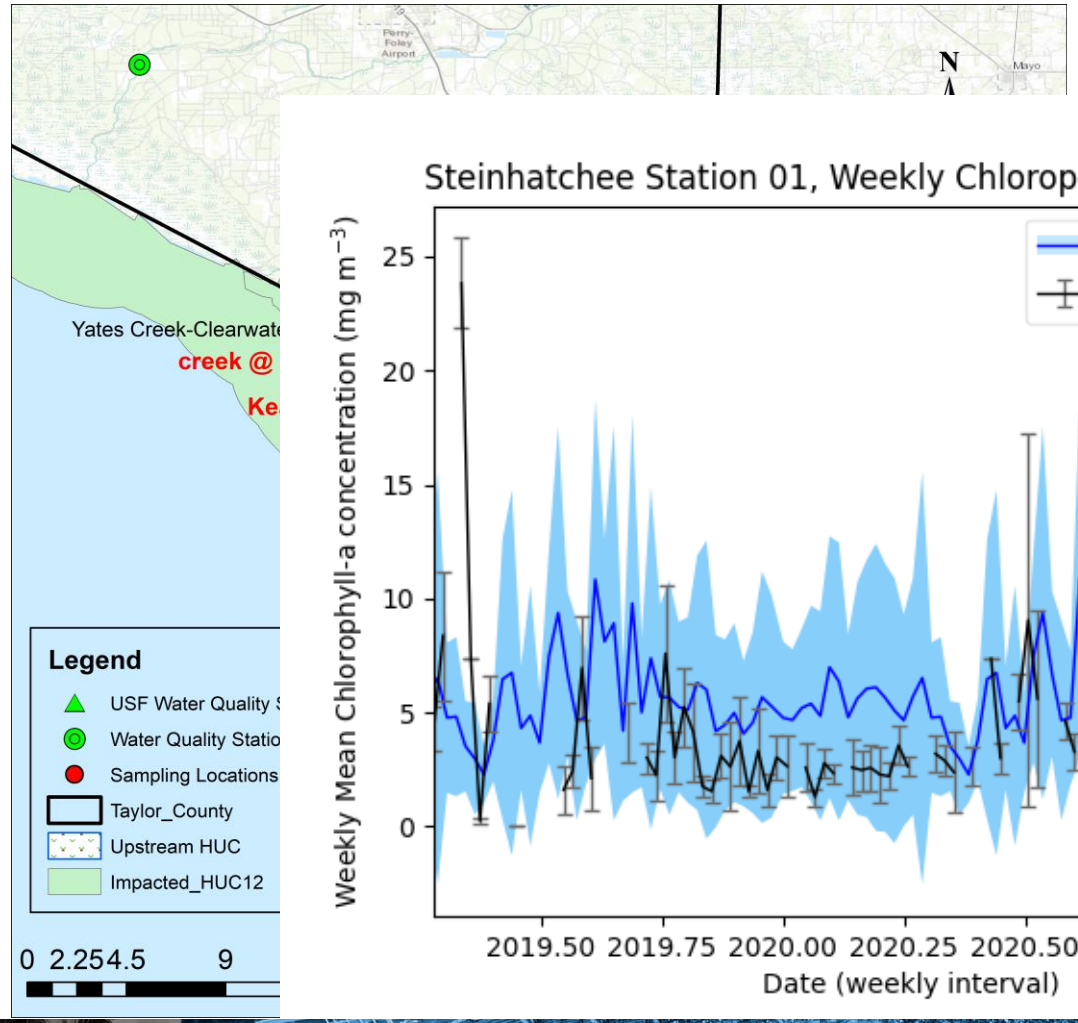
Home » Environmental Health » Beach Water Quality » Florida Healthy E

## Florida Healthy Beaches Program

**Beach Samples for: Taylor County -- Beach: KEATON BEACH**

Search Again

| ID | Location | Date Descending | Enterococcus Code (Calc) | Advisory | ? | |
|---|---|---|---|---|---|---|
| 997 | KEATON BEACH | 8/24/2020 | Good | No | | Map |
| 996 | KEATON BEACH | 8/20/2020 | Moderate | No | | Map |
| 995 | KEATON BEACH | 8/11/2020 | Good | No | | Map |
| 994 | KEATON BEACH | 8/4/2020 | Good | No | | Map |
| 993 | KEATON BEACH | 7/29/2020 | Good | No | | Map |
| 992 | KEATON BEACH | 7/21/2020 | Good | No | | Map |
| 992 | KEATON BEACH | 7/21/2020 | Good | No | | Map |
| 991 | KEATON BEACH | 7/14/2020 | Poor | Yes | | Map |
| 990 | KEATON BEACH | 7/6/2020 | Good | No | | Map |
| 989 | KEATON BEACH | 6/29/2020 | Good | No | | Map |



# Questions?

**Contact:**
**Hongbo Su (suh@fau.edu)**
**Dan Meeroff (dmeeroff@fau.edu)**

# University of South Florida

## Approach to evaluate the impacts OSTDS on regional water quality in Red Bug Slough, Sarasota County

# Impact of OSTDS on Surface on Regional Water Quality Conditions

## Prepared for: The Florida Department of Health

Dr. Mahmood Nachabe, Dr. Sarina Ergas

Rachael Cooper, Jenelle Mohammed

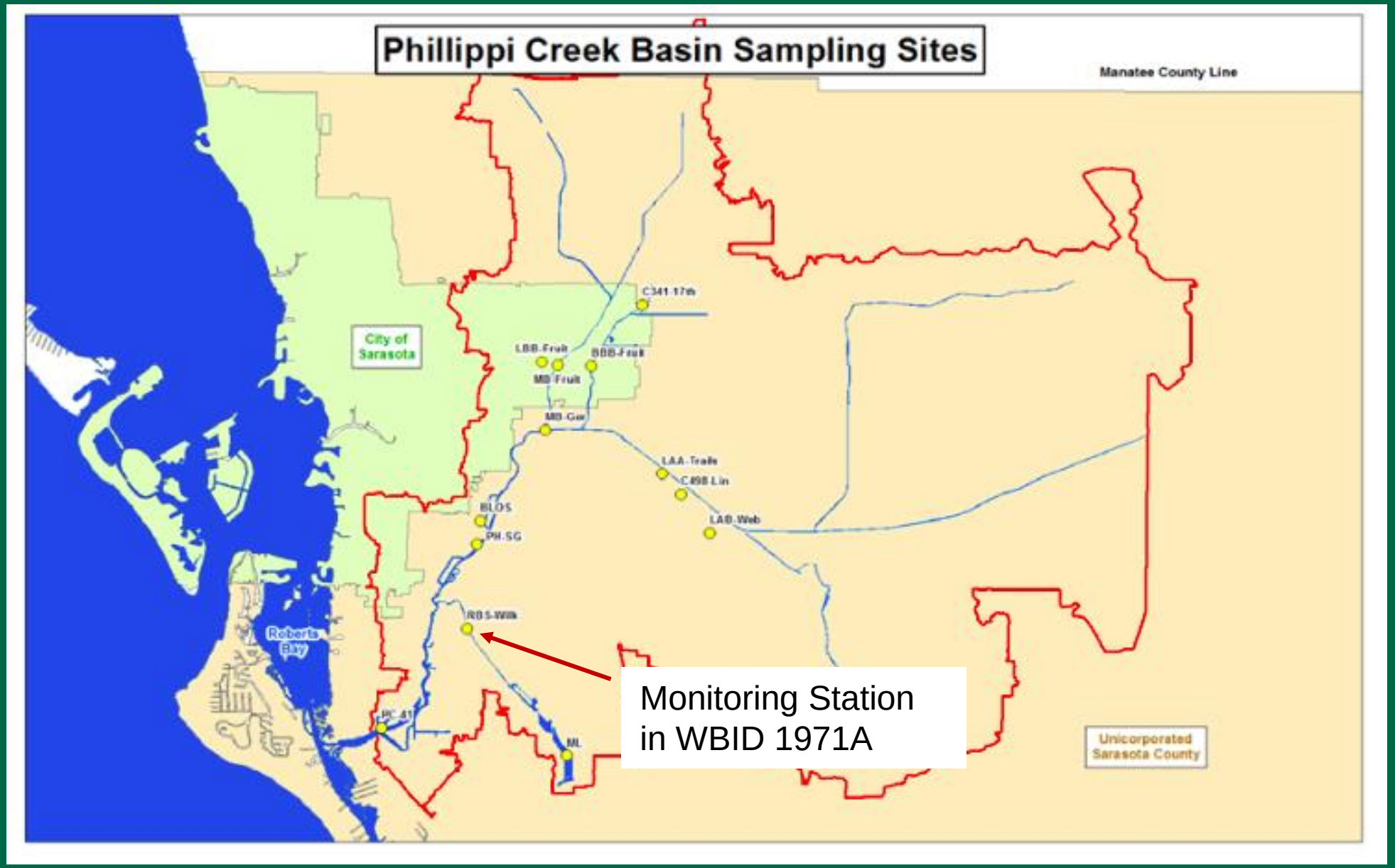
04/06/2021

UNIVERSITY of SOUTH FLORIDA

# Red Bug Slough Sub-Basin within Phillippi Creek Watershed.

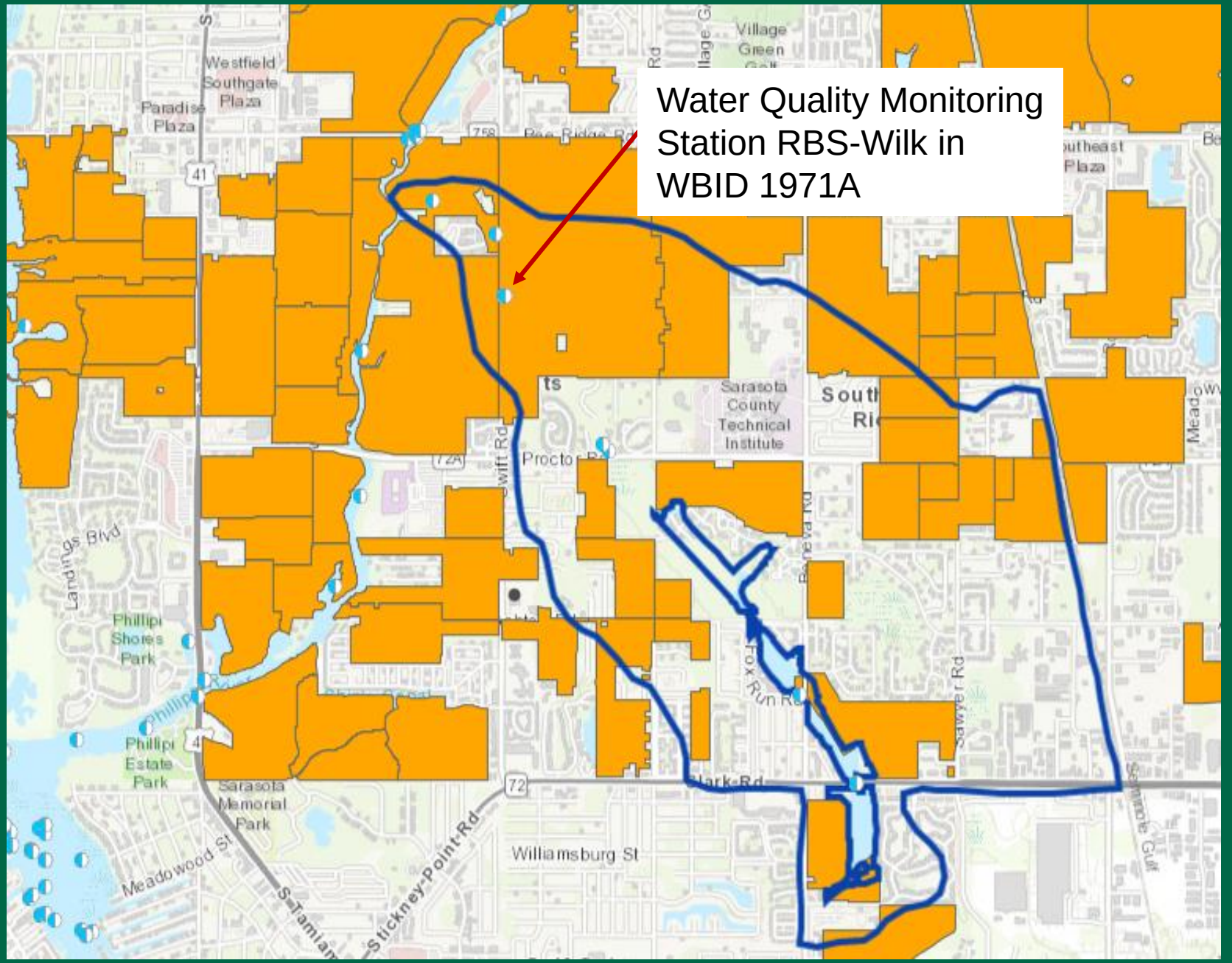
- Red Bug Slough - 2.8-mile stream
- Catchment Size: 600 acres ~ 0.94 sq. mi


Source: Sarasota County Utilities Department.




Source: Sarasota County Utilities Department.

# Red Bug Slough Sub-Basin Boundary
# WBID: 1971A & 1971




Source: Sarasota County ArcGis.

# Review of Water Quality Data

| Sample Station ID | Data Source | Database | Period of Record |
|---|---|---|---|
| RBS-J | Sarasota County Coastal Creeks<br>Sarasota County Environmental Services Department | Sarasota County Water Atlas | 2005-2008<br>2015-2017 |
| ****RBS-Wilk** | **Sarasota County Coastal Creeks** | | **2005-2008<br>2010-2020** |
| RBW-P | Sarasota County Environmental Services Department | | 2010-2015 |
| RBS-K | Sarasota County Coastal Creeks | | 2005-2008 |

** Sample Stations with consistent water quality data.

# Confounding Factors

1) Fertilizer used by agriculture

3) Changes in land use

4) Soil types

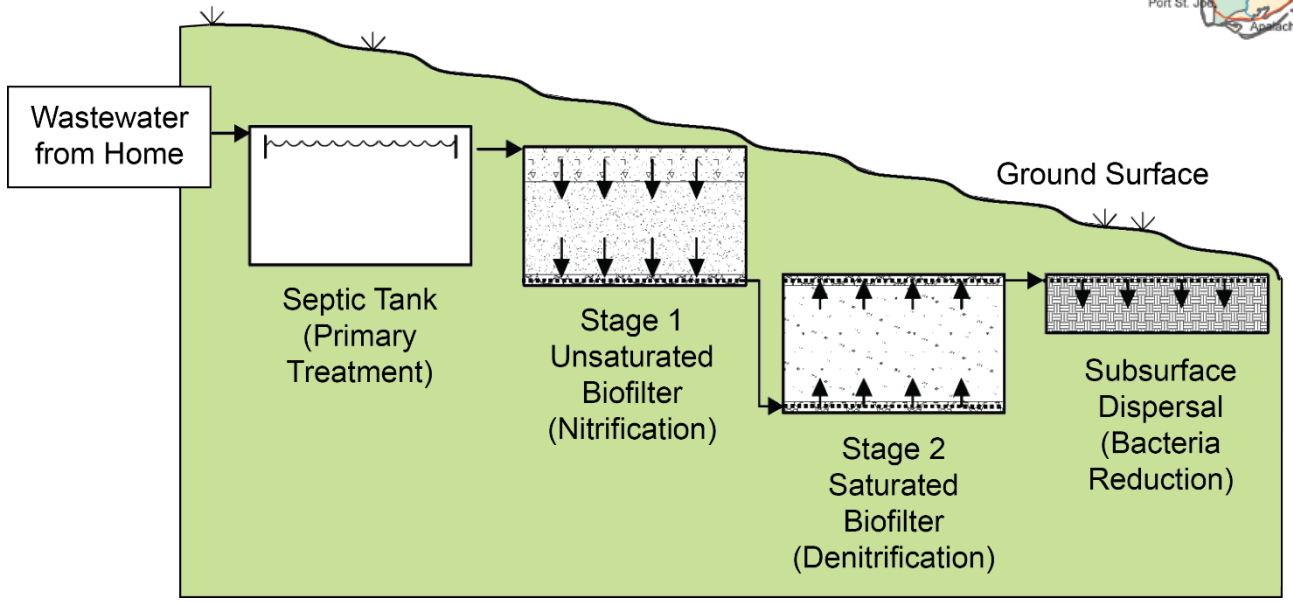
5) Weather

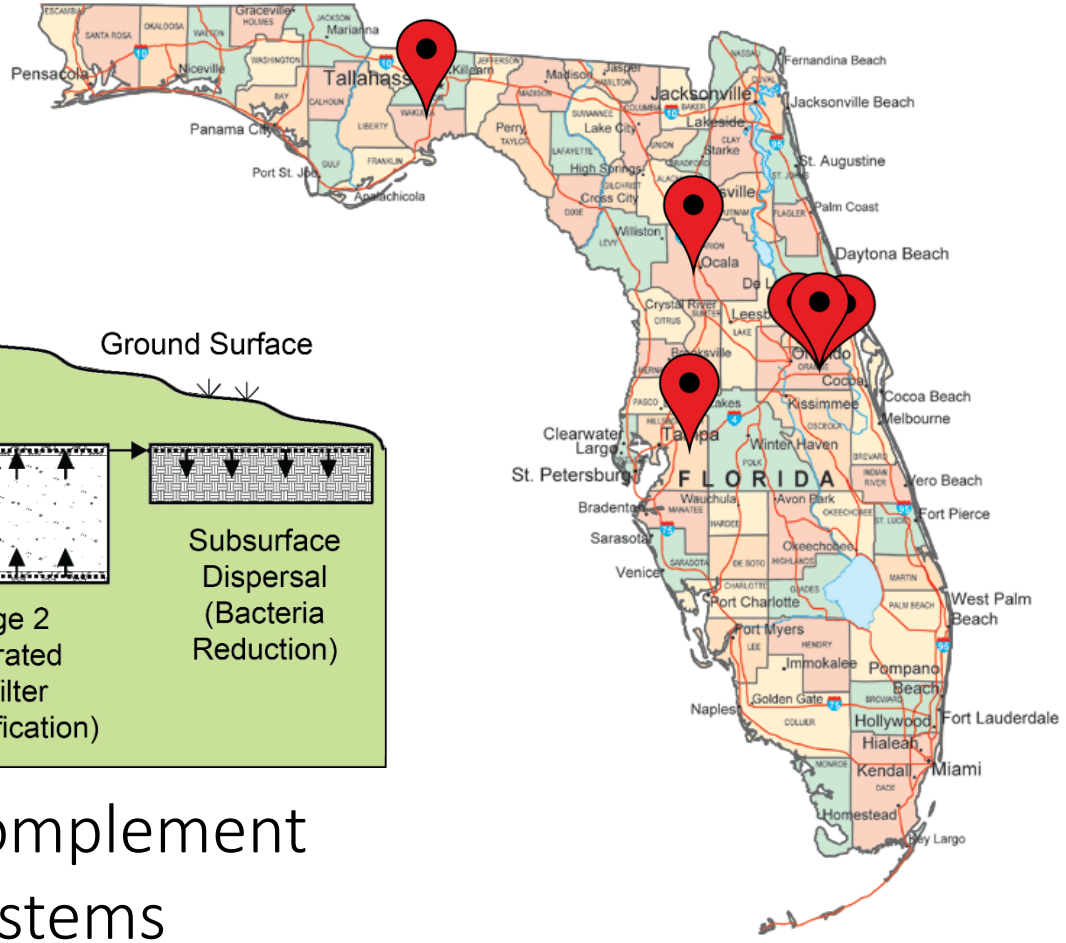
6) Bird populations in the Red Bug Slough Preserve

# Onsite Sewage Program

**Summary of the draft final report for the continued monitoring of nitrogen reducing OSTDS installed during the Florida Onsite Sewage Nitrogen Reduction Strategy (FOSNRS) study**

# Florida Onsite Sewage Nitrogen Reduction Strategy (FOSNRS) Study

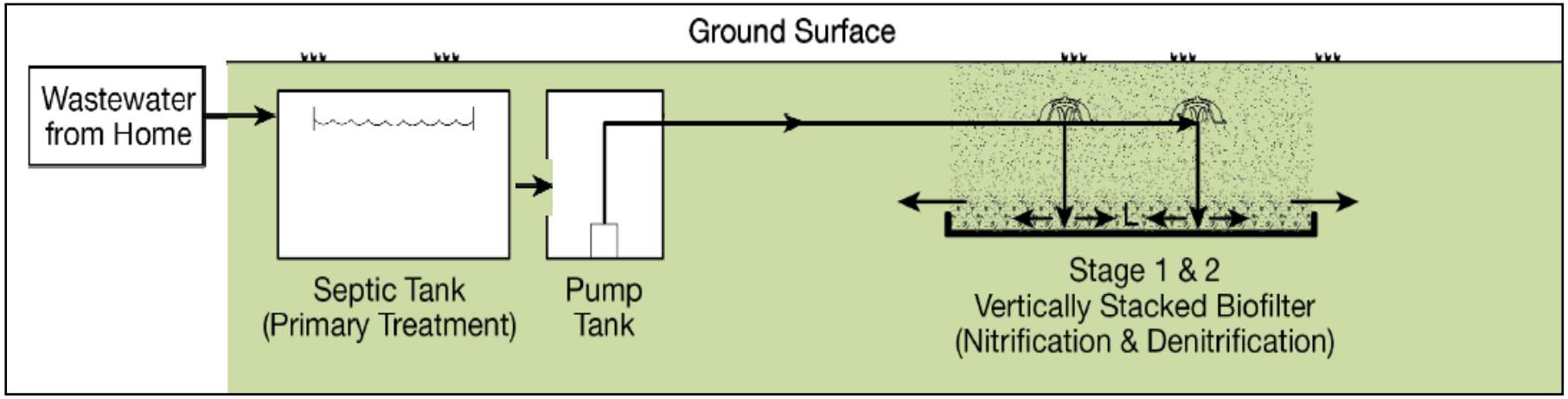



Full Scale Concepts Complement Existing Septic Systems

# Florida Onsite Sewage Nitrogen Reduction Strategy (FOSNRS) Study - Continued


Conventional OSTDS + In-Ground Two Stage System: Stage 1 Sand, and Stage 2 Lignocellulosic Materials



# Continued Monitoring on FOSNRS Systems

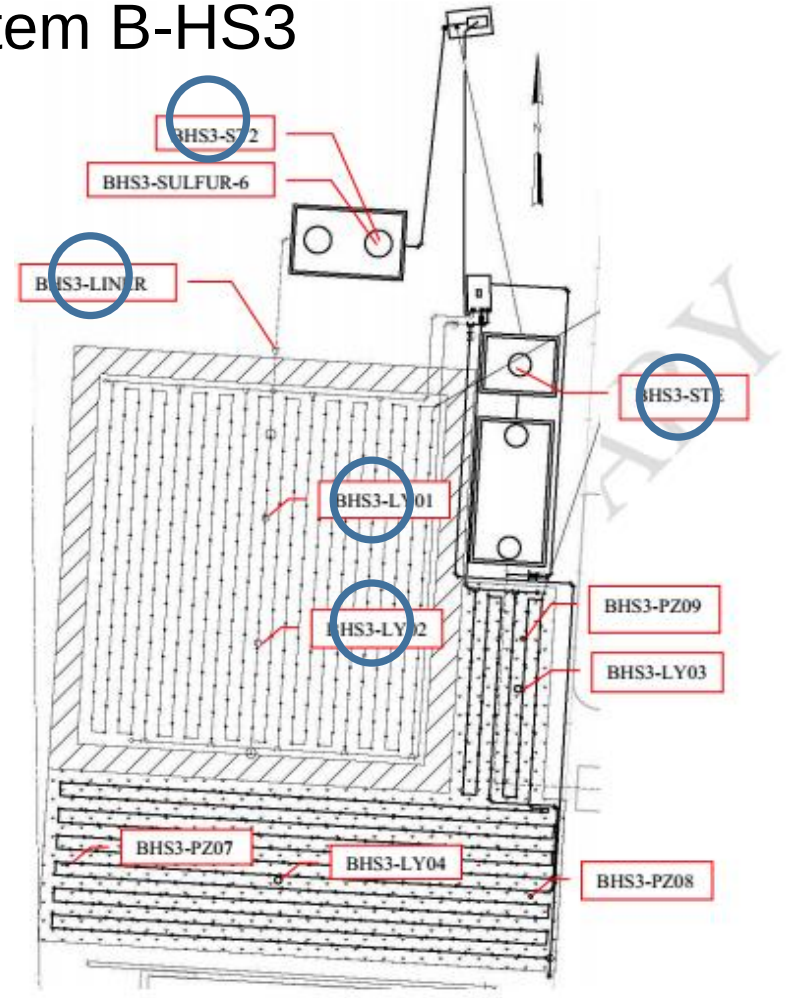
1. The FOSNRS study monitored these systems for about two years.
2. Results from the monitoring showed an average total nitrogen (TN) removal efficiency from 65% to 97%.
3. The FOSNRS study recommended that FDOH establish a long-term monitoring schedule for these systems.
4. Goal of the continued monitoring project is to
    1) Evaluate continued system performance,
    2) Observe the longevity of the media,
    3) Estimate the nitrogen removal efficiency as these systems become mature, and
    4) Estimate the overall maintenance and operating cost of these systems.

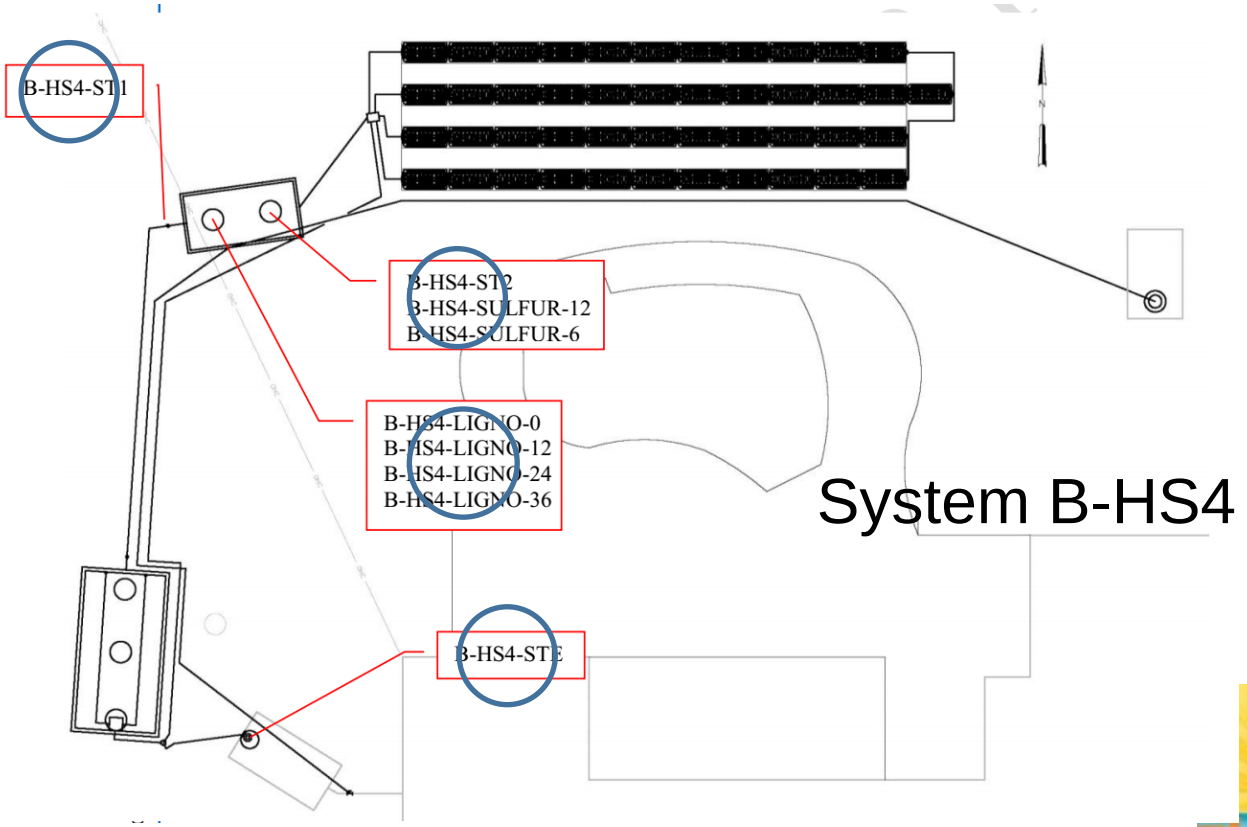
# Objectives of the Continued Monitoring Project

1. Evaluating systems' overall condition and performance;
2. Evaluating system treatment efficiencies for nitrogen, as well as other pollutants including phosphorus, five-day carbonaceous biochemical oxygen demand (CBOD5), total suspended solids (TSS), and fecal coliform;
3. Comparing pollutant treatment efficiencies during the continued monitored period (this project) and the FOSNRS monitoring period and evaluating the temporal trend of treatment efficiency;
4. Documenting the operating costs and maintenance requirements to maintain proper system functioning; and
5. Identifying operating and functional issues with the monitored systems in order to identify possible future refinements.

# Systems B-HS3 and B-HS4

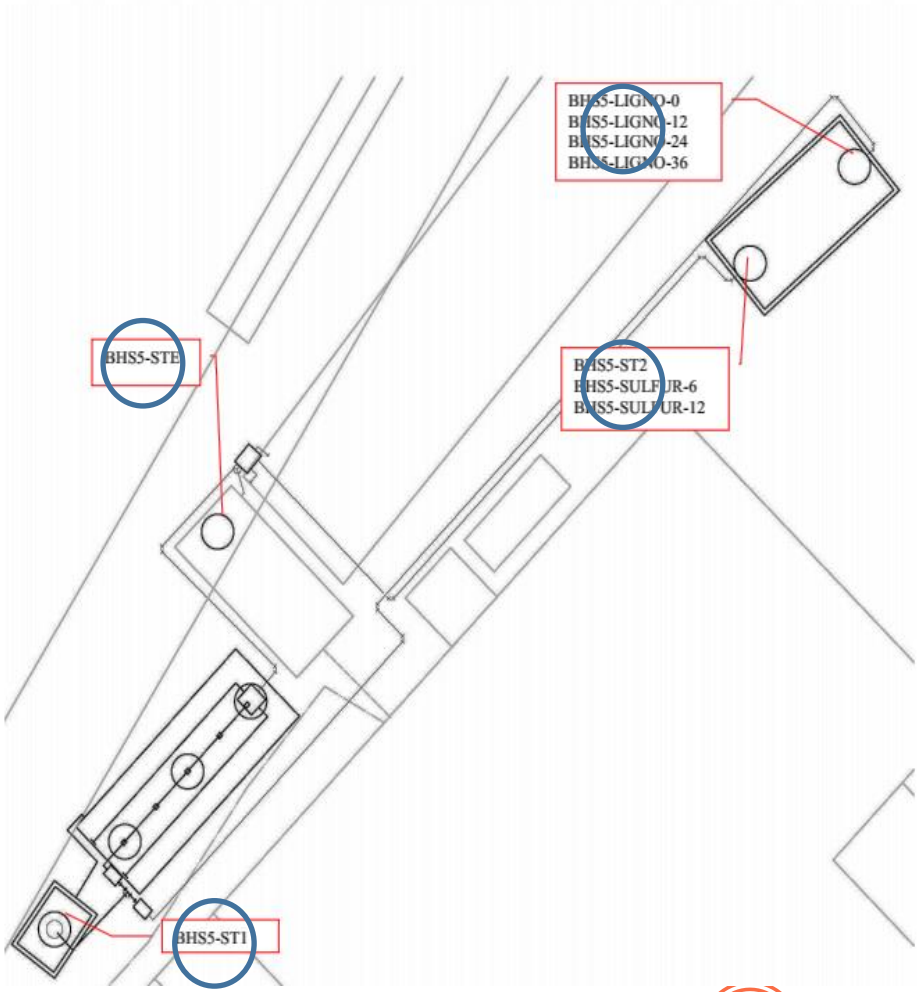
System B-HS3



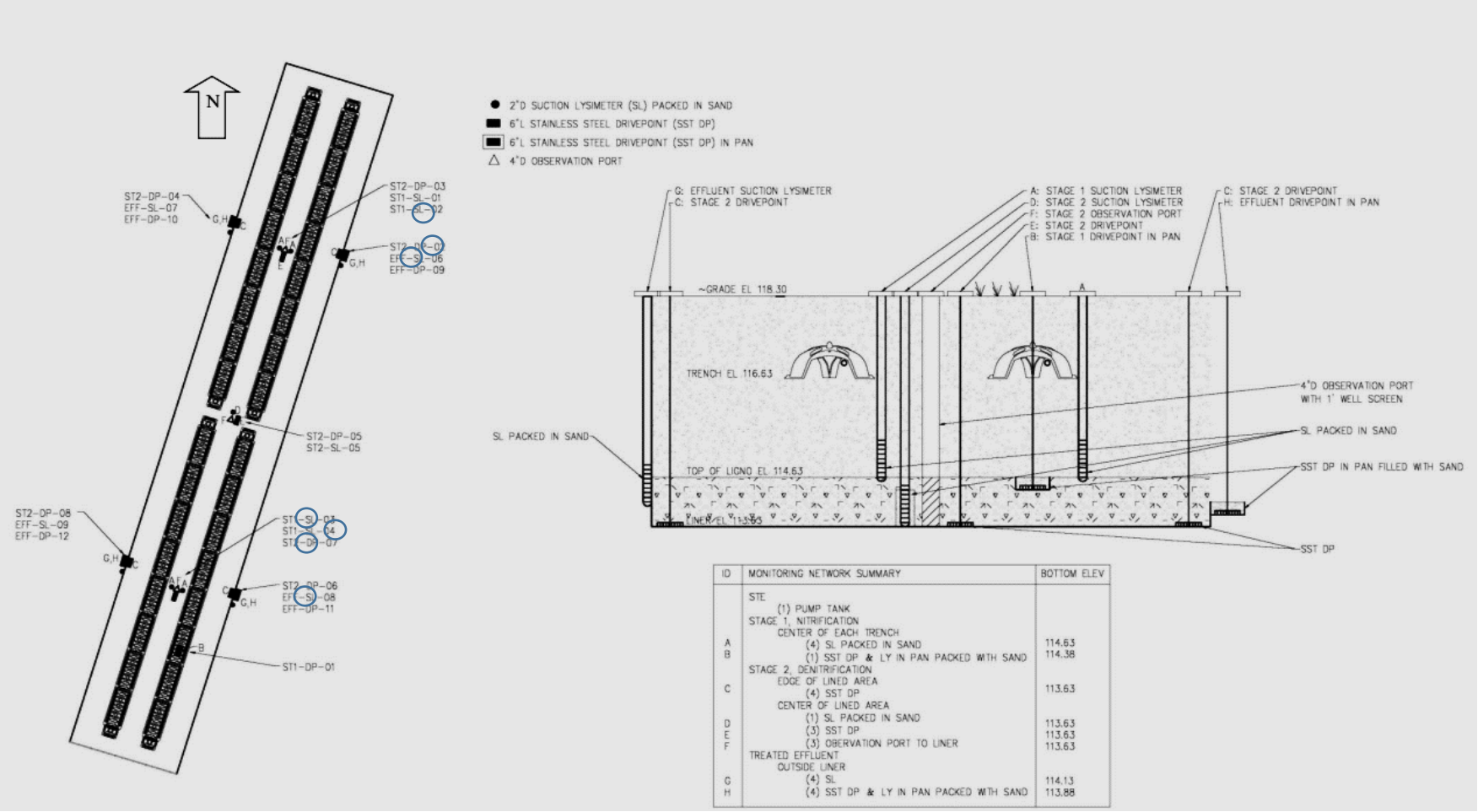

System B-HS4

# System B-HS5




System B-HS5

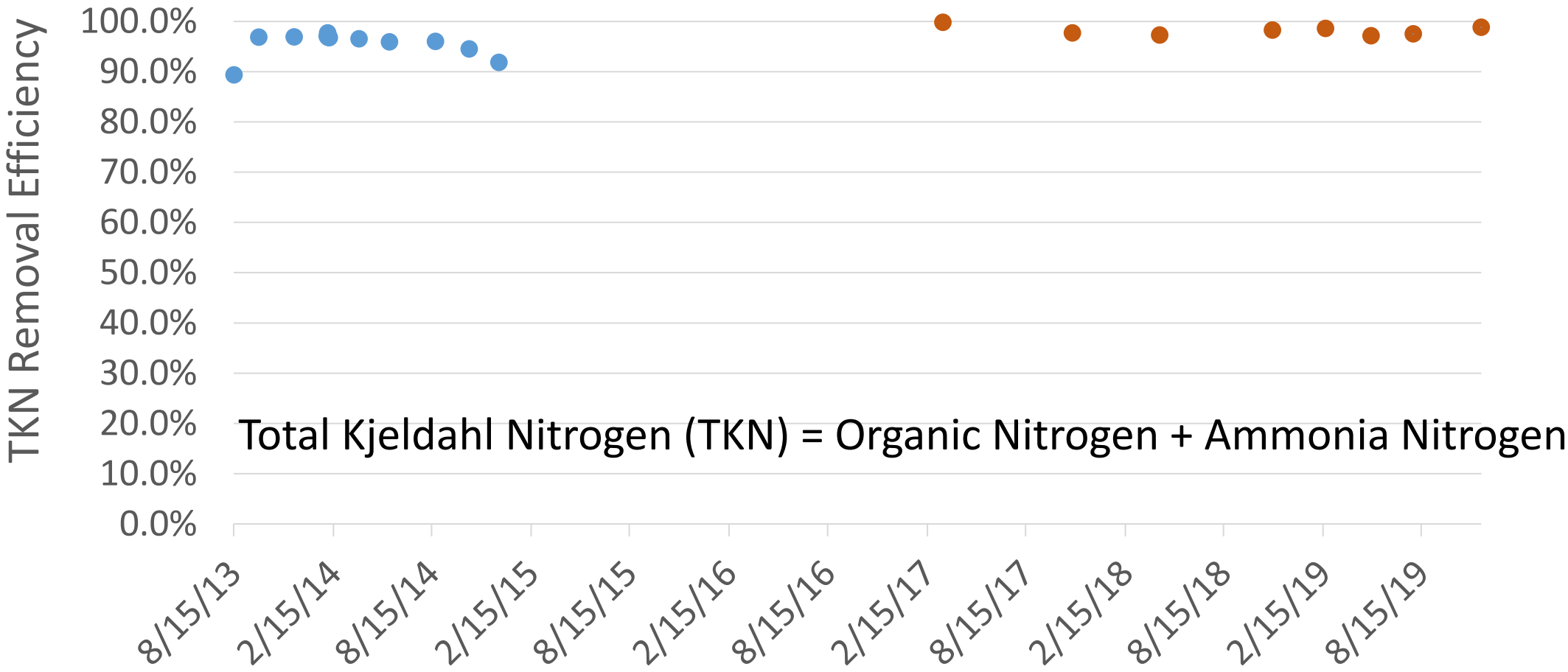
# System B-HS7



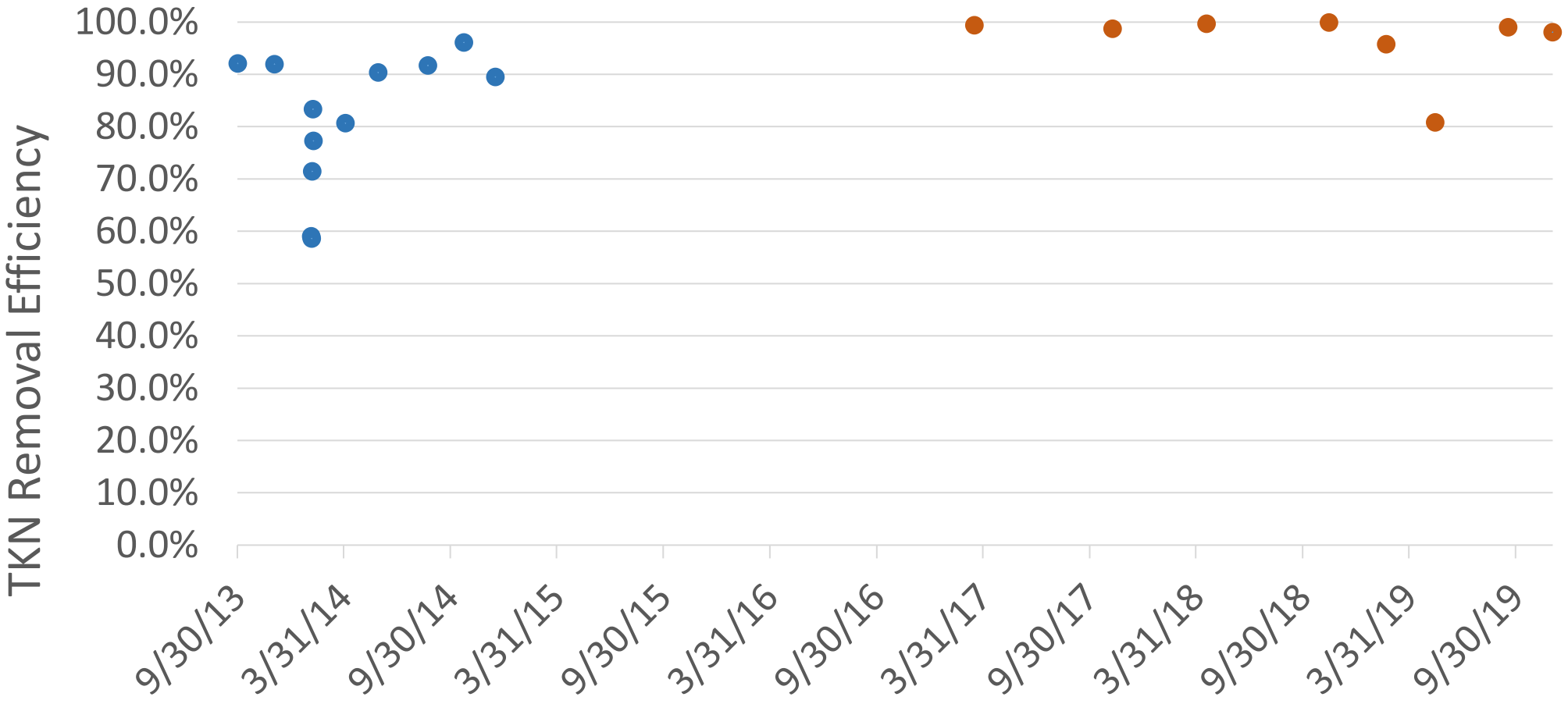

| ID | MONITORING NETWORK SUMMARY | BOTTOM ELEV |
|---|---|---|
| | STE | |
| | (1) PUMP TANK | |
| | STAGE 1, NITRIFICATION | |
| | CENTER OF EACH TRENCH | |
| A | (4) SL PACKED IN SAND | 114.63 |
| B | (1) SST DP & LY IN PAN PACKED WITH SAND | 114.38 |
| | STAGE 2, DENITRIFICATION | |
| | EDGE OF LINED AREA | |
| C | (4) SST DP | 113.63 |
| | CENTER OF LINED AREA | |
| D | (1) SL PACKED IN SAND | 113.63 |
| E | (3) SST DP | 113.63 |
| F | (3) OBERVATION PORT TO LINER | 113.63 |
| | TREATED EFFLUENT | |
| | OUTSIDE LINER | |
| G | (4) SL | 114.13 |
| H | (4) SST DP & LY IN PAN PACKED WITH SAND | 113.88 |

System B-HS7

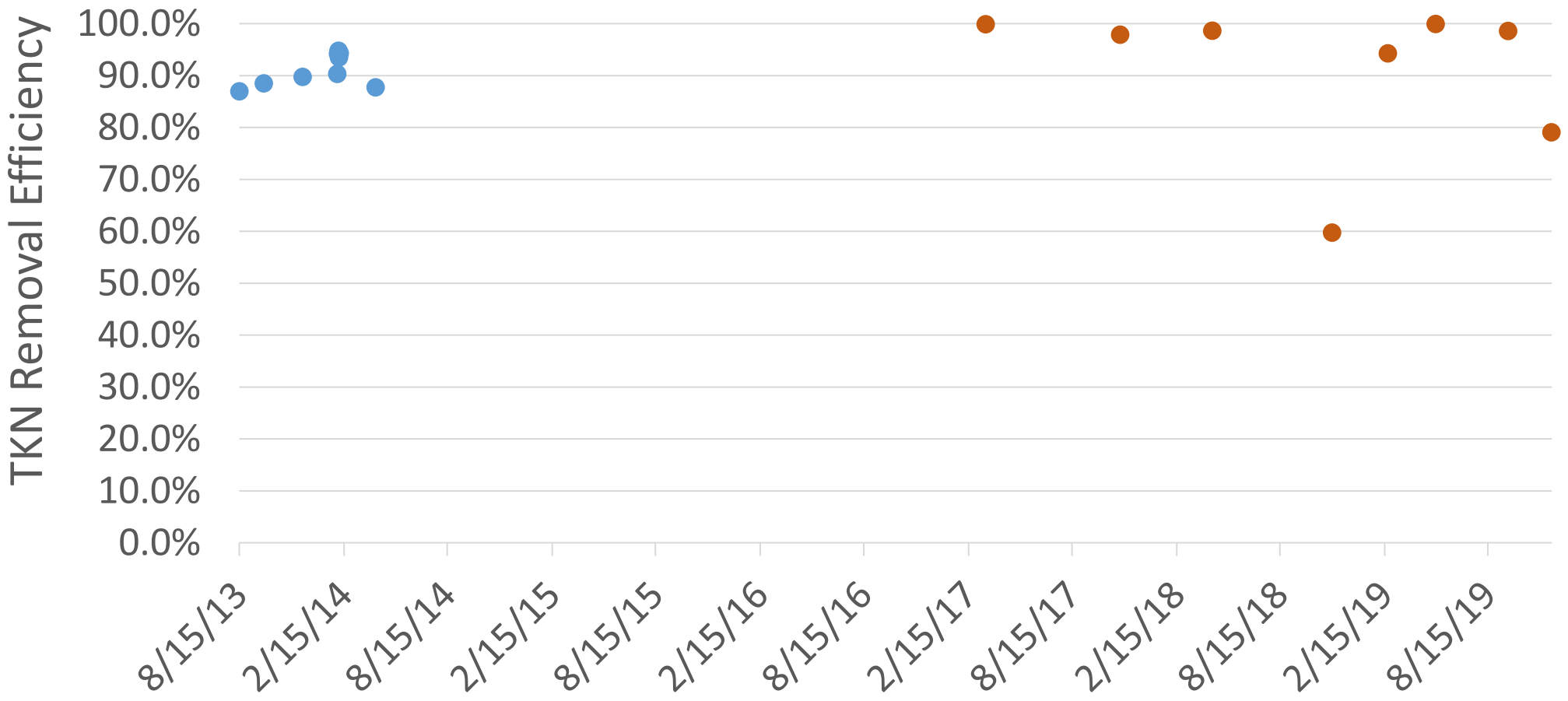
# TKN Removal by Stage One Media System B-HS3



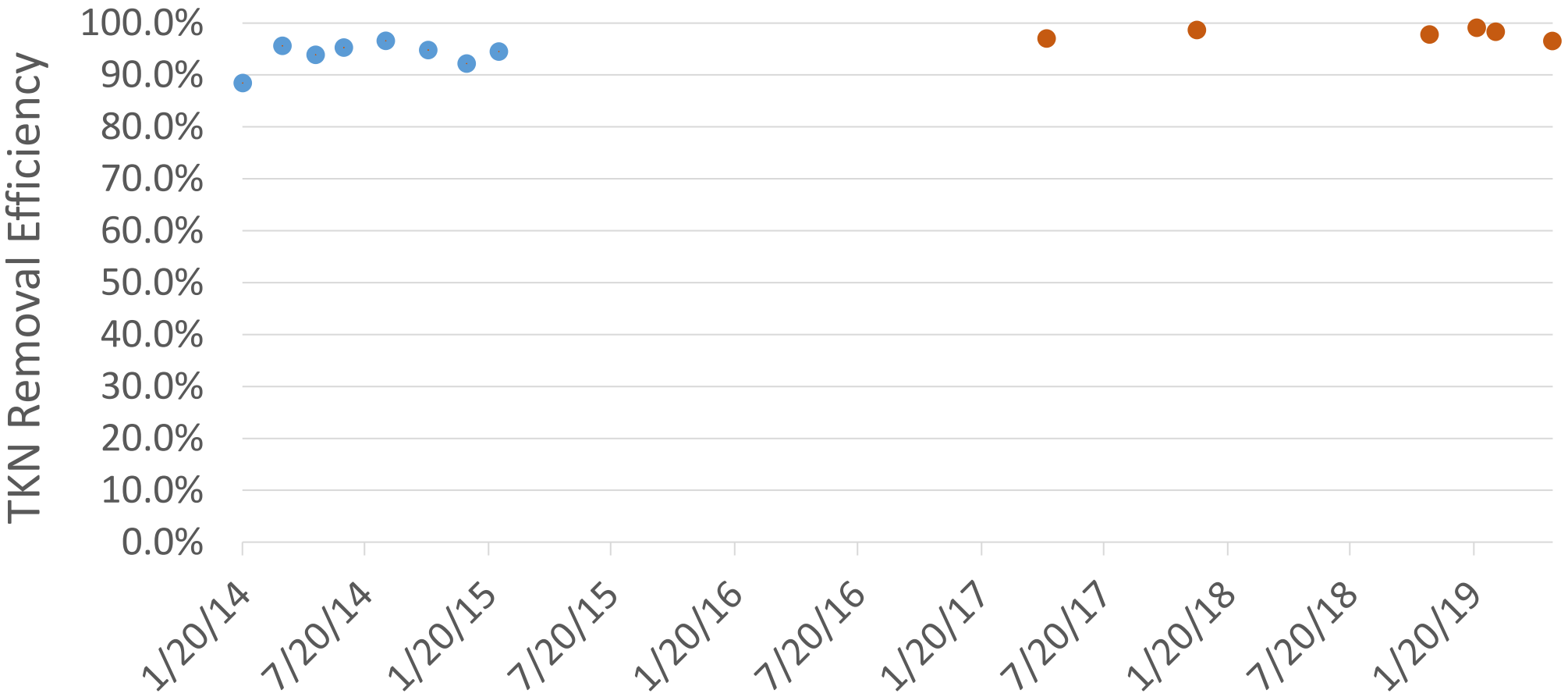
# TKN Removal by Stage One Media System B-HS4



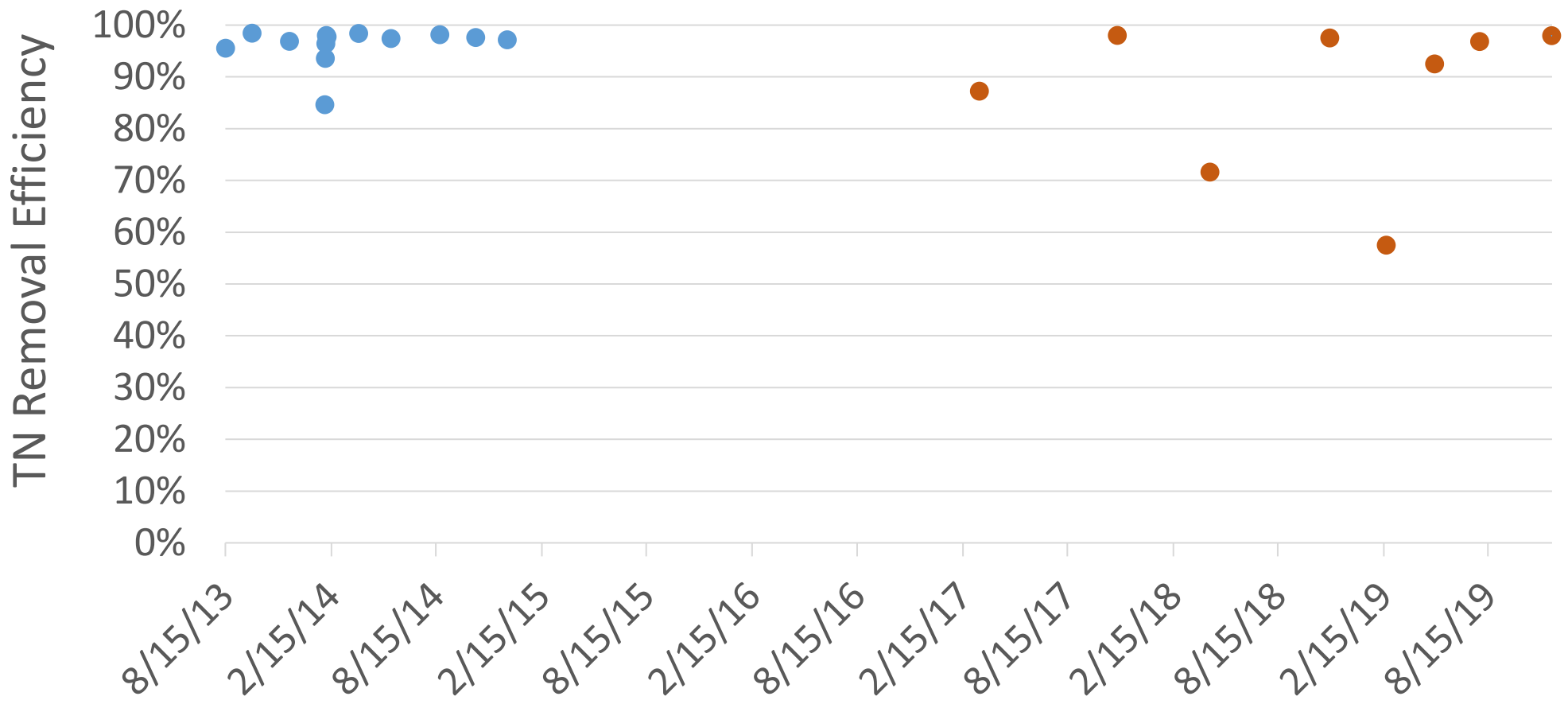
# TKN Removal by Stage One Media System B-HS5



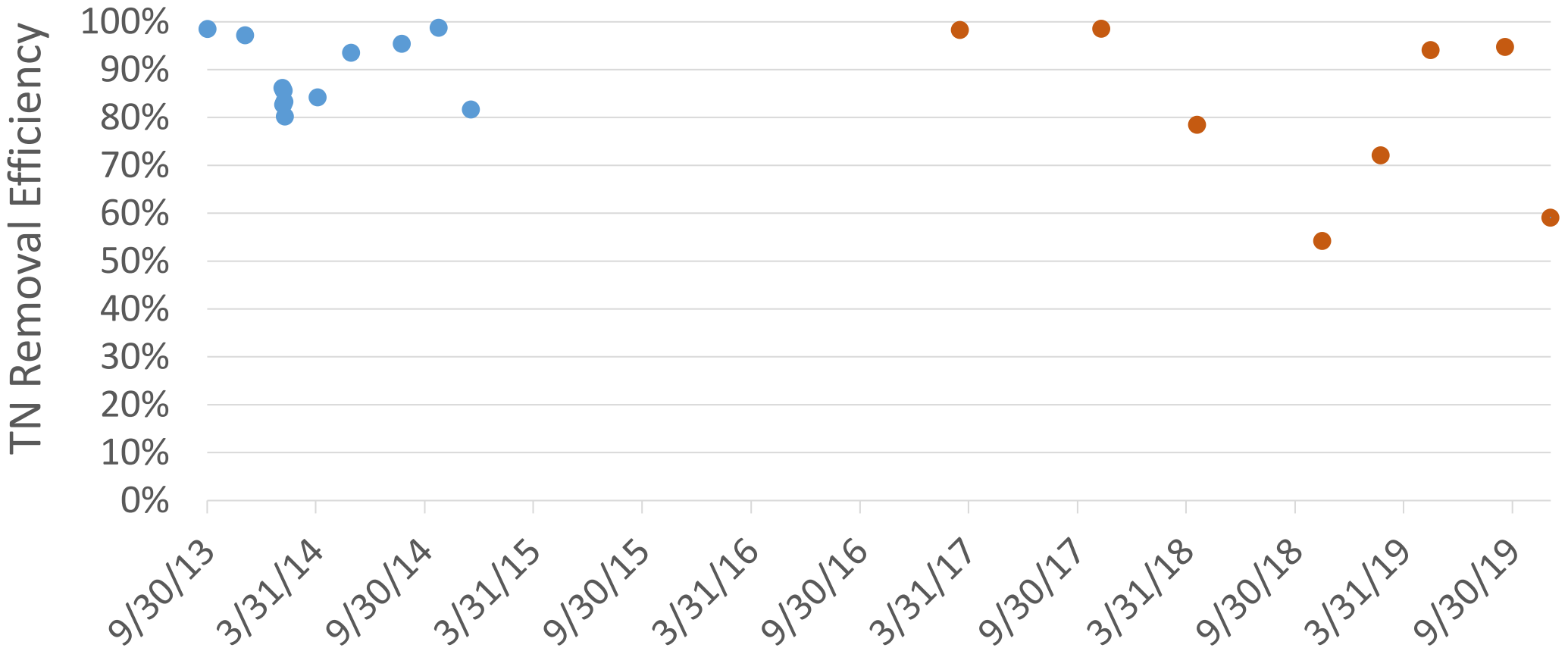
# TKN Removal by Stage One Media System B-HS7



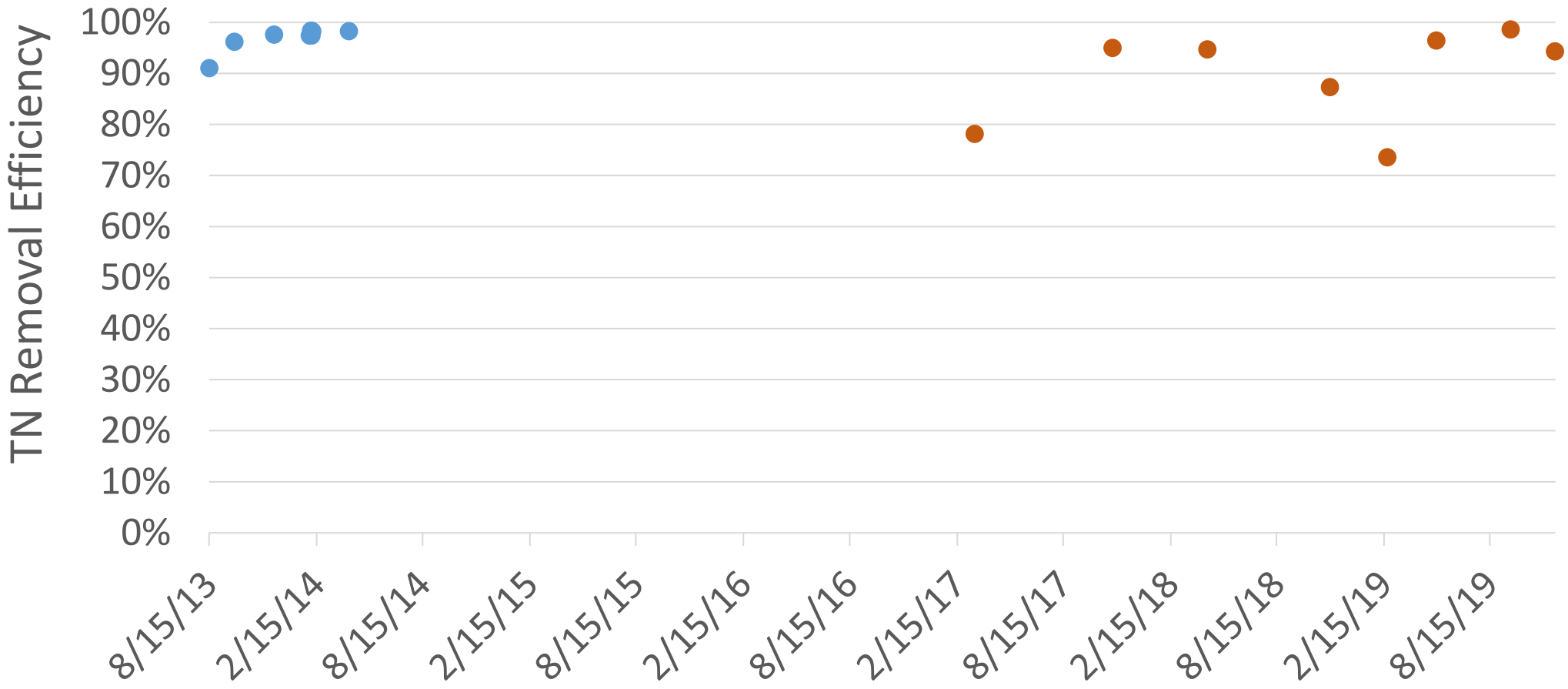
# TN Removal by the System
# System B-HS3



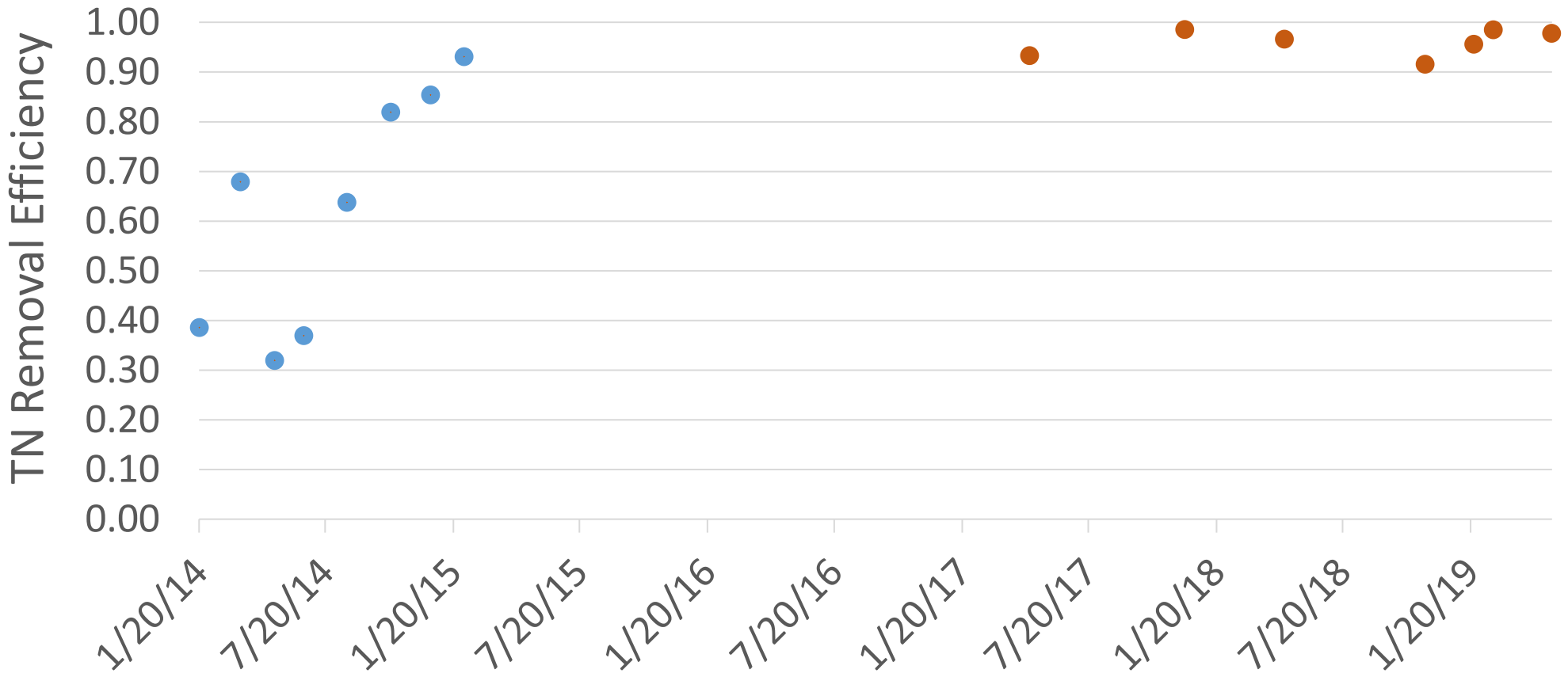
# TN Removal by the System
# System B-HS4



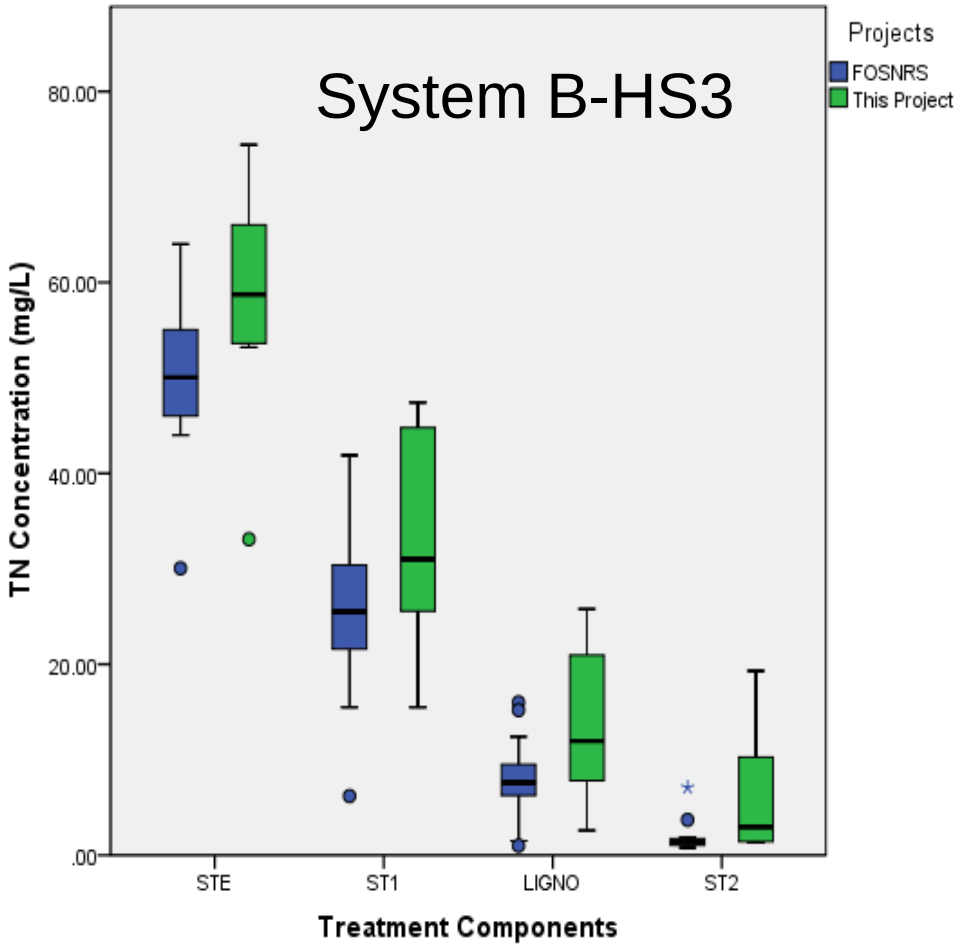
# TN Removal by the System
# System B-HS5

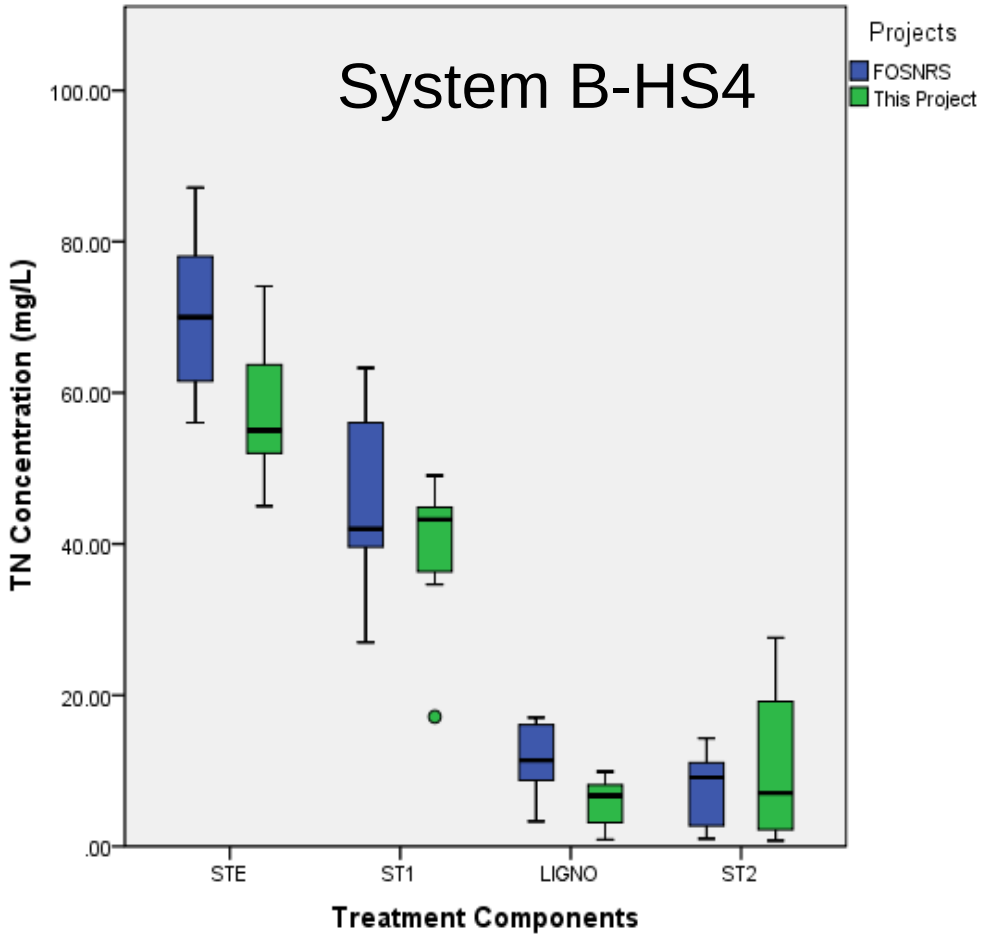


# TN Removal by the System
# System B-HS7

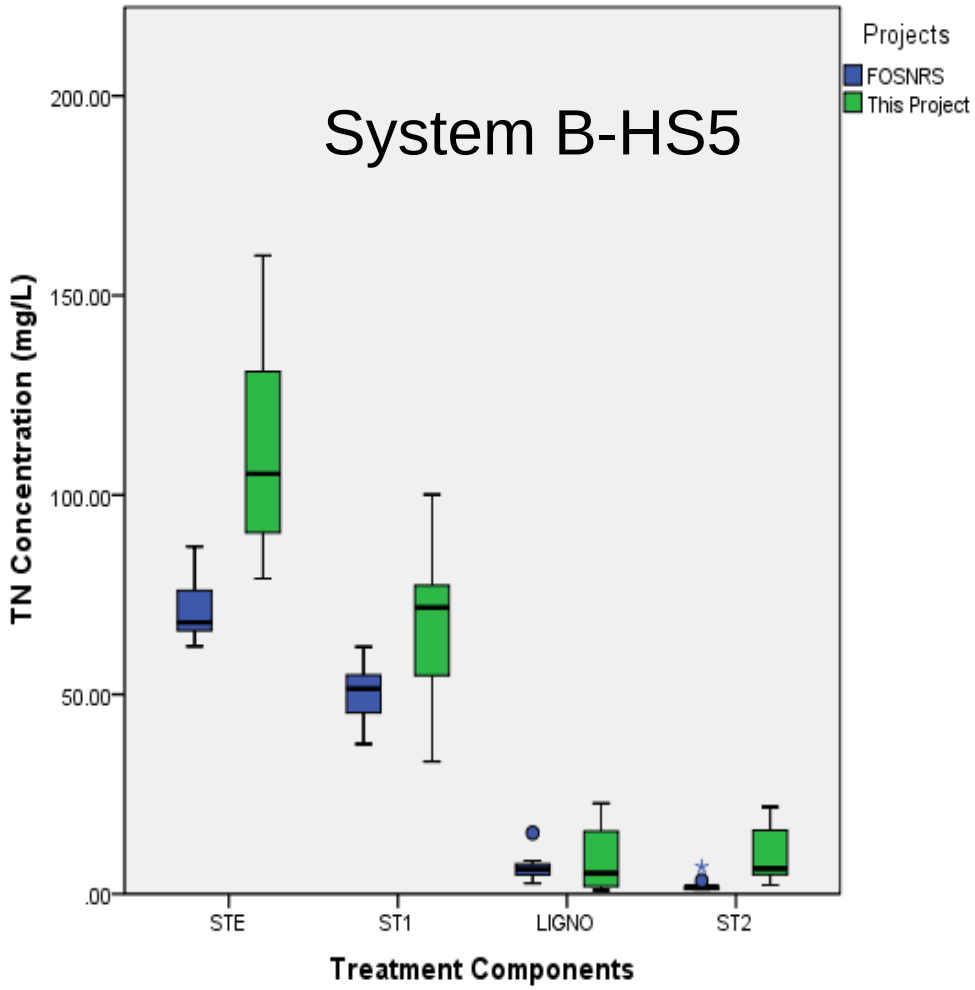


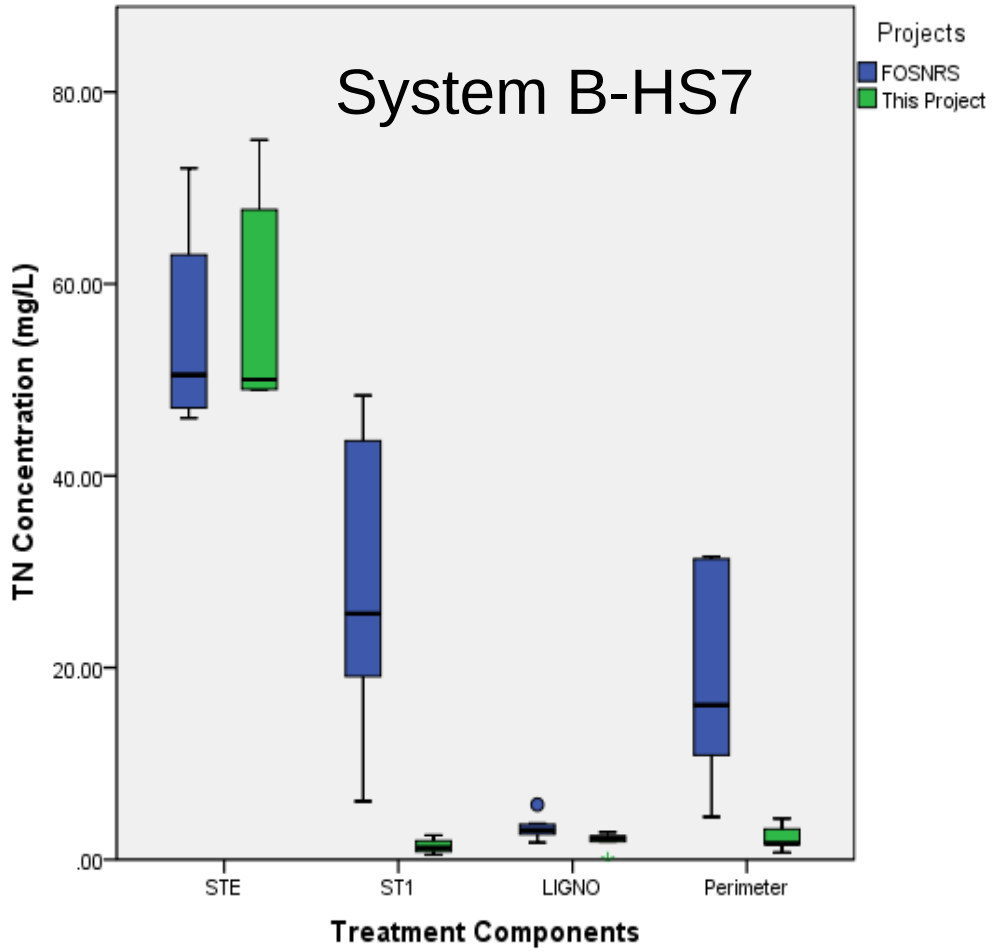
# TN Concentrations at Different Treatment Train Components



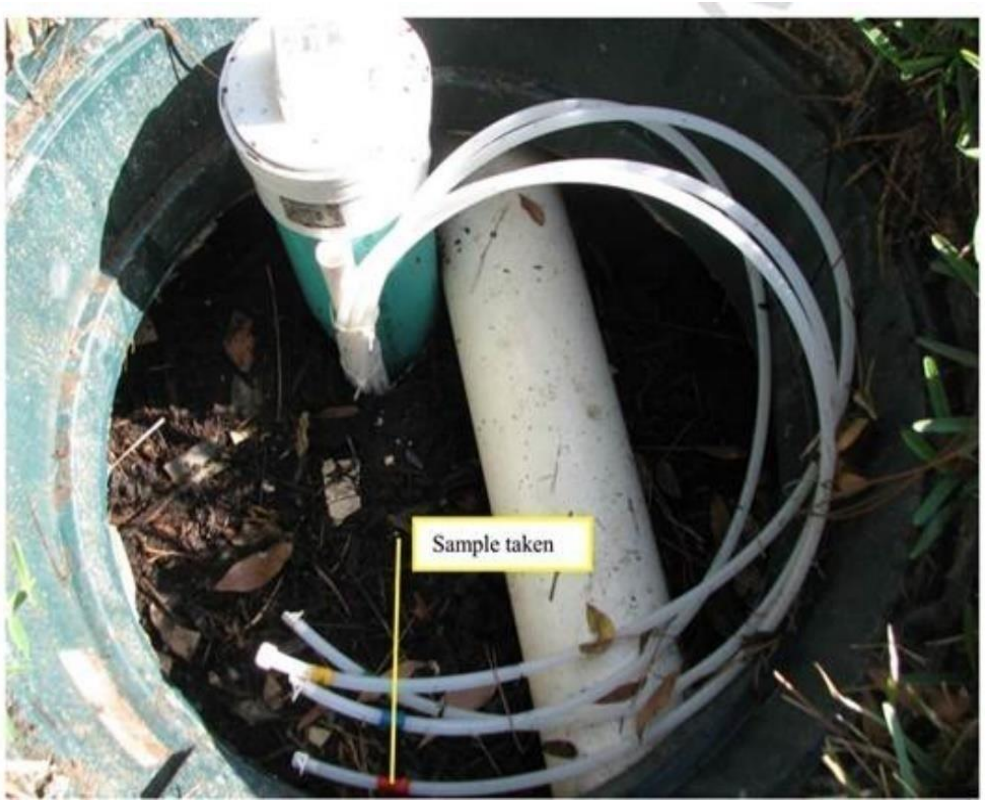



# TN Concentrations at Different Treatment Train Components – cont.



# Decay of Lignocellulose Media in B-HS5




# Decay of Lignocellulose Media in B-HS4

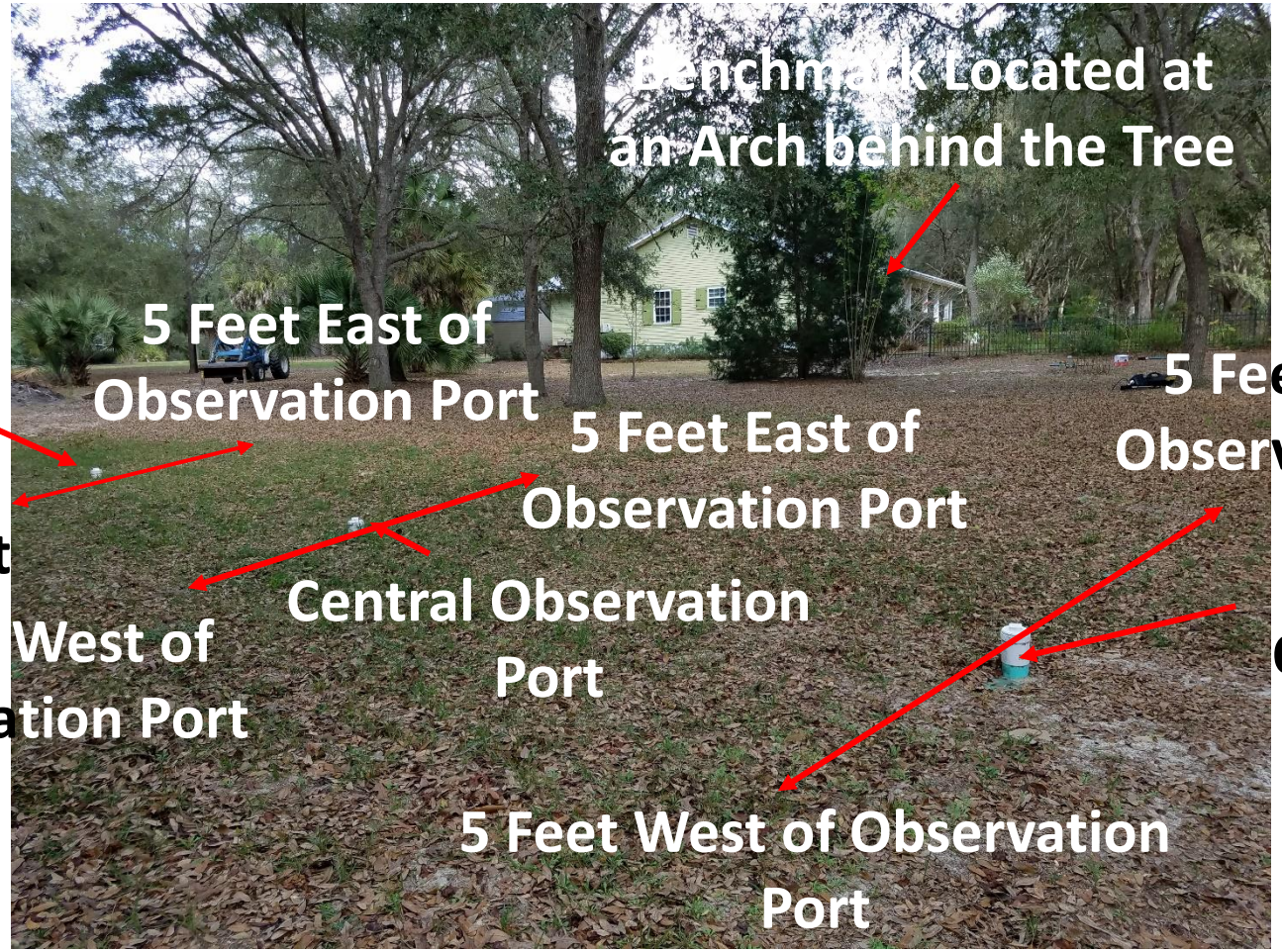

# Possible Overflow of Untreated Wastewater Over the Top of the Baffle Wall

# Possible Overflow of Untreated Wastewater Over the Top of the Baffle Wall – cont.

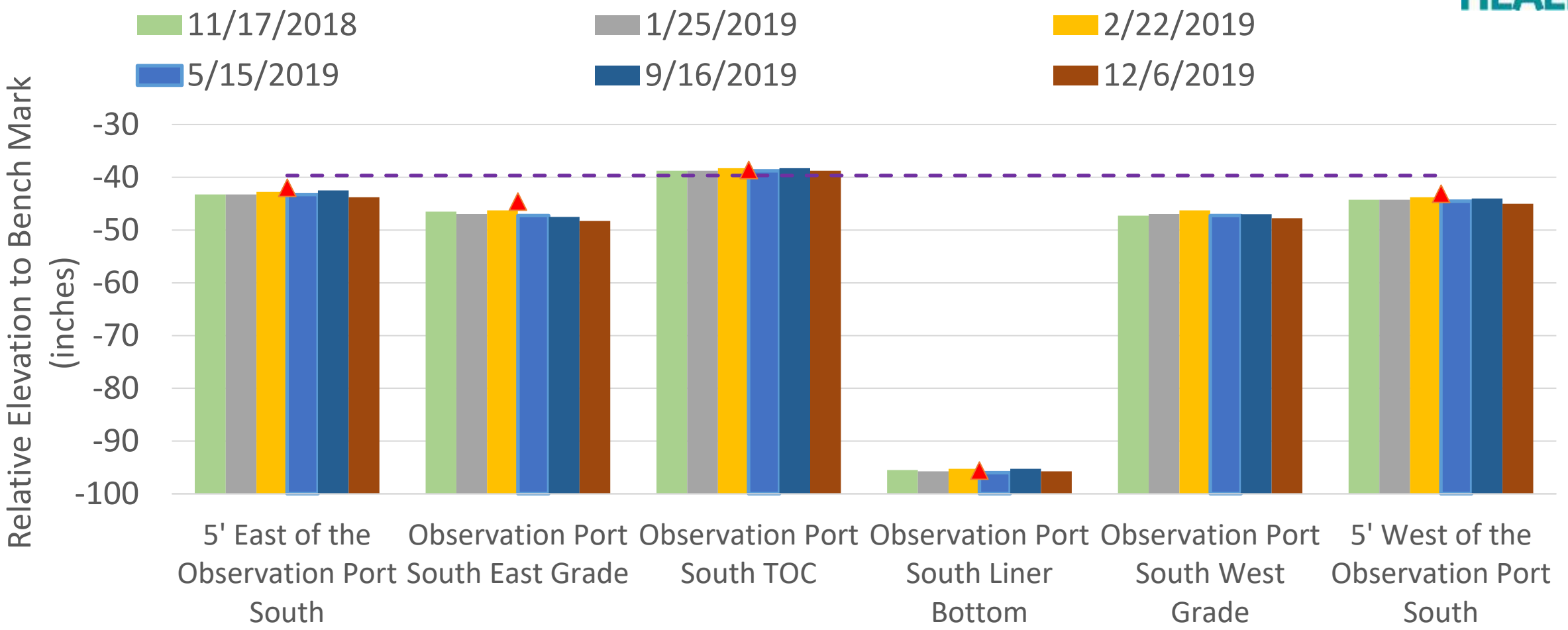
1. Untreated wastewater overflow over the top of the baffle wall – A tank design issue

2. When the lignocellulose media becomes mature, does the infiltration rate decrease?

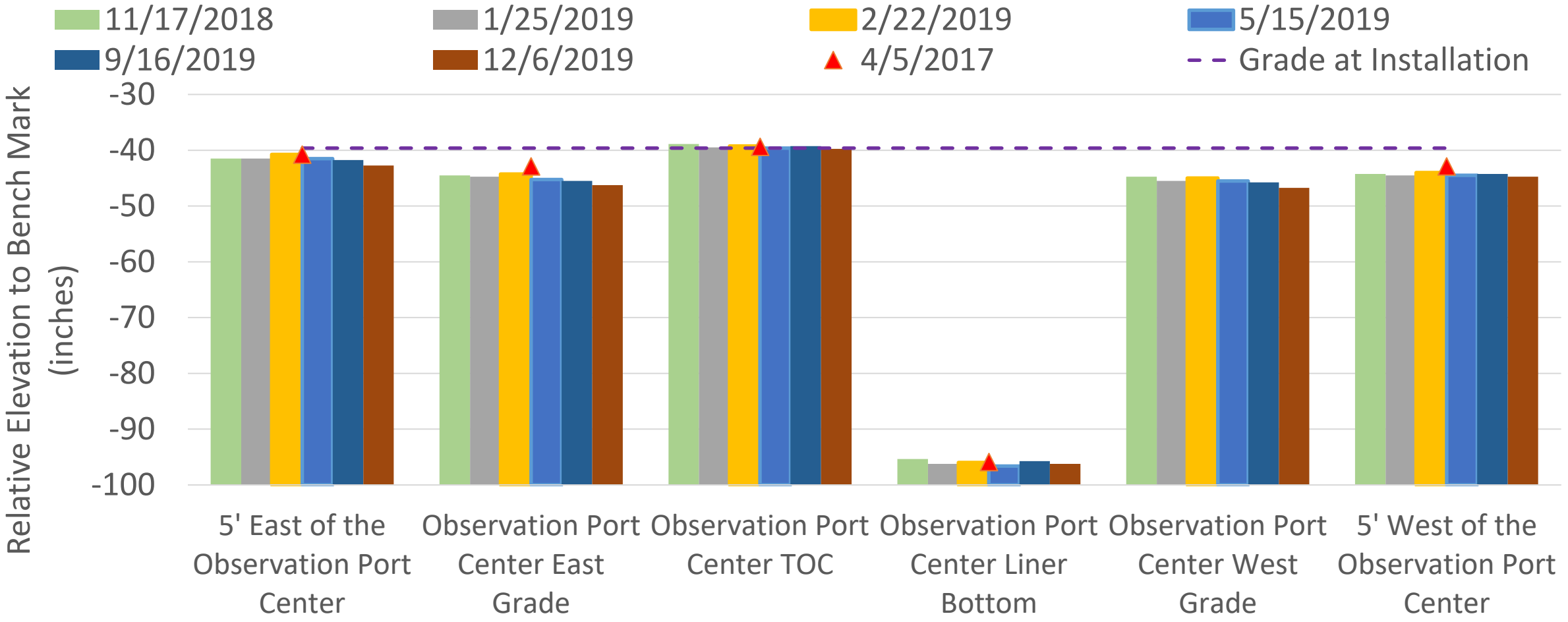
# In-Ground System Drainfield Subsidence



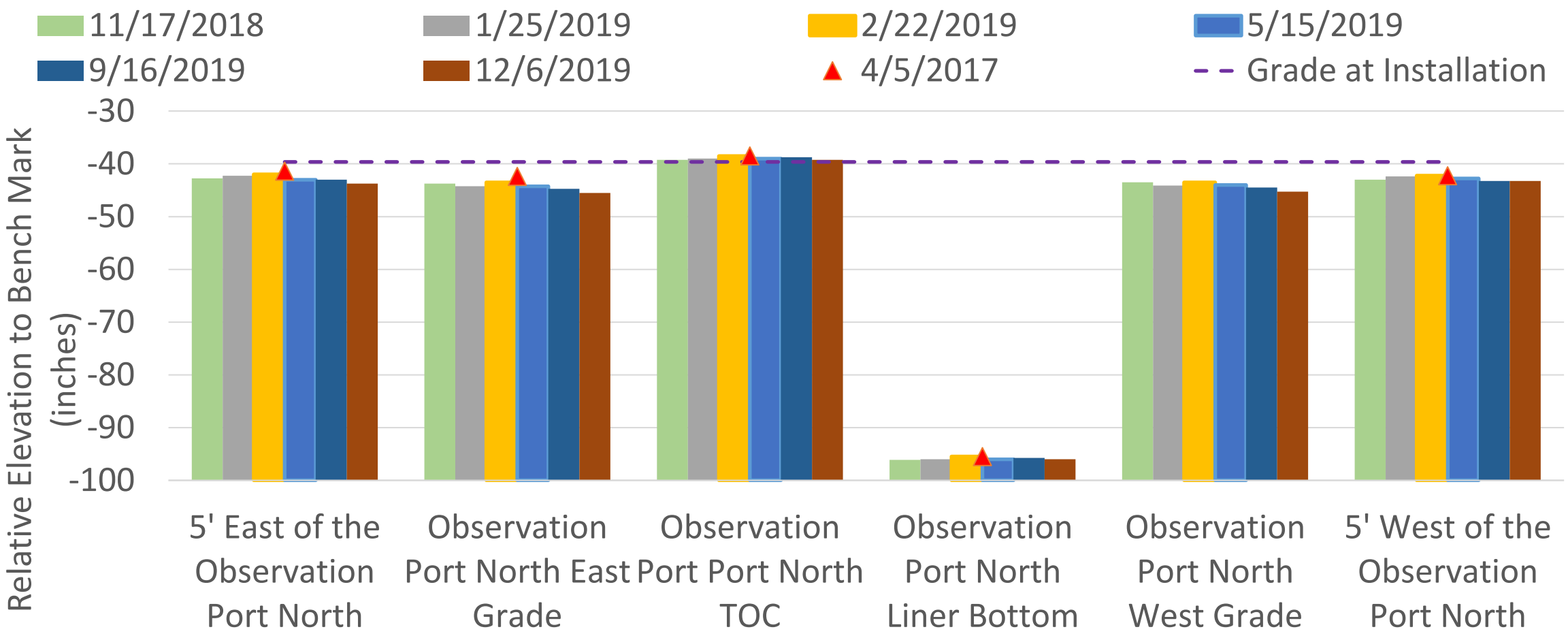
# In-Ground System Drainfield Subsidence (South Observation Port)



# In-Ground System Drainfield Subsidence (Central Observation Port)



# In-Ground System Drainfield Subsidence (North Observation Port)



# In-Ground System Drainfield Subsidence (North Observation Port) – cont.

# Summary

1. Median TN removal efficiencies for B-HS3, B-HS4, and B-HS7 were above 90%, and Median TN removal for B-HS5 was above 86% six years after initial installation.
2. The vast majority of CBOD5, TSS, fecal coliform were removed by these media systems. The lignocellulose media did not add large amount of CBOD5 to the system effluent.
3. Certain portion of TP was removed mostly by the Stage 1 media, but not by the lignocellulose media.
4. Energy consumption remained lower
   1) 0.56 ± 0.11 kWh/day for B-HS3 with drip irrigation)
   2) 0.037 ± 0.004 kWh/day for B-HS7 with low pressure dosing)
5. Maintenance effort was low (lignocellulose and sulfur media replacement)

# Summary - Continued

1. Issues:
   1) Tank design issue.
   2) Mature lignocellulose media reduce infiltration rate?
   3) In-ground system drainfield subsidence.
2. Next steps:
   1) Replace the lignocellulose media in system B-HS5
   2) Measure the water depth variation using water depth data logger.
   3) Explore possible reasons for the faster decay of lignocellulose media in B-HS5 than in B-HS4.
   4) Monitor B-HS5 and B-HS4 for four more times (Funded by federal multipurpose grant).

# Contact Information

Florida Department of Health

Division of Disease Control & Health Protection

Bureau of Environmental Health

Onsite Sewage Programs

850-245-4250