Supplemental CSO Team – Session 7

PVSC Service Area
North Bergen MUA Service Area (Woodcliff Treatment Plant)
Long Term Control Plan

April 17, 2018

CLEAN WATERWAYS
Healthy Neighborhoods

Agenda

- Introduction and Recap
- Baseline Compliance Monitoring Program Overview
- Overview of July 1st, 2018 Submissions to NJDEP
  - *Baseline Compliance Monitoring Report*
  - *Public Participation Process Report*
  - *Consideration of Sensitive Areas Information*
  - *System Characterization Report*
  - Timeline for Supplemental CSO Team Input
- Clean Waterways, Healthy Neighborhoods Public Outreach
  - Facebook, Twitter, Website, Brochures
- Right-of-Way Green Infrastructure Pilot Projects
- Questions

CLEAN WATERWAYS
Healthy Neighborhoods

Introduction and Recap

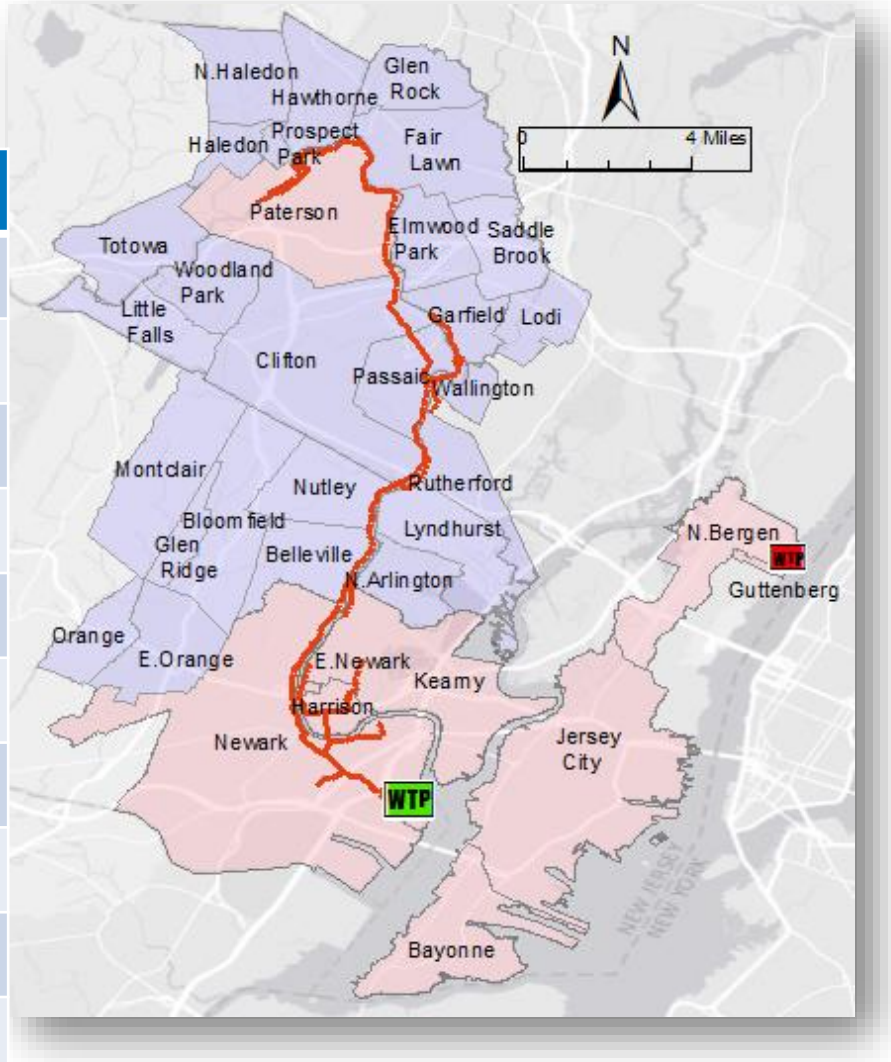
CLEAN WATERWAYS
Healthy Neighborhoods

Supplemental CSO Team Members

Member	Organization		Member	Organization
Matt Dorans	Bayonne Chamber of Commerce		Sandra Meola	Paterson Smart
TBD	Jersey City Redevelopment Agency		Ruben Gomez	City of Paterson Economic Development
Nicole Miller	Newark DIG		Sheri Ferreira	Greater Paterson Chamber of Commerce
Drew Curtis	Ironbound Community Corporation		Betty Jane Boros	New Jersey Business & Industrial Association
Robin Dougherty	Newark Greater Conservancy/Newark Business Partnership		Meiyin Wu, Ph.D	Montclair State University - Passaic River Institute
Jorge Santos	Newark Community Economic Development Corporation		Christopher C. Obropta, Ph.D	Rutgers University - Cooperative Extension Water Resources
Christopher Pianese	Township of North Bergen		Captain Bill Sheehan	Hackensack Riverkeeper
Janet Castro	Hudson Regional Health Commission Town of North Bergen		Harvey Morginstin	Passaic River Boat Club & Passaic River Superfund CAG
Thomas Stampe	North Bergen "Sustainable Jersey" group		Laurie Howard	Passaic River Coalition
Nancy Kontos	Bunker Hill Special Improvement District		Ben Delisle	Passaic River Rowing Association
Alison Cucco	Jersey City Environmental Commission		Patricia Hester-Fearon	Town of Kearny
Michele Langa	NY/NJ Baykeeper		Christopher Vasquez	Town of Kearny

Permittees

Permittee	Municipality	WWTP	CSOs
Bayonne MUA	Bayonne	PVSC	30
Borough of East Newark	East Newark		1
Town of Harrison	Harrison		7
Jersey City MUA	Jersey City		21
Town of Kearny	Kearny		5
City of Newark	Newark		18
North Bergen MUA	North Bergen		7
City of Paterson	Paterson		23
PVSC	-		0
Town of Guttenberg	Guttenberg	Woodcliff	1
North Bergen MUA*	North Bergen		1
	Total		114



** North Bergen MUA conveys flows to both PVSC and Woodcliff WWTPs*

CLEAN WATERWAYS
Healthy Neighborhoods

59-Month Program Schedule and Milestones

Permit Effective Date
July 1st, 2015

January 1, 2016
- ✓ Coordinates of pumps, regulators, and outfalls
- ✓ System Characterization Work Plan
- ✓ Baseline Compliance Monitoring Program Work Plan

July 1, 2016
- ✓ Map of Combined and Separate Sewer Areas

July 1, 2018
- System Characterization Report
- Public Participation Process Report
- Compliance Monitoring Program Report
- Consideration of Sensitive Areas Plan

July 1, 2019
- Development and Evaluation of Alternatives Report

June 1, 2020
- Selection and Implementation of Alternatives Report in the Final LTCP

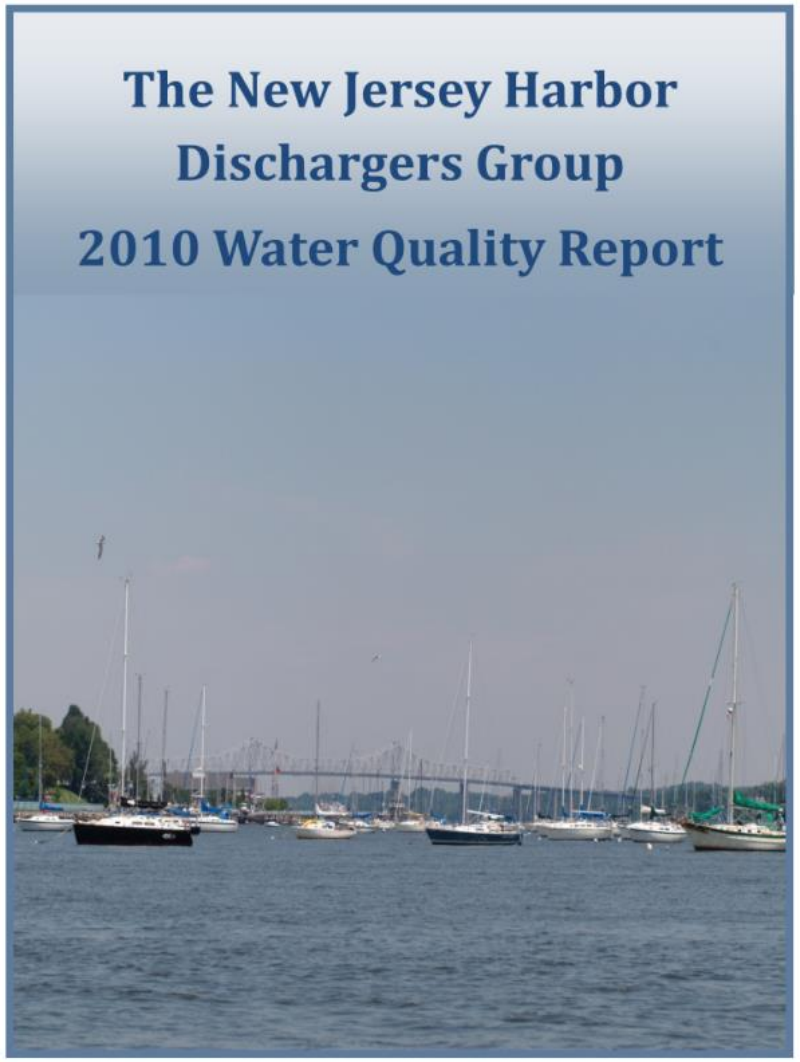
Permit Due Date

Water Quality Monitoring Program Overview

presented by: Richard R. Isleib

CLEAN WATERWAYS
Healthy Neighborhoods

NJHDG Existing Sampling Program



- Initiated in 2003
- 34 Active Monitoring Sites throughout NJ portion of NY/NJ Harbor Estuary

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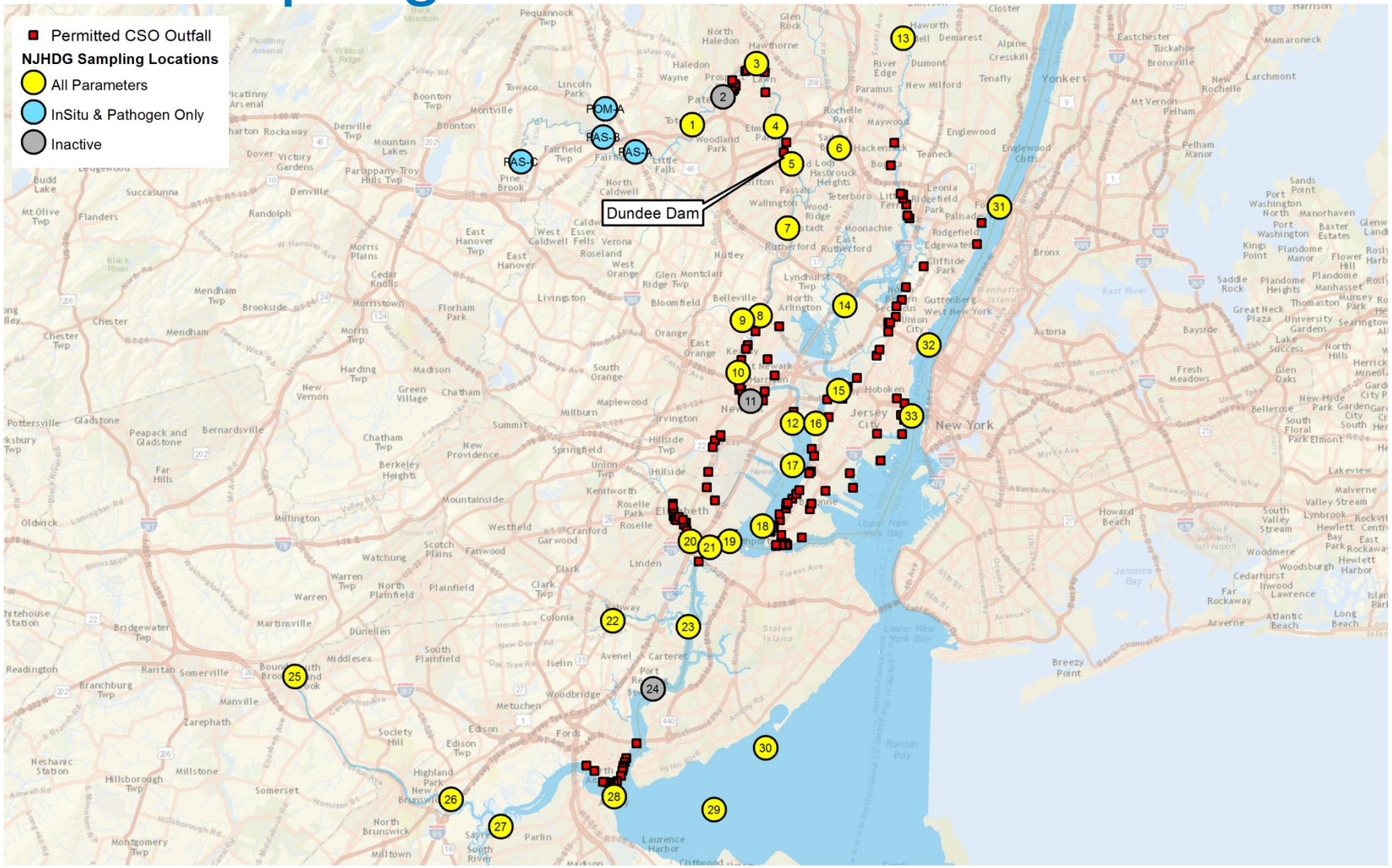
Healthy Neighborhoods

NJHDG Sampling Locations



Baseline Sampling Plan Goals

- Supplement NJHDG stations
  - Ensuring each permittee is represented
- Assess baseline water quality (WQ) conditions
  - Pre-LTCP implementation
- Assess dry-weather and wet-weather conditions
  - NJDEP requires a minimum of five dry-weather events and 10 wet-weather events
- Sampling to assess only pathogens

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Model Requirements Sampling

- Demonstration Approach Modeling Sampling Needs
  - Supplement NJHDG data and Baseline Compliance Monitoring Data with specific data for model calibration/validation
  - Quantify load-response relationships
  - Receiving water sampling following pathogen die-off (consecutive day “intensive” sampling)
  - Physical measurements

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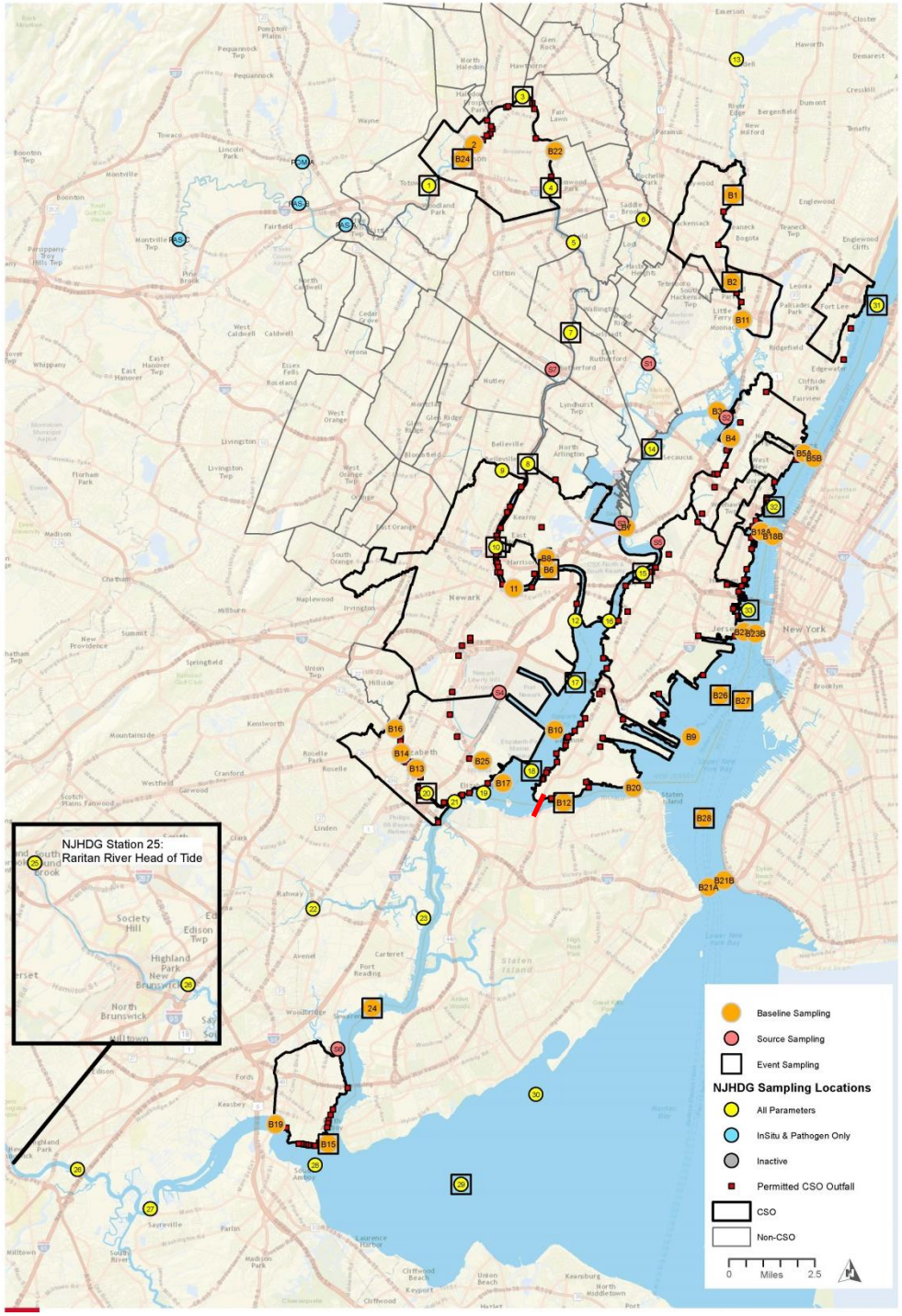
Healthy Neighborhoods

CMP Sampling Program

- Routine Sampling
  - 34 NJHDG (existing)
  - 35 Baseline (additional)
  - 7 Source (trib. Inflows)
- Sampling Frequency
  - Baseline and Source
    - Jan-Apr: Monthly
    - May-Jun: Bi-weekly
    - Jul-Aug: Weekly
    - Oct-Dec: Monthly
- Intensive Sampling
  - 20 Stations
  - 3 events
  - 3 days/event
  - Sampled 2-4/day



WATERWAYS
Neighborhoods

Summary of Stations

- Sampling stations are distributed so that each municipality has at least one representative station.

Community	Number of Stations
City of Hackensack	2
Borough of East Newark	1
Borough of Fort Lee	1
City of Bayonne	5
City of Elizabeth	9
City of Jersey City	5
City of Newark	6
City of Paterson	5
City of Perth Amboy	3
Town of Guttenberg	1
Town of Harrison	2
Town of Kearny	9
Township of North Bergen	5
Village of Ridgefield Park	2

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Healthy Neighborhoods

Sampling Constituents

- Field
  - Temperature
  - Salinity
  - Secchi Depth
  - Turbidity
- Laboratory
  - Fecal Coliform
  - Enterococci
  - E. Coli

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Healthy Neighborhoods

NJ Pathogen Criteria

Primary Contact Recreation:

- Enterococci levels shall not exceed a geometric mean of **35/100 ml**, or a single sample maximum of **104/100 ml.** (SE1 and SC)
  - Hackensack River (upper), Hudson River (north of Harlem River), Raritan River, Raritan Bay
- E. coli levels shall not exceed a geometric mean of **126/100 m**l or a single sample maximum of **235/100 ml**. (All FW2)
  - Elizabeth River, Passaic River, Raritan River

Secondary Contact Recreation:

- Fecal coliform levels shall not exceed a geometric mean of 770/100 ml. (SE2)
  - Arthur Kill (lower), Hackensack River (mid), Hudson River, Passaic River (mid), Rahway River
- Fecal coliform levels shall not exceed a geometric mean of 1500/100ml. (SE3)
  - Arthur Kill (upper), Elizabeth River, Hackensack River (lower), Kill Van Kull, Newark Bay, Passaic River (lower)

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Healthy Neighborhoods

Results

Note: 2016 was not a “typical” or base case condition

CLEAN WATERWAYS
Healthy Neighborhoods

Passaic River & Tributaries

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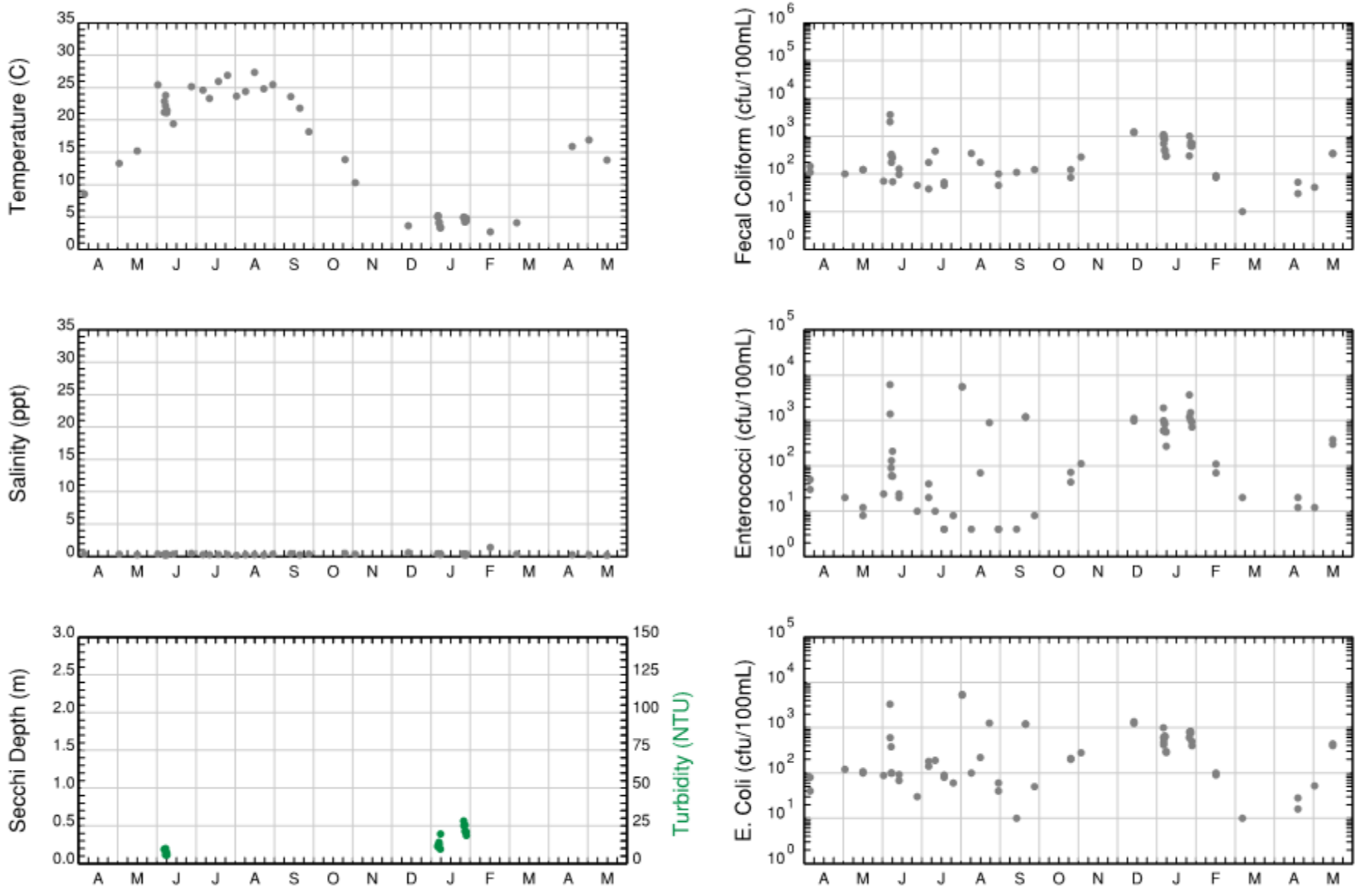
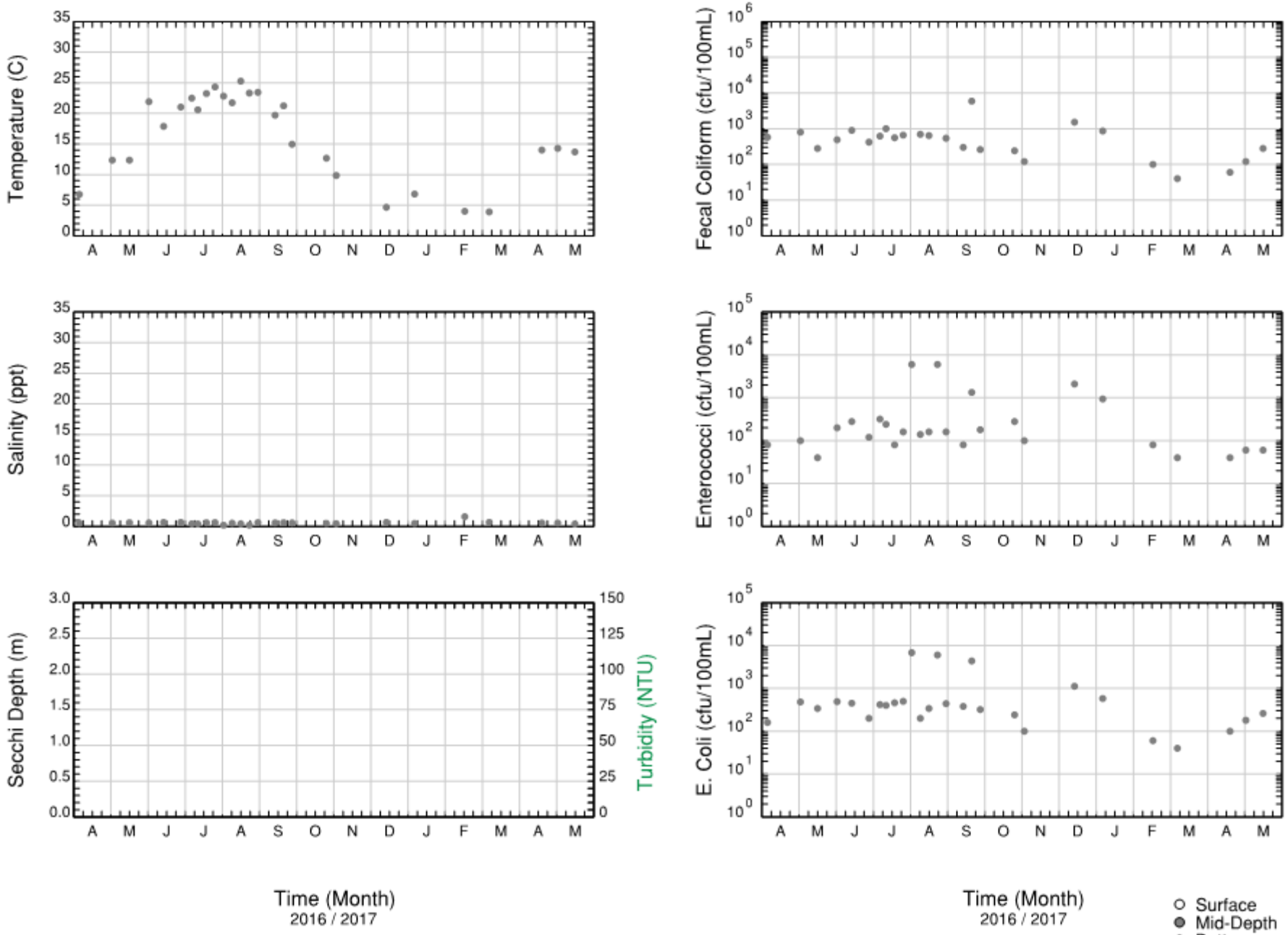
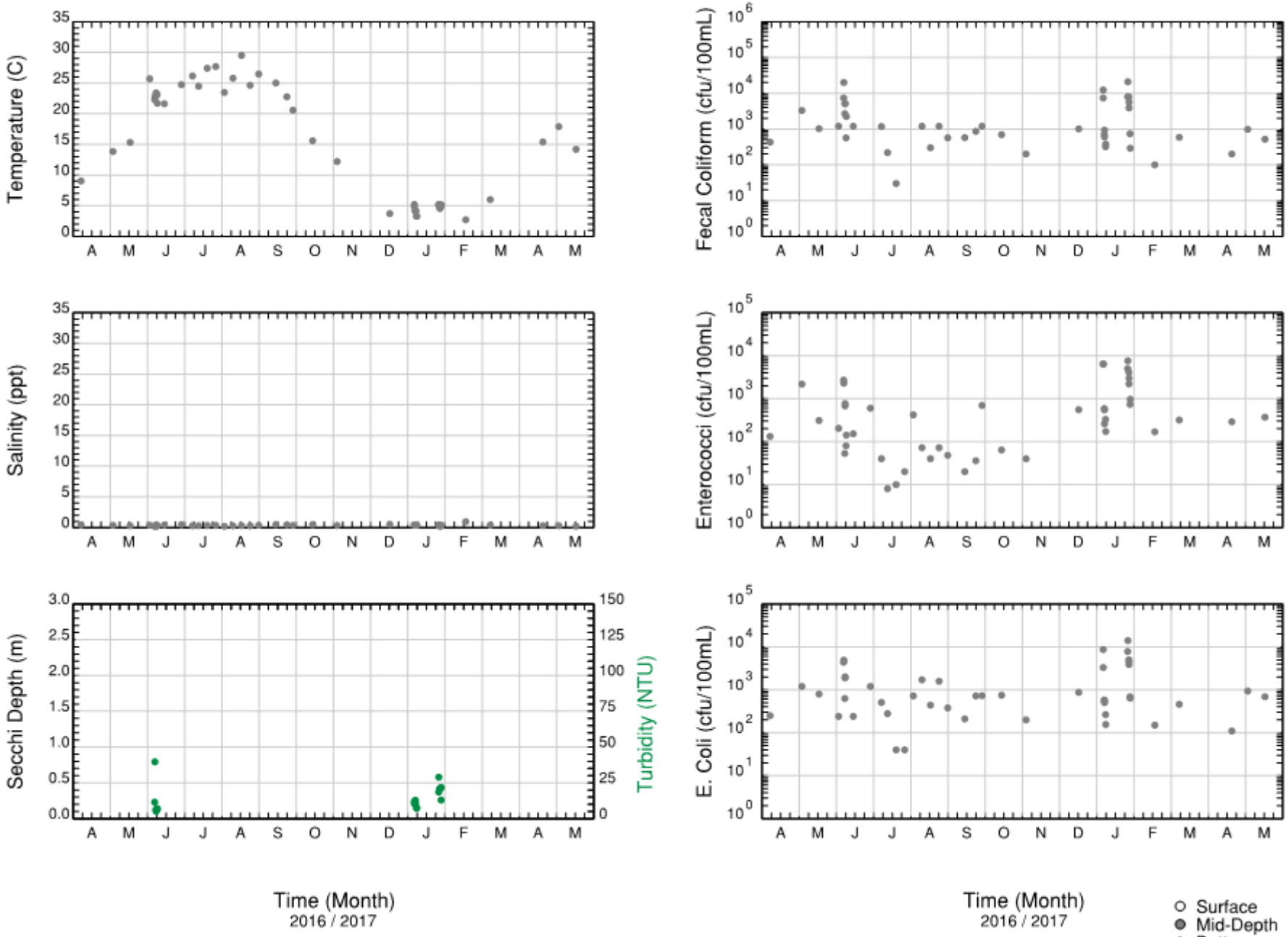
Passaic River & Tributaries, Passaic River, 1, (FW2)



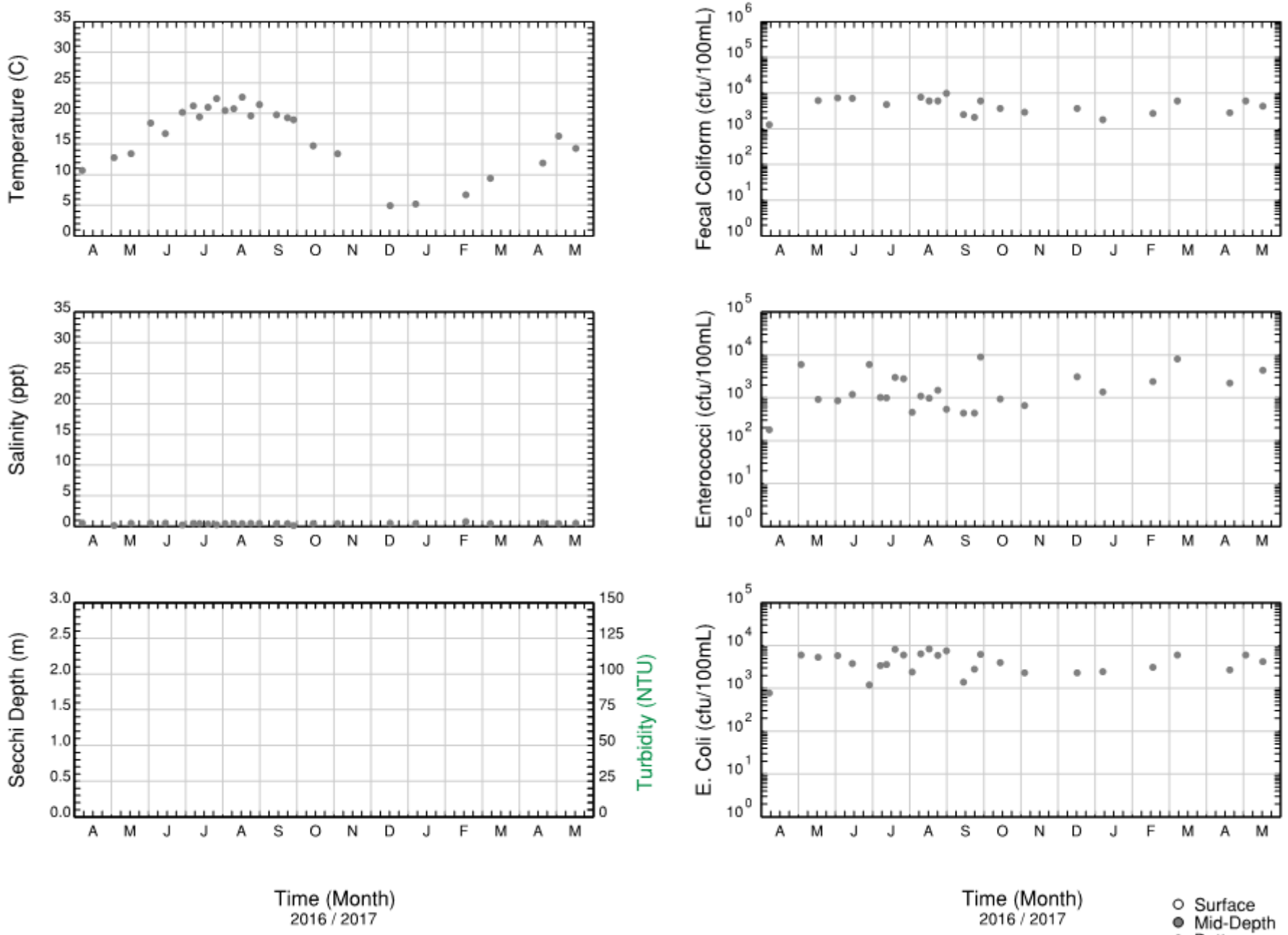
Passaic River & Tributaries, Saddle River, 6, (FW2)



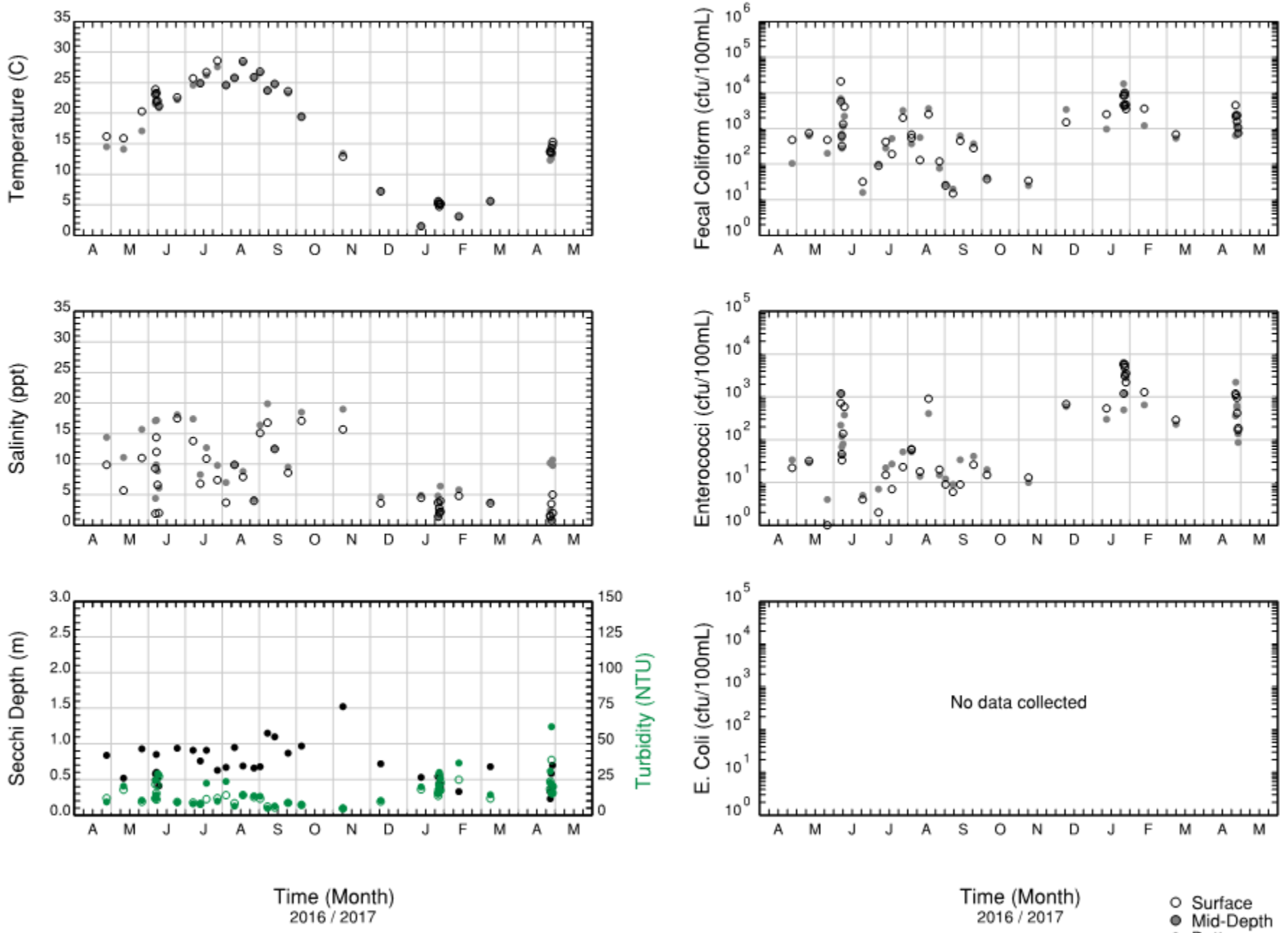
Passaic River & Tributaries, Passaic River, 7, (FW2/SE2)



Passaic River & Tributaries, Second River, 9, (FW2)



Passaic River & Tributaries, Passaic River, B6, (SE3)



Newark Bay

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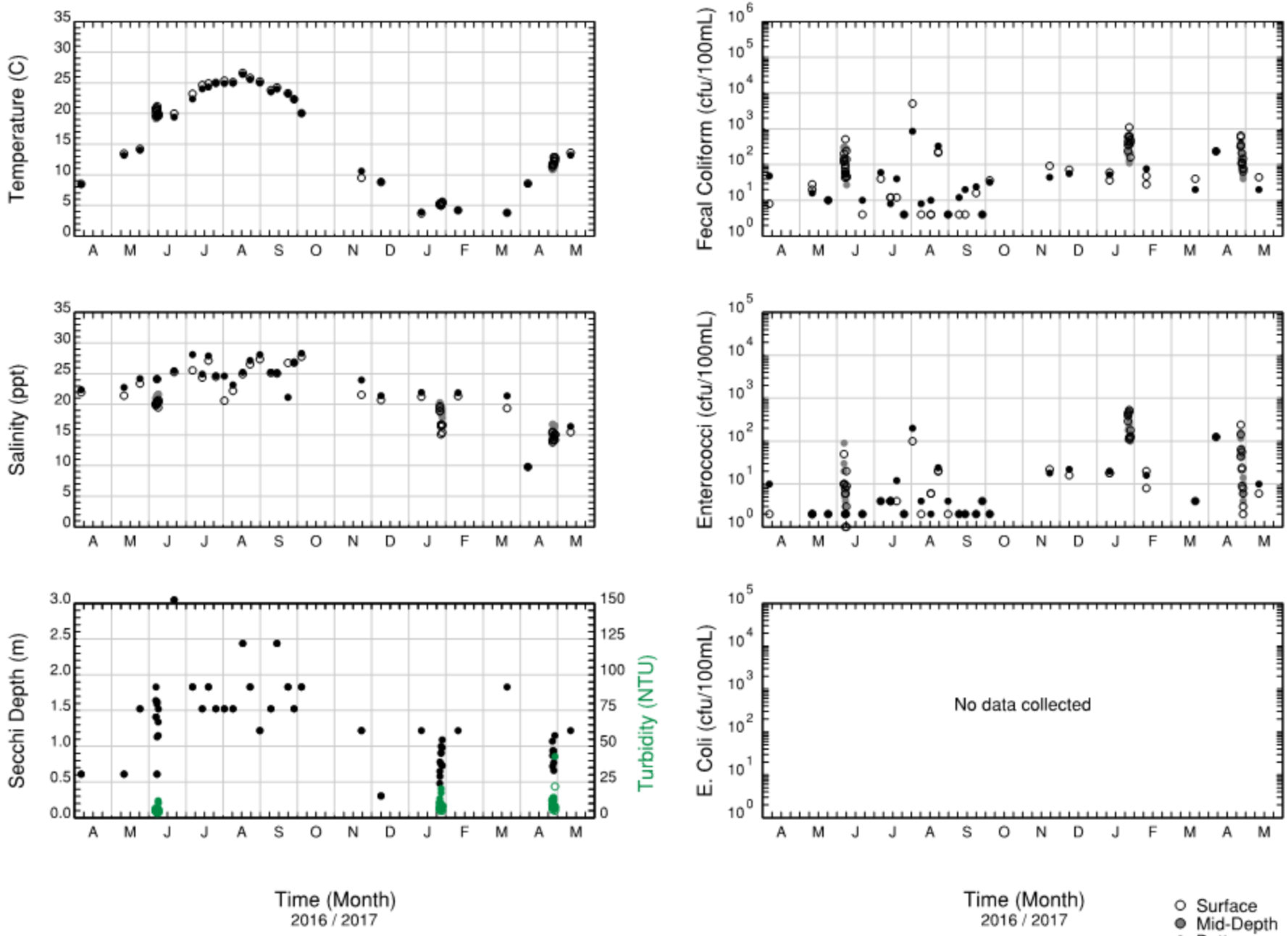
Healthy Neighborhoods

Newark Bay & Tributaries, Newark Bay, 18, (SE3)



Arthur Kill

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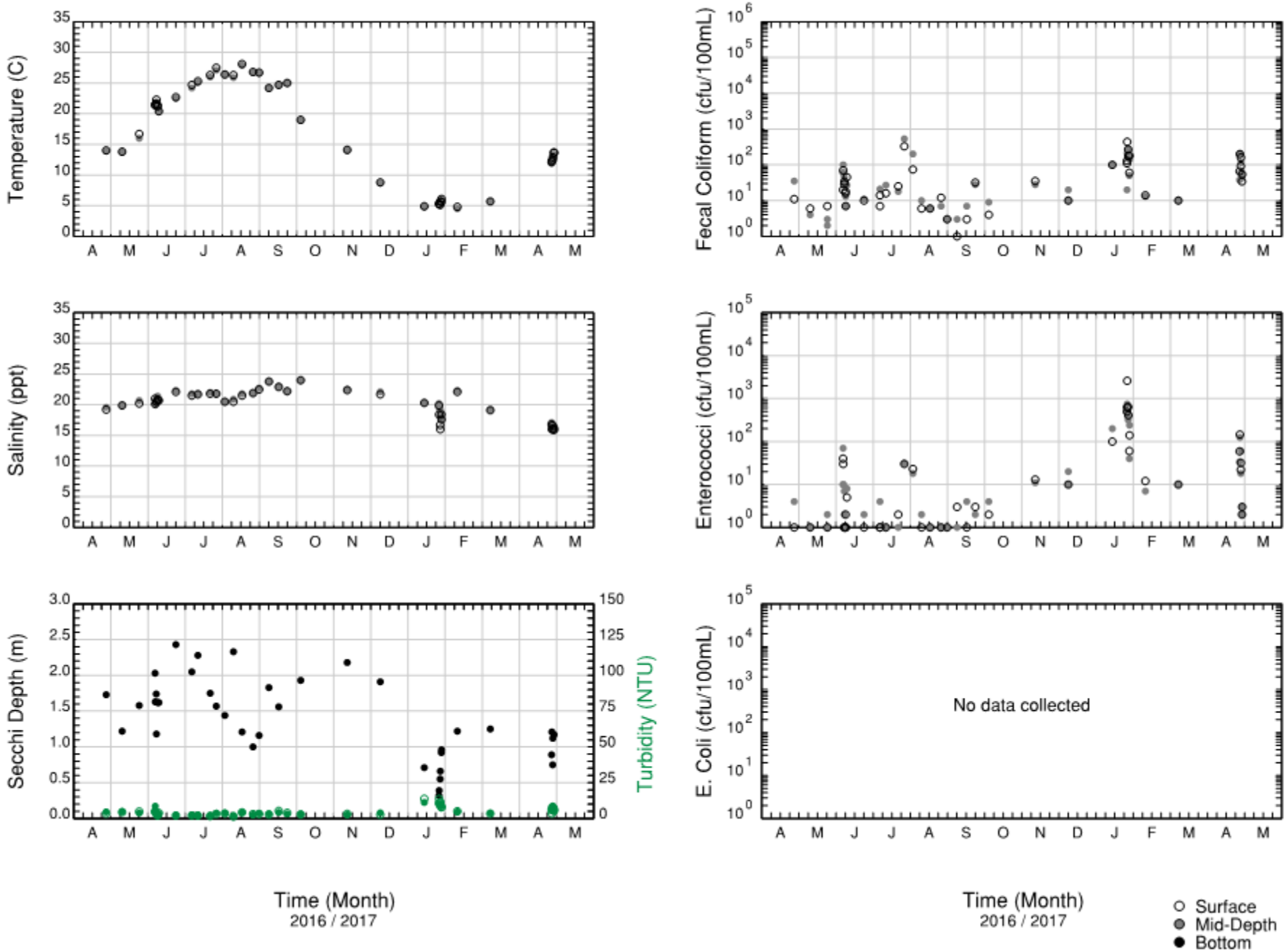
Healthy Neighborhoods

Arthur Kill, Raritan River/Bay & Tributaries, Arthur Kill, 24, (SE3)



Elizabeth River

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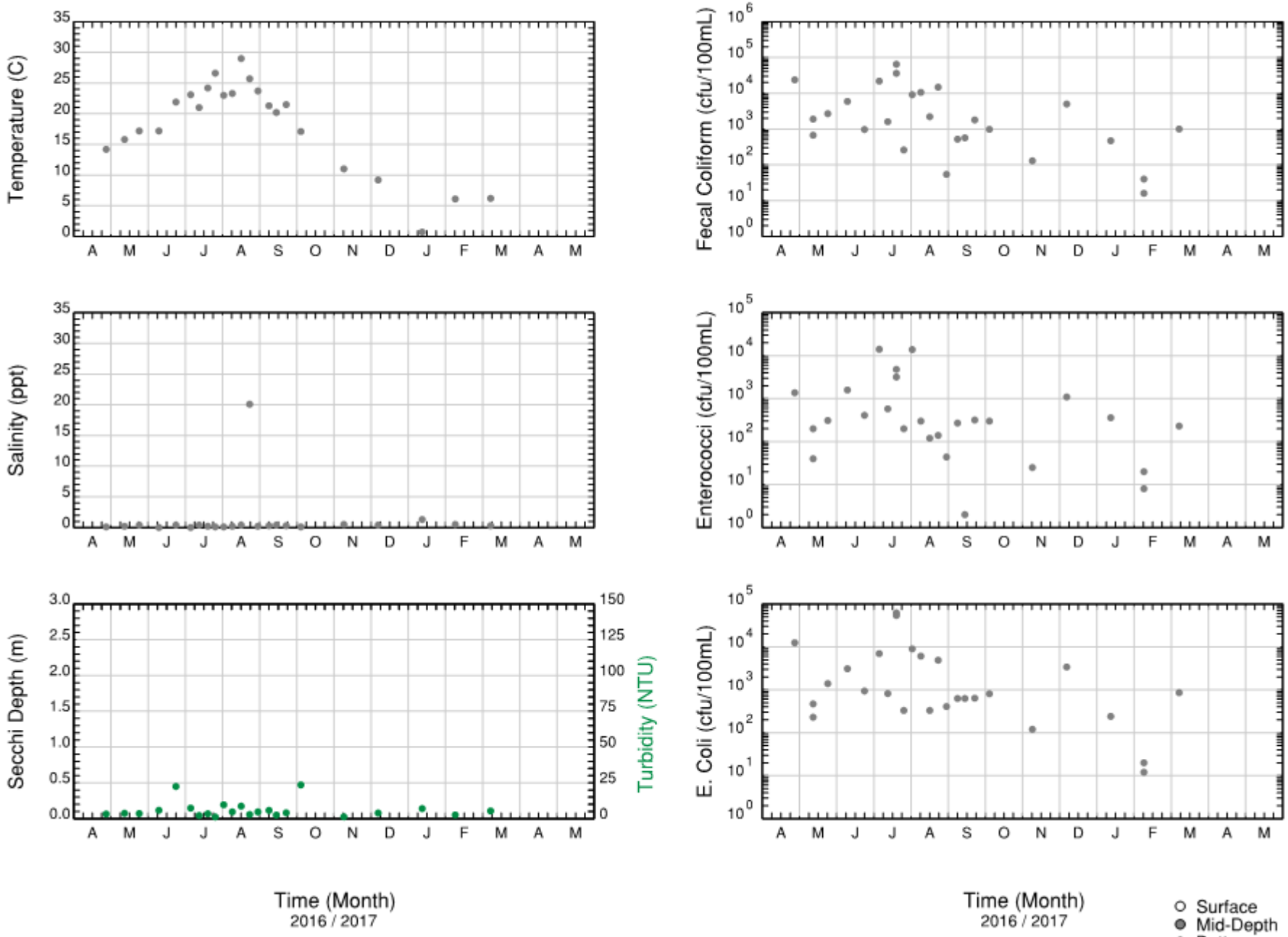
Newark Bay & Tributaries, Elizabeth River, B16, (FW2)



Hackensack River

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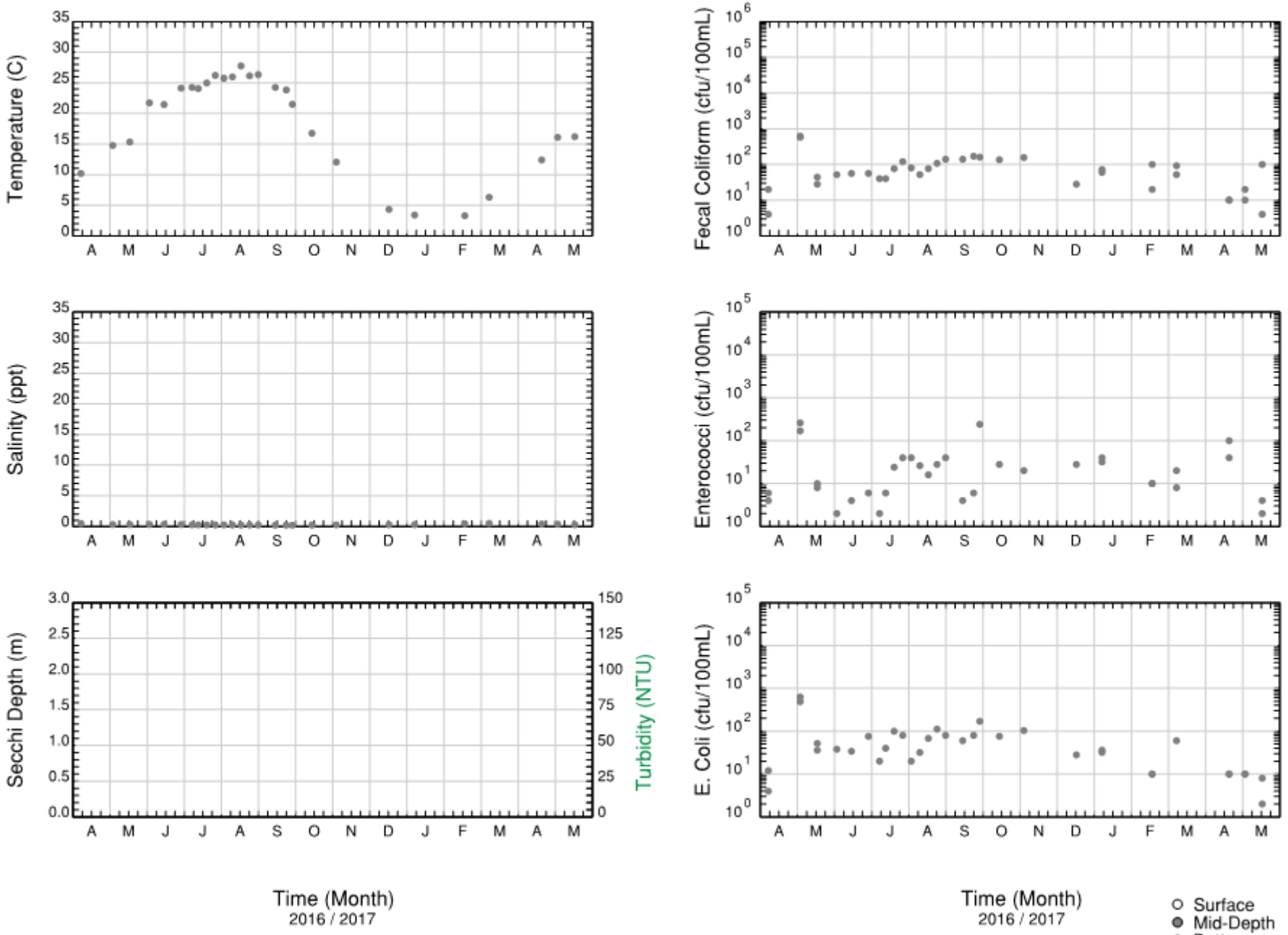
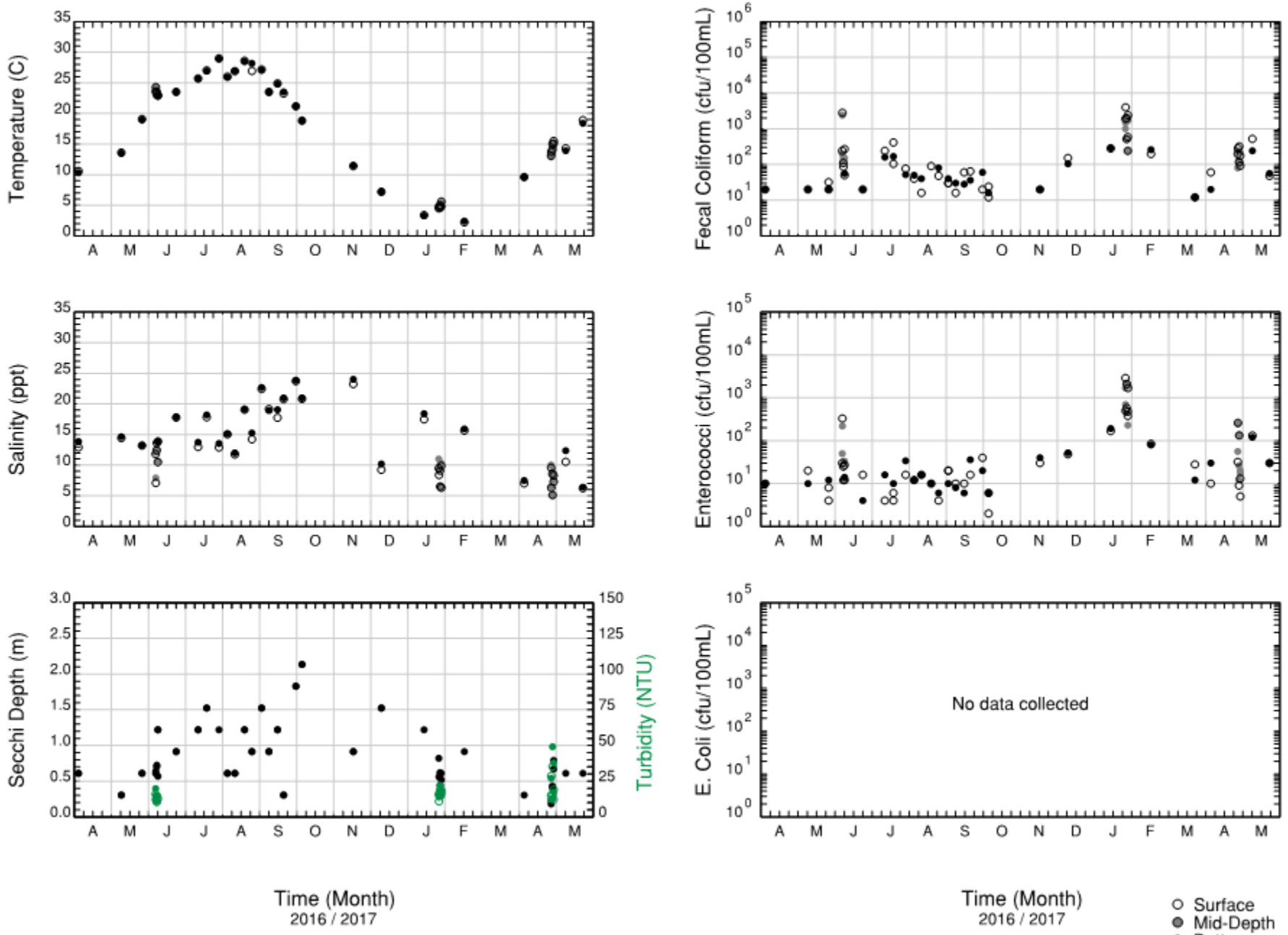
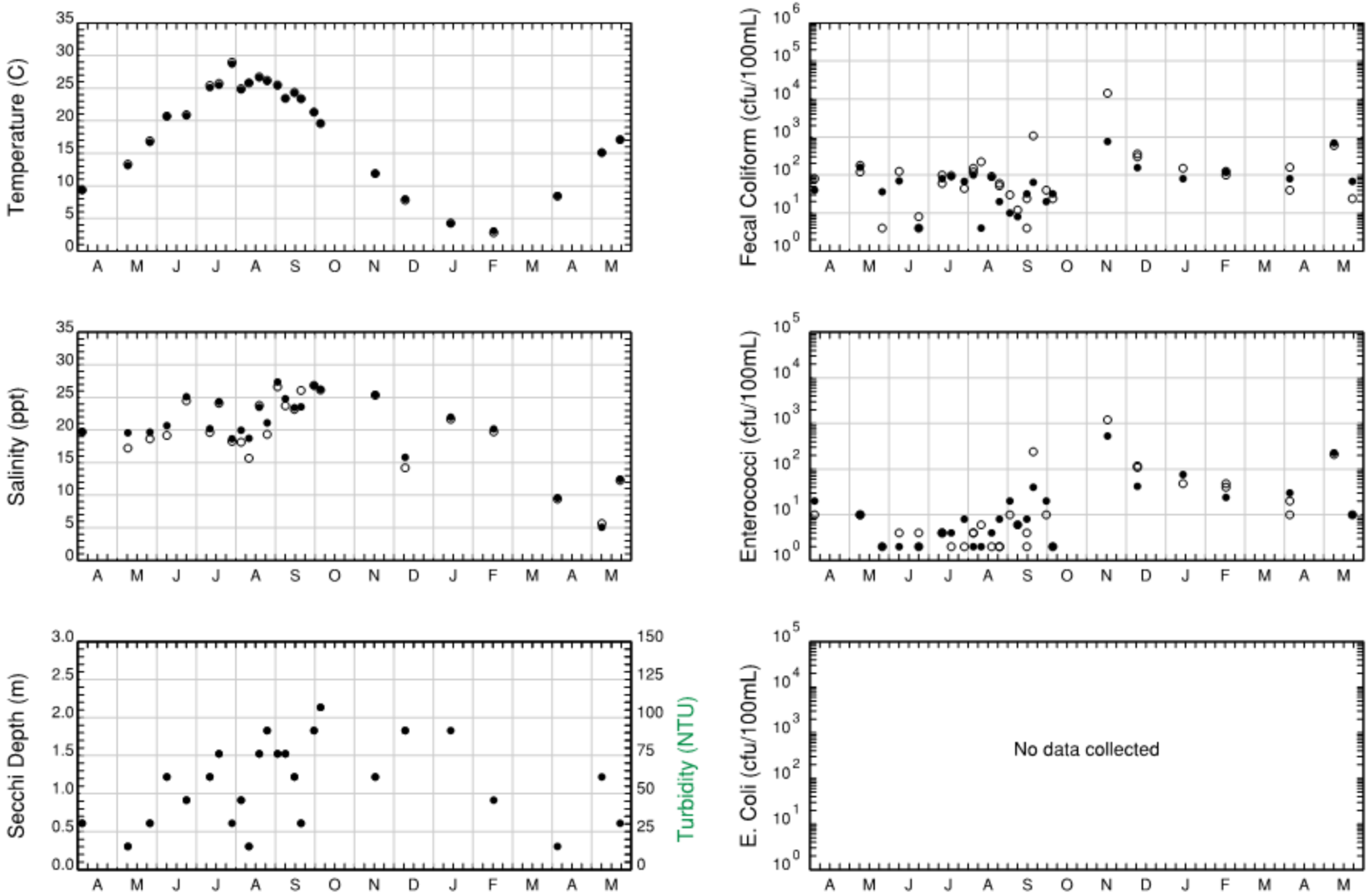
Hackensack River & Tributaries, Hackensack River, 13, (SE1)



Hackensack River & Tributaries, Hackensack River, 14, (SE2)



Hackensack River & Tributaries, Hackensack River, 16, (SE3)



Hudson River

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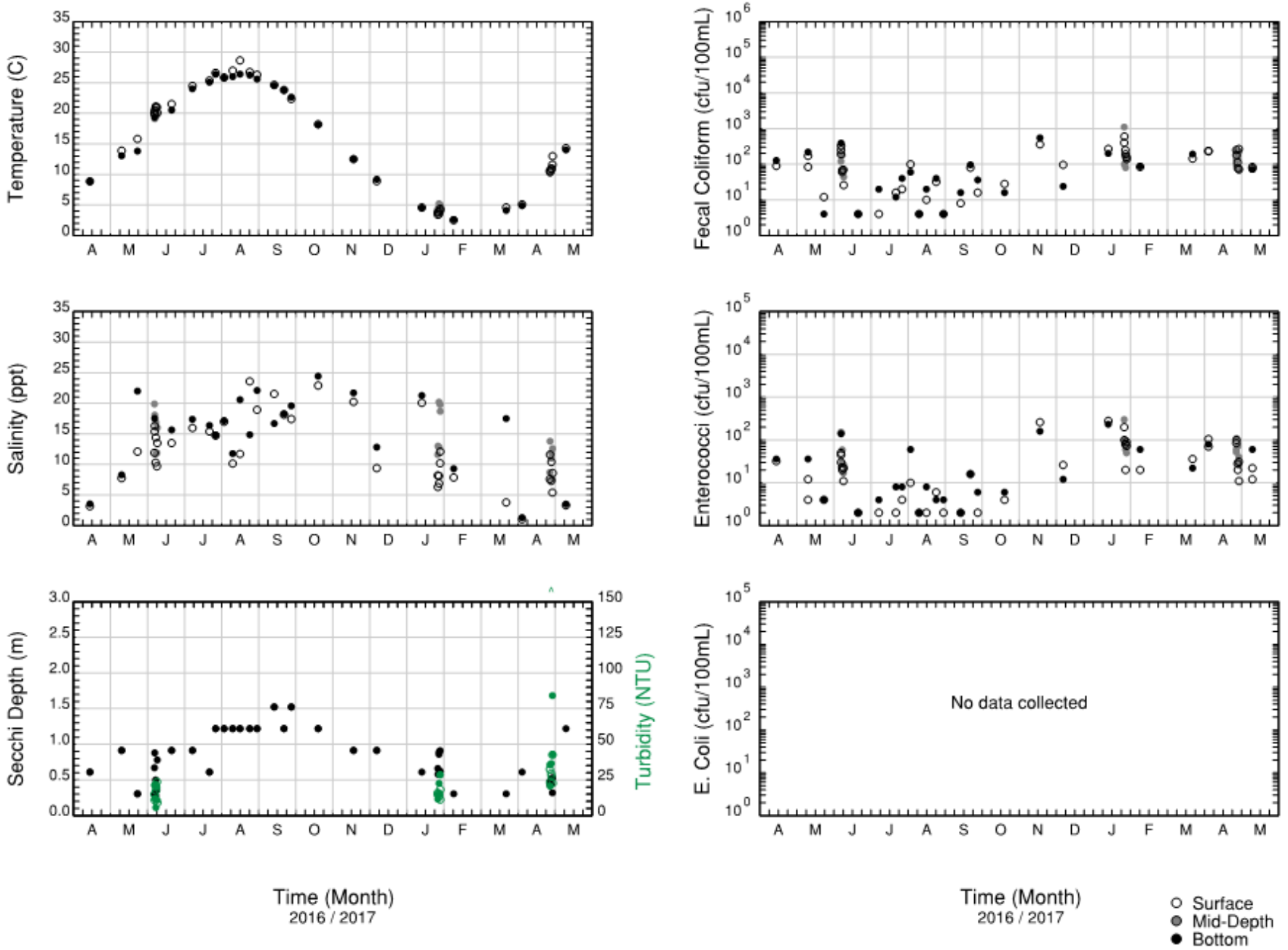
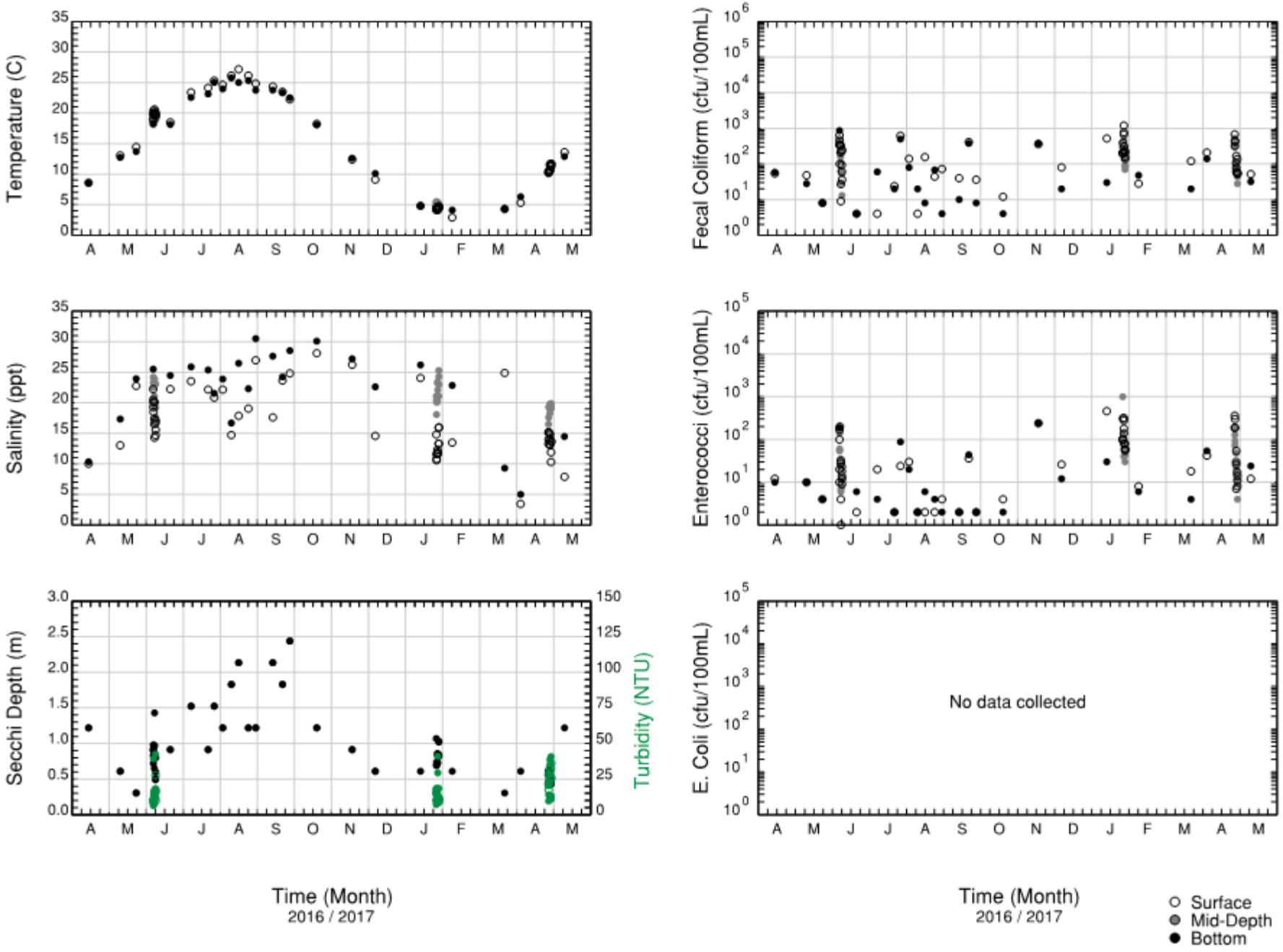
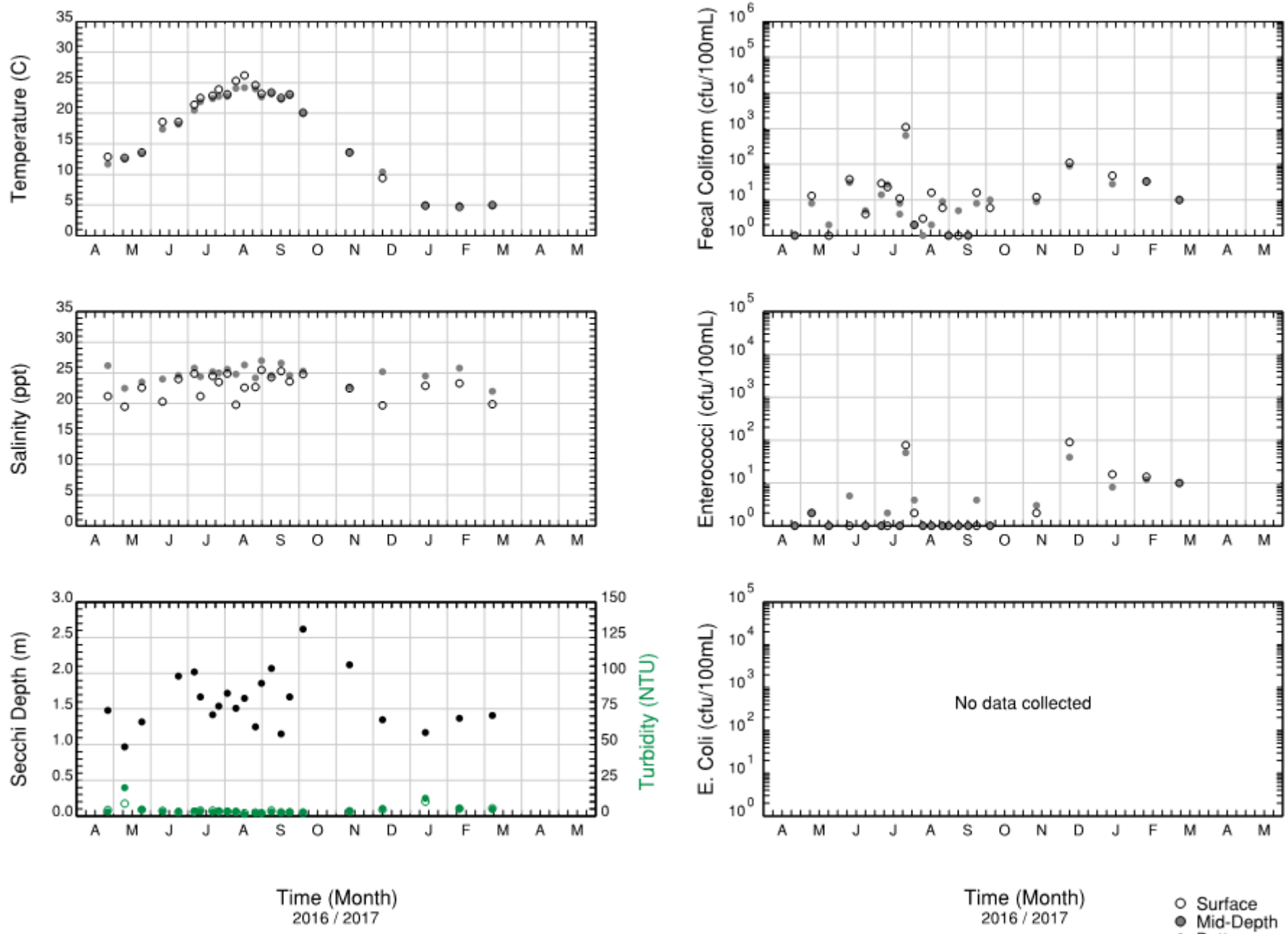
Hudson River, Upper Bay, Hudson River, 31, (SE2)



Hudson River, Upper Bay, Hudson River, 33, (SE2)



Hudson River, Upper Bay, Upper Bay, B21A, (SE2)



Kill Van Kull

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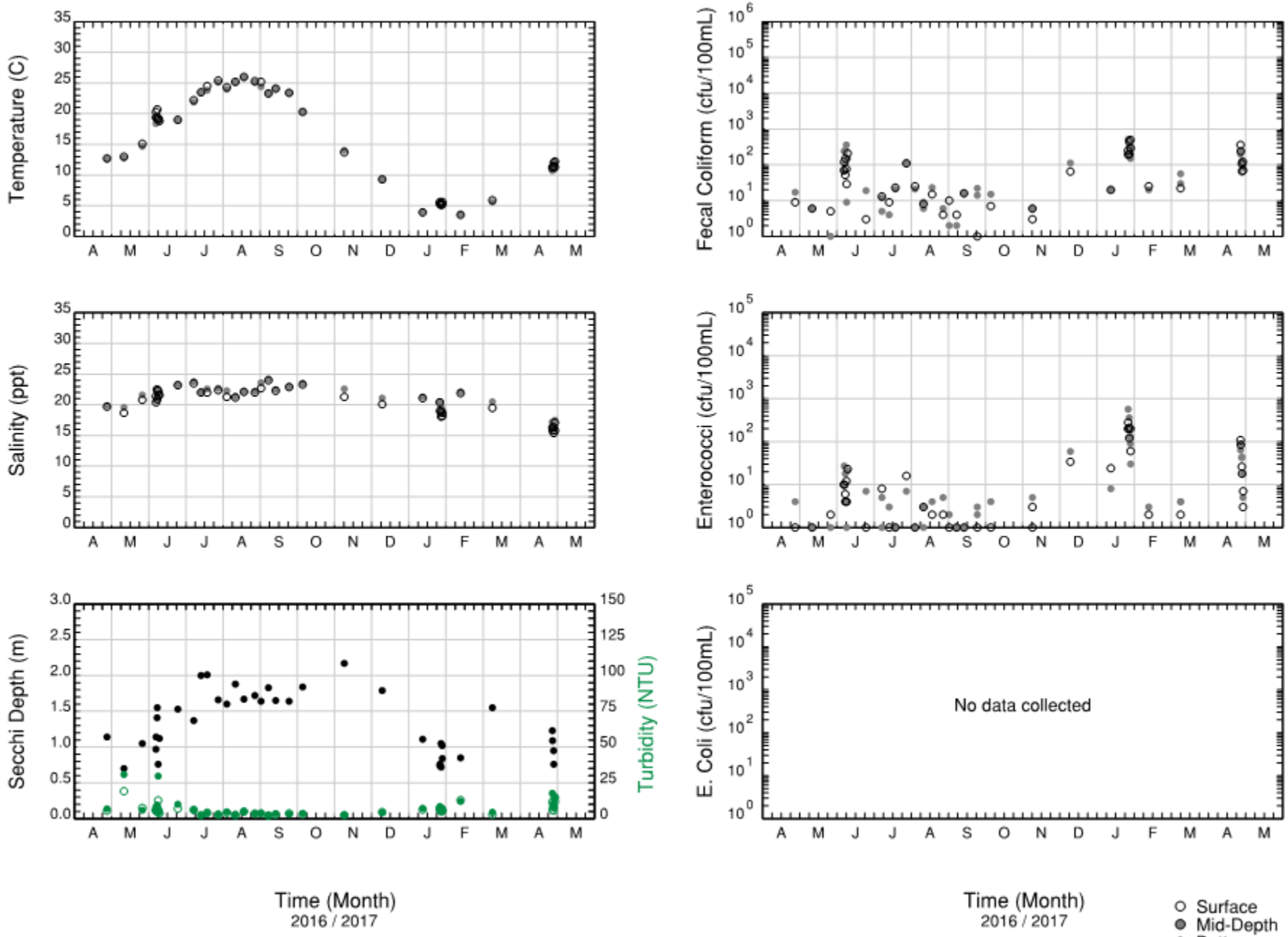
Hudson River, Upper Bay, Kill Van Kull, B12, (SE3)



Raritan River & Bay

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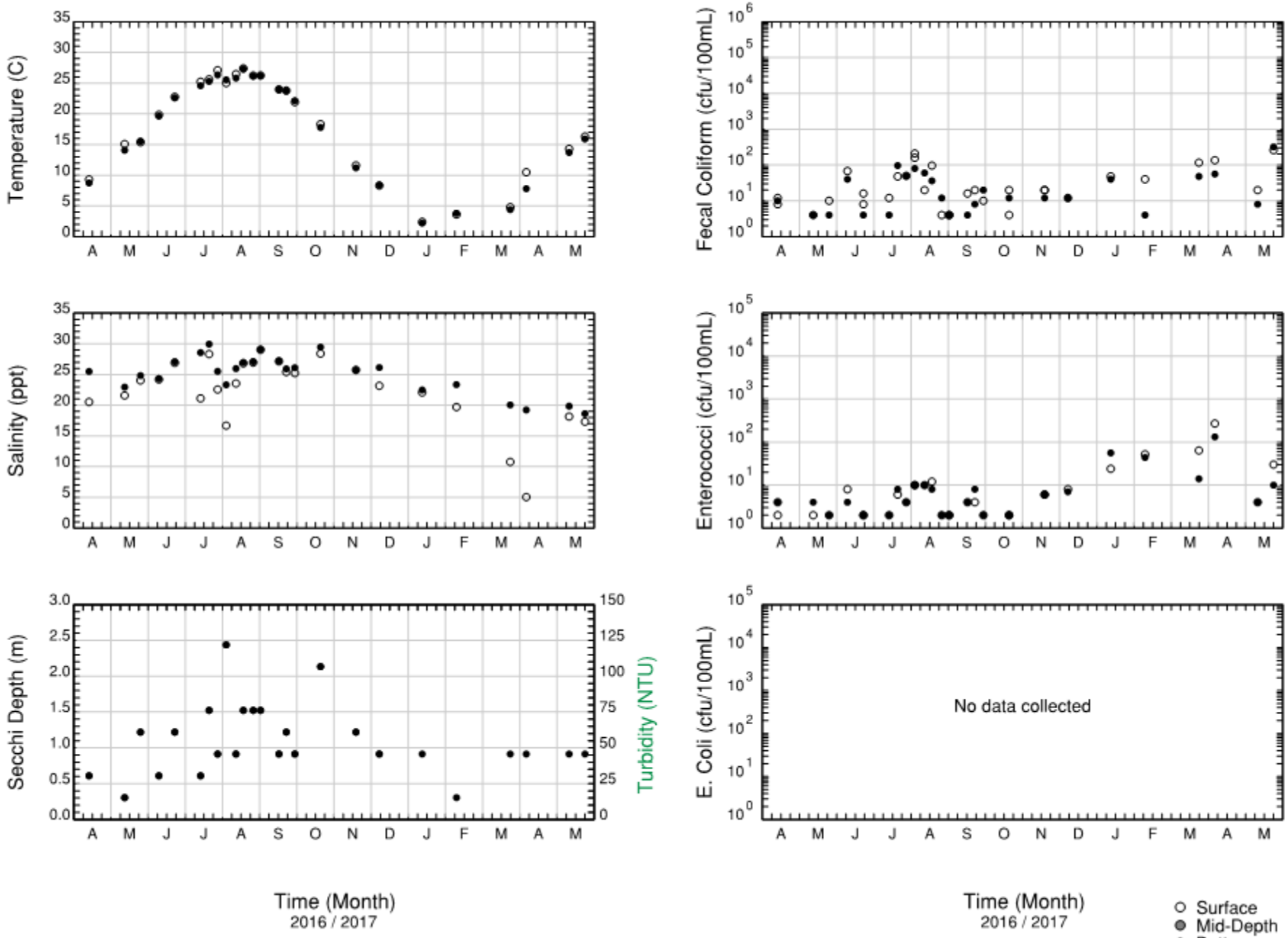
Arthur Kill, Raritan River/Bay & Tributaries, Raritan Bay, 28, (Shellfish)



Summary/Conclusions

- Receiving water sampling program was successful
- Receiving water in rivers (Passaic, Hackensack, Elizabeth and Raritan) are more likely to have periods of non-attainment.
  - Stricter criteria
  - Less dilution
- Receiving water in more open waters (Newark Bay, Hudson River, Kills) have less likelihood of non-attainment.

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Healthy Neighborhoods

Overview of July 1st, 2018 Submissions to NJDEP

CLEAN WATERWAYS
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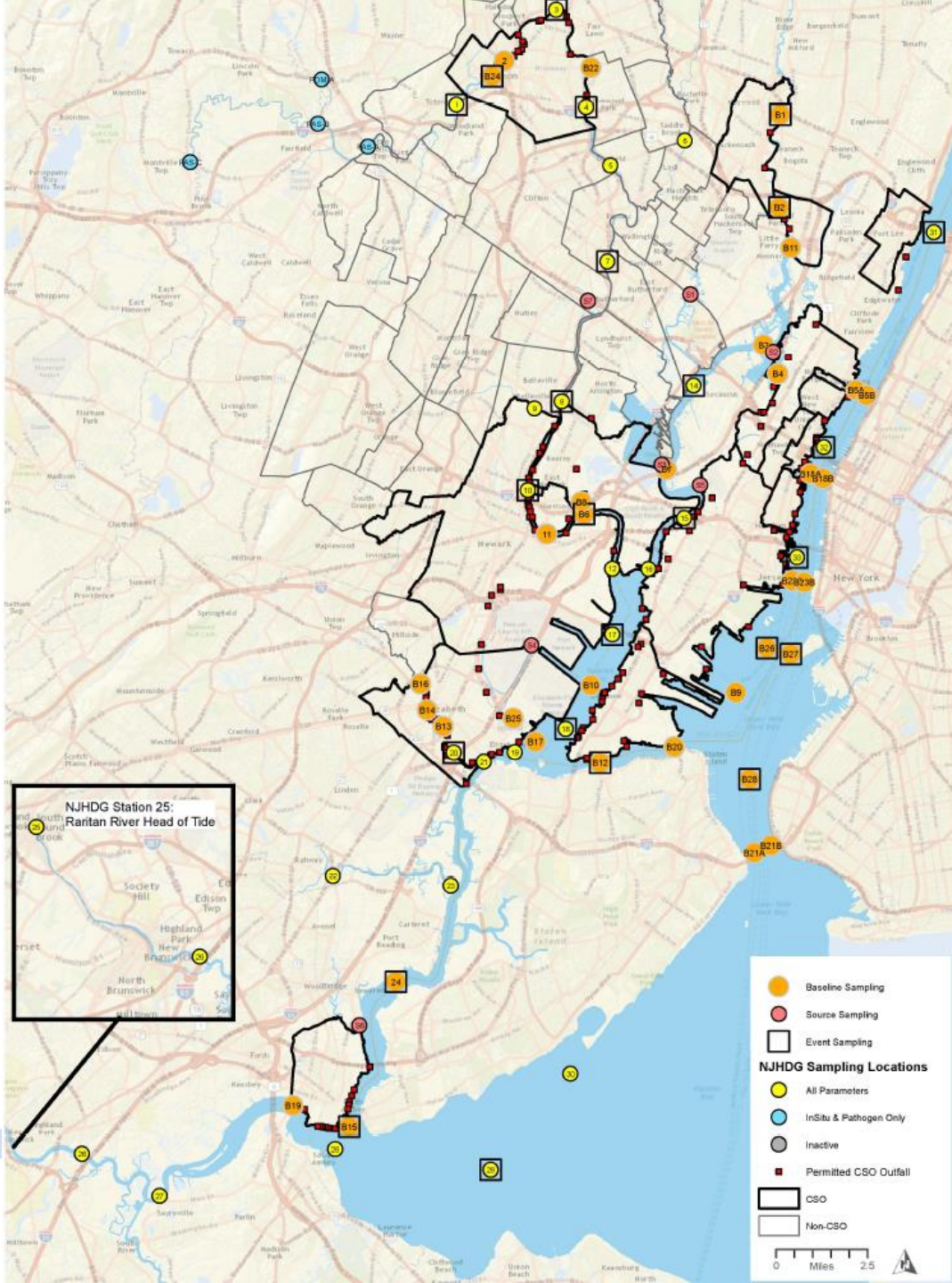
Baseline Compliance Monitoring Report

- Report is being drafted now
- Presents the data collected during the Baseline Compliance Monitoring Program
- Establishes existing in-stream water quality conditions
- Program and Report include the entire NJ CSO Group, beyond the PVSC service area



Public Participation Process Report

- Report is being drafted now
- Documents existing outreach efforts:
  - Supplemental CSO Team
  - Meetings with Municipal Action Groups
  - Meetings with Municipal Governments
  - CSO Notification System
  - Branding
  - Social Media
  - Other

Consideration of Sensitive Areas Information

- Report is being drafted now
- According to the National CSO Policy and the NJPDES Permits, Sensitive Areas include:
  - Outstanding National Resource Waters
  - National Marine Sanctuaries
  - Waters with threatened or endangered species and their habitat
  - Waters used for primary contact recreation **(including but not limited to bathing beaches)*
  - Public drinking water intakes or their designated protection areas
  - Shellfish beds

By xwest2 (Hanging Rock State Park)

By Clément Bucco-Lechat

www.nps.gov/glba/learn/nature/mussels-clams.htm

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LTCP Requirements for Sensitive Areas

- Give highest priority to overflows discharging to sensitive areas:
  - Prohibit new or significantly increased overflows
  - Eliminate or relocate wherever physically possible and economically achievable

- Not everything can be a priority when affordability is a limiting factor

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System Characterization Report

- Report is being drafted now
- Report Includes:
  - Detailed description of the combined sewer system
  - Precipitation, sewer flow, and water quality monitoring programs data
  - Overview of the receiving waters and identified pollutants of concern
  - Description of the Hydrologic and Hydraulic models
  - Overflow statistics based on model simulations

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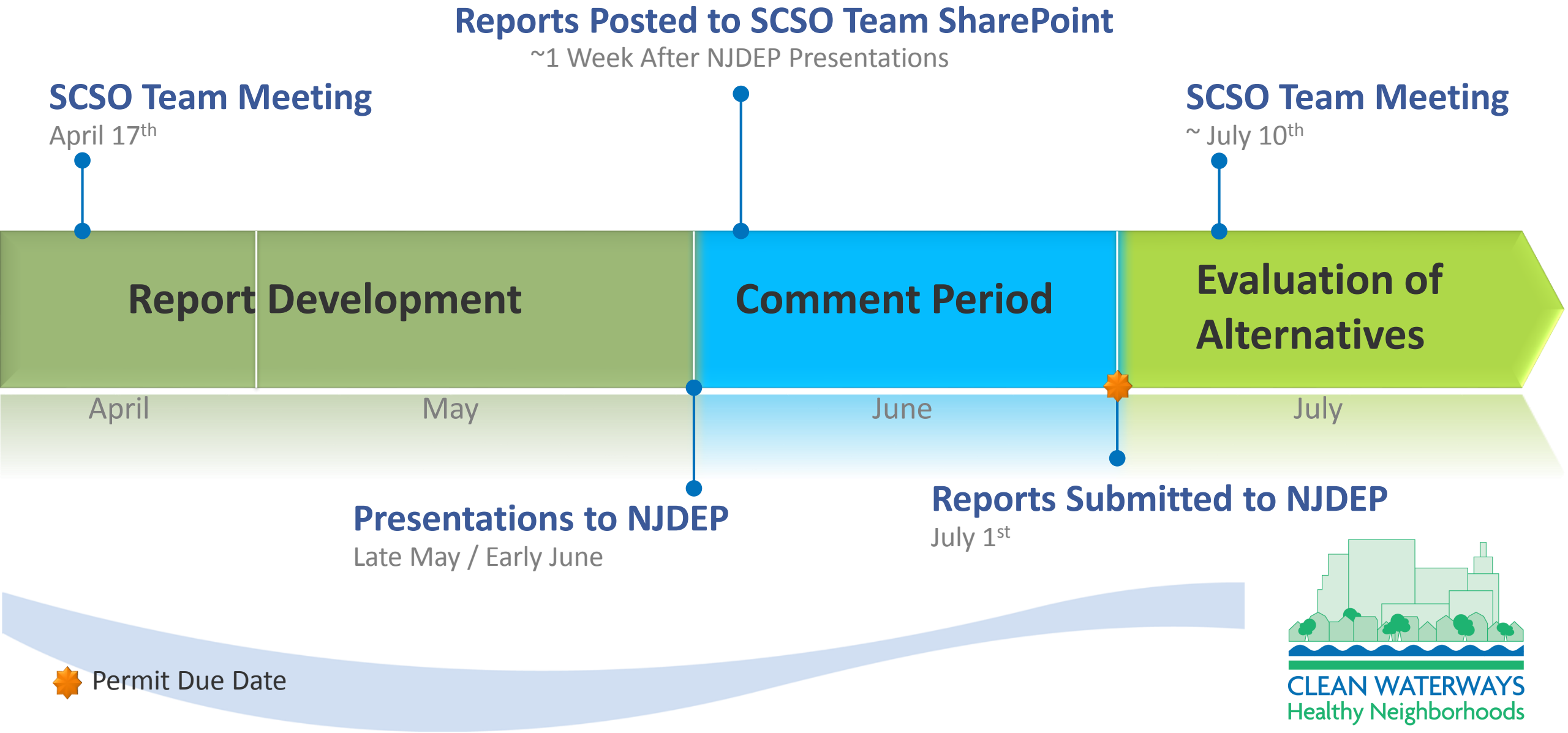
Timeline for Submittals and Supplemental CSO Team Input



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Clean Waterways, Healthy Neighborhoods

Public Outreach

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Social Media Platforms

Facebook

@NJCleanWaterways

Twitter

@NJWaterways

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Educational Fact Sheets

- Three Fact Sheets
  - Downspout Disconnection
  - What is Green Infrastructure?
  - Controlling CSOs with Sewer Separation
- Available in English, Spanish, and Portuguese

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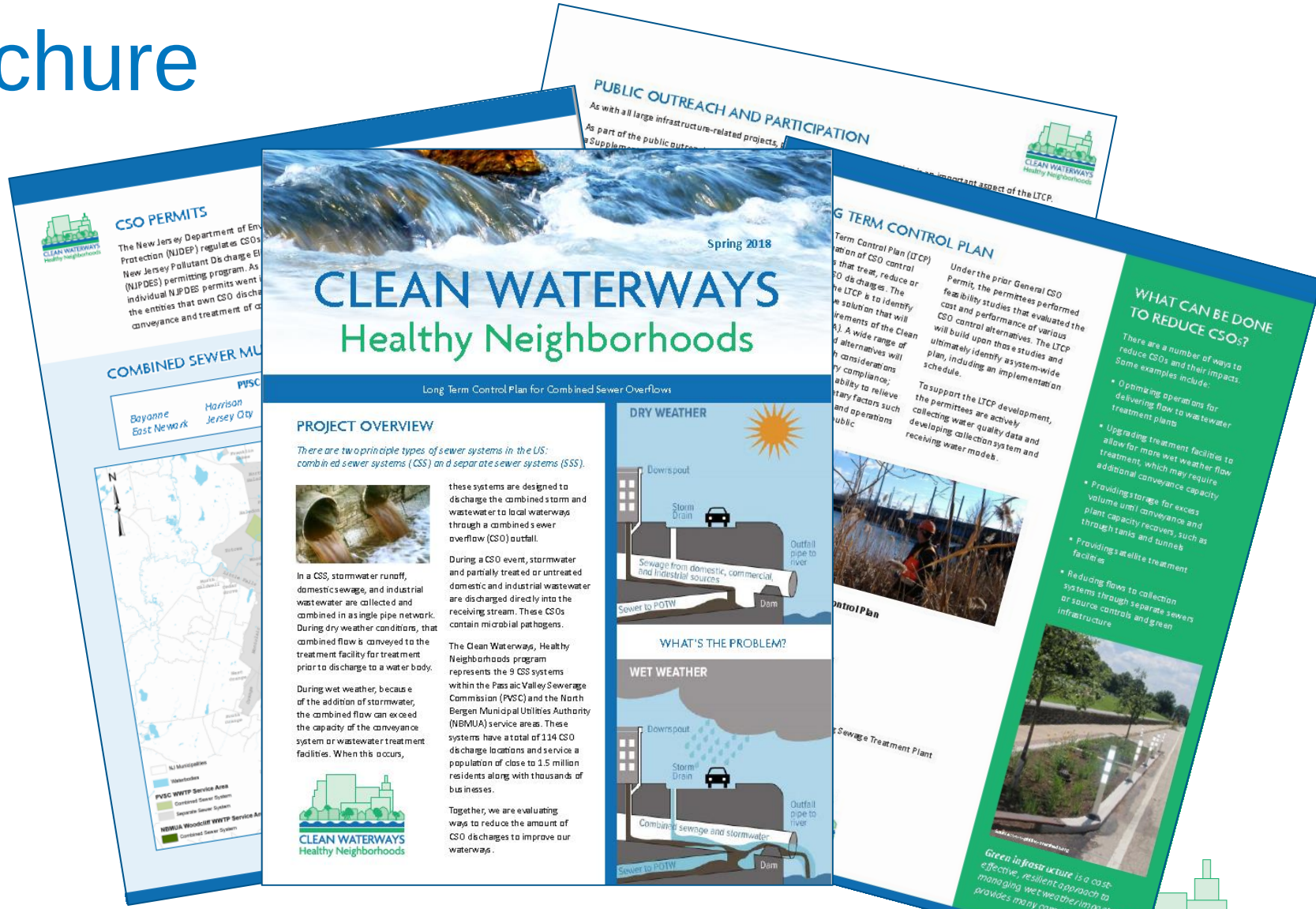
Informational Brochure

- Provides information on the Clean Waterways, Healthy Neighborhoods initiative
- Available in English, Spanish, and Portuguese



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Right-of-Way Green Infrastructure Pilot Projects

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Right-of-Way Green Infrastructure Pilot Projects

- Up to three pilot projects being funded by PVSC
  - Sites have been selected in Jersey City and Newark
  - Identifying a third pilot project location
- Will be used to educate the public and to assist the permittees

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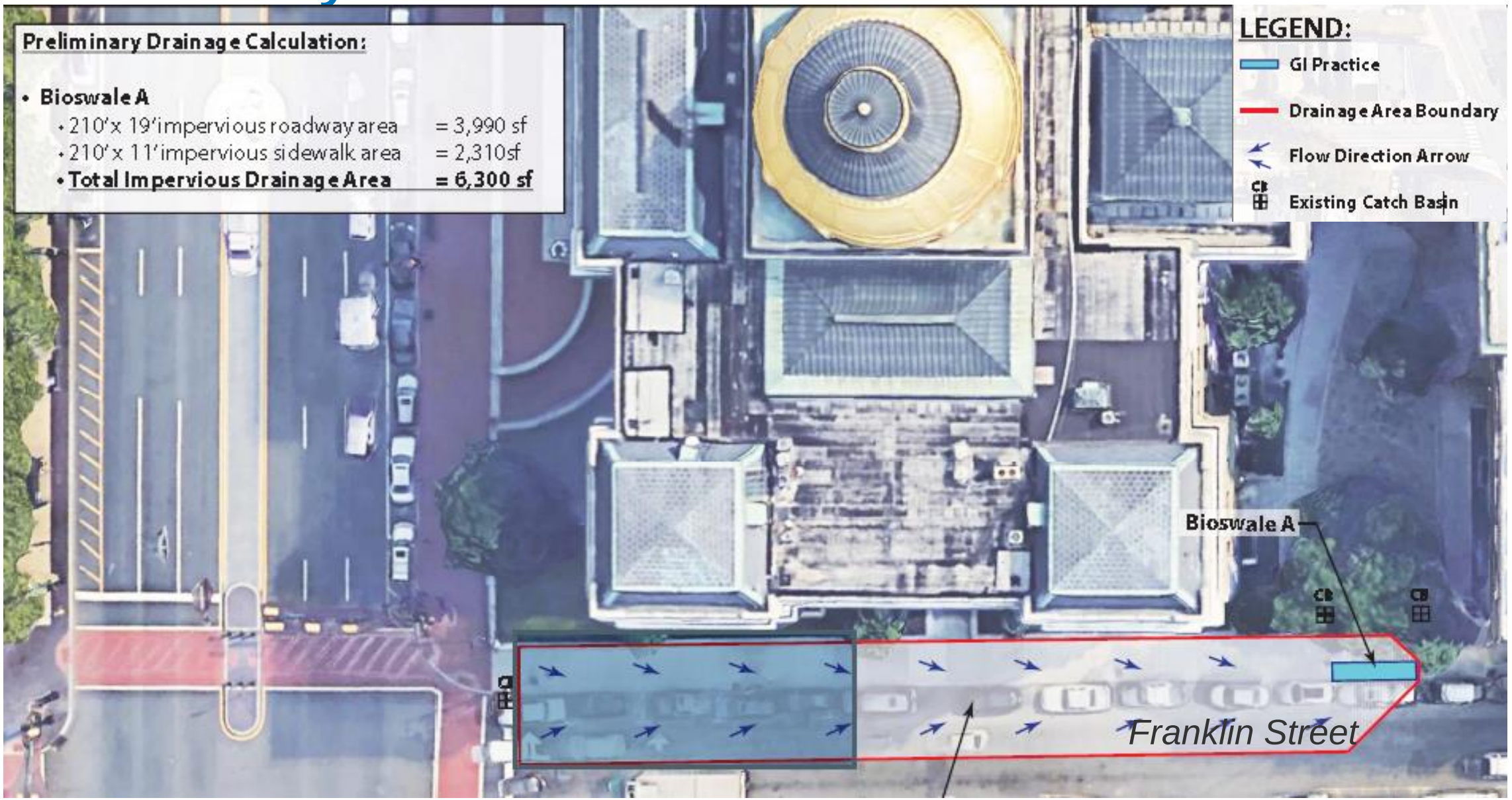
Newark City Hall Pilot – Franklin Street



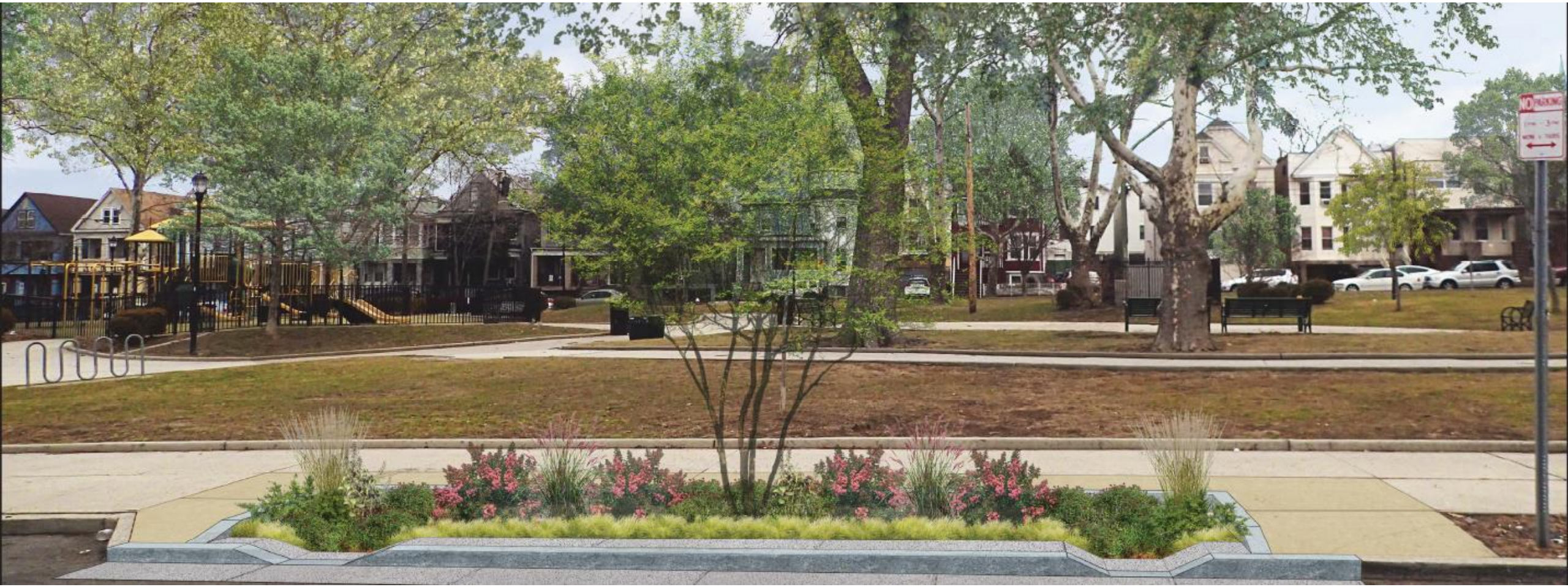
Franklin Street Existing Conditions and Renderings

Jersey City Pilot – Columbia Park (Winfield Ave)

Winfield Ave

Columbia Park Existing Conditions

Columbia Park GI Pilot Rendering



Questions and Final Discussion

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