

QUARTERLY REPORT
April 1 – June 30, 2025



Hampton Roads Sanitation District
1434 Air Rail Avenue
Virginia Beach, VA 23455

September 2, 2025

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1. Introduction and Purpose

On September 26, 2007, the Hampton Roads Sanitation District (HRSD) entered into a Special Order by Consent (SOC) with the Virginia Department of Environmental Quality (DEQ) and thirteen (13) area Localities for the purpose of resolving certain alleged violations of environmental laws and regulations related to Sanitary Sewer Overflows (SSOs). On February 23, 2010, HRSD entered into an Amended Consent Decree (“Consent Decree”) with the United States of America and the Commonwealth of Virginia for the purpose of fulfilling the objectives of the Clean Water Act and the Virginia State Water Control Law. This Consent Decree has been modified six times by agreement of all parties in 2011, 2013, 2014, 2017, 2022, and 2024. In December 2014, the SOC was eliminated by DEQ and HRSD is no longer under state enforcement. On February 8, 2022, the Fifth Amendment to the Consent Decree was entered.

The Fifth Amendment to the Consent Decree requires:

“HRSD will submit quarterly SSO reports to VADEQ and EPA, in which HRSD will identify all SSOs, SSDs, Prohibited Bypasses, or unauthorized discharges from the HRSD SS System or the HRSD STPs. HRSD will identify those SSOs, SSDs, Prohibited Bypasses, or unauthorized discharges for which it asserts a claim of force majeure. If HRSD asserts a force majeure claim, it shall document the basis for such claim in the quarterly SSO reports. It will pay the associated undisputed stipulated penalties for all SSOs, SSDs, Prohibited Bypasses, or unauthorized discharges for which it did not assert a claim of force majeure within 90 days of the close of each calendar quarter. In addition, HRSD will submit all of HRSD’s post-storm synopses reports for rain events during the quarterly reporting period to VADEQ and EPA as part of the quarterly reports for rain events that satisfy HRSD’s current criteria for publishing a post-storm analysis, i.e.: (a.) one or more rain gauge sites meet a two-year or greater rainfall recurrence interval and at least 50% of sites in any treatment plant service area receive one inch of rainfall or greater; (b.) a rain gauge meets a five-year or greater rainfall recurrence interval; or (c.) a weather-related SSO occurs.”

This quarterly report is submitted pursuant to Section XVII.D of the Consent Decree. HRSD has prepared this quarterly report in accordance with the above requirements to apprise the EPA (representing the United States of America) and the DEQ (representing the Commonwealth of Virginia) of steps taken toward meeting the obligations of the Consent Decree. Specifically, this quarterly report summarizes all Sanitary Sewer Overflows (SSOs), Sanitary Sewer Discharges (SSDs), Prohibited Bypasses, or unauthorized discharges from the HRSD Sanitary Sewer System or the HRSD Sewage Treatment Plants from April 1, 2025, through June 30, 2025, the associated post-storm synopses reports, claims of force majeure, and undisputed stipulated penalties.

During the reporting period, there were a total of five (5) SSOs, SSDs, Prohibited Bypasses, and unauthorized discharges from the HRSD SS System or the HRSD STPs. These are summarized in Tables 1 & 2.

2. Claim of Force Majeure

2.1. Sanitary Sewer Overflow

There were two (2) SSOs from the HRSD SS System during the 3-month reporting period. HRSD asserts a force majeure claim for one (1) of the SSOs.

2.1.1. Basis of Claim

A description of the circumstances supporting a claim of force majeure is included in Table 1.

2.2. Unusual Discharges (Sanitary Sewer Discharge, Prohibited Bypasses, Unauthorized Discharge)

There were three (3) unusual discharges from the HRSD SS System or the HRSD STPs during the 3-month reporting period. HRSD asserts a force majeure claim for one (1) Unusual Discharges that were non potable water, final effluent or there was no discharge to waters of Virginia or the United States.

2.2.1. Basis of Claim

A description of the circumstances supporting a claim of force majeure is included in Table 2.

3. Undisputed Stipulated Penalties

3.1. Sanitary Sewer Overflow

There were two (2) SSOs from the HRSD SS System during the 3-month reporting period. HRSD will pay undisputed stipulated penalties in the amount of \$750 for one (1) of the SSOs.

3.1.1. Basis of Undisputed Stipulated Penalties

Calculation of undisputed stipulated penalties is outlined in Section XX “Stipulated Penalties” paragraph 110 of the Consent Decree. The calculated stipulated penalties are shown in Table 1.

<u>Volume of the SSD or Prohibited Bypass</u>	<u>Penalty from the date of entry</u>
Less than 100 gallons	\$ 100
100 to 2,499 gallons	\$ 750
2,500 to 9,999 gallons	\$ 1,250
10,000 to 99,999 gallons	\$ 4,700
100,000 to 999,999 gallons	\$ 10,000
1,000,000 gallons or greater	\$ 15,000

3.2. Unusual Discharges (Sanitary Sewer Discharge, Prohibited Bypasses, Unauthorized Discharge)

There were three (3) unusual discharges from the HRSD SS System or the HRSD STPs during the 3-month reporting period. HRSD will pay undisputed stipulated penalties in the amount of \$850 for two (2) Unusual Discharges.

3.2.1. Basis of Undisputed Stipulated Penalties

Calculation of undisputed stipulated penalties is outlined in Section XX “Stipulated Penalties” paragraph 110 of the Consent Decree. The calculated stipulated penalties are shown in Table 2.

<u>Volume of the SSD or Prohibited Bypass</u>	<u>Penalty from the date of entry</u>
Less than 100 gallons	\$ 100
100 to 2,499 gallons	\$ 750
2,500 to 9,999 gallons	\$ 1,250
10,000 to 99,999 gallons	\$ 4,700
100,000 to 999,999 gallons	\$ 10,000
1,000,000 gallons or greater	\$ 15,000

4. Post-Storm Synopses Reports

Post-Storm Synopses Reports are generated when:

- One or more rain gauge sites meet a two year or greater rainfall recurrence interval and 50% of sites receive one inch or greater rainfall
- A rain gauge meets a five-year or greater rainfall recurrence interval or
- A capacity related wet weather SSO occurs

There were two (2) Post-Storm Synopses Reports for the 3-month reporting period.

QUARTERLY REPORT APRIL 1 – JUNE 30, 2025

Table 1. Detailed Listing of HRSD SSOs (April 1, 2025 to June 30, 2025)												
Date and Time of Incident	Location	Sewer System Component	Potential Receiving Waters	Spilled In Jurisdiction	SSO Classification	Description of Incident from SSORS	SSO Duration	Action Taken and Explanation of SSO	Discharge Quantity (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Force Majeure Rationale or Stipulated Penalty
04/09/2025 13:30	On Curlew Dr., Immediately East of the intersection of Curlew Dr. and Kidd Blvd.	Force Main Failure (SF-116) at Curlew Dr. and Kidd Blvd.	Storm drain and direct input into Nosehs Creek, with connection to the Elizabeth River.	Norfolk	Damage By Others	A contractor working in the area struck a 16" force main pipeline. The City of Norfolk Department of Utilities contacted HRSD at approximately 13:30 to report the event. The current flow from the force main is approximately 250-300 gallons per minute of raw wastewater.	6 hour(s) 0 minute(s)	HRSD is working with appropriate utilities to assure safety of site and utilize five pump and haul trucks to remove what materials possible. HRSD is expected to begin excavation and diversion of flow after an emergency Miss Utility ticket clears at 16:45. April 9, 2025 07:07 PM HRSD staff was able to isolate the involved force main, ceasing the SSO, at 19:30 on April 9, 2025. Estimated unrecovered spill volume is 100-125K gallons of raw wastewater. The repair was ongoing as of 23:04 on April 9, 2025. April 10, 2025 08:43 AM FINAL UPDATE: HRSD crews finalized repairs of the damaged pipe at 01:30 on 04/10/25. The final estimated volume lost is 85,200 gallons of raw wastewater, with the remainder being collected by a rotation of pump and haul trucks. The affected area was washed down, debris was removed, and lime was spread. April 11, 2025 08:24 AM	85,200	85,200	0	Force Majeure. Contractor struck pipeline

QUARTERLY REPORT APRIL 1 – JUNE 30, 2025

Table 1. Detailed Listing of HRSD SSOs (April 1, 2025 to June 30, 2025)												
Date and Time of Incident	Location	Sewer System Component	Potential Receiving Waters	Spilled In Jurisdiction	SSO Classification	Description of Incident from SSORS	SSO Duration	Action Taken and Explanation of SSO	Discharge Quantity (gallons)**	Amount Reaching State Waters (gallons)**	DEQ IR	Force Majeure Rationale or Stipulated Penalty
04/13/2025 09:29	908 Norview Avenue	Norview Connecting Sewer	storm drain to Wayne Creek, Elizabeth River tributary	Norfolk	Infrastructure	Staff found a failure on an eight-inch cast iron (CI) discharge force main coming from the Norview Avenue Pump Station. The pipeline was installed in 1955. After further investigation, staff found a sharply deflected joint that appeared to have settled over time.	4 hour(s) 34 minute(s)	Staff immediately contacted the On-call pump and haul contractor to service the Norview Avenue Pump Station while it was shut down. On Monday, April 14, staff excavated the site, reported the issue, and removed the failed joint. The joint was replaced with a five-foot section of pipe sleeved in on both sides. Staff also used a vactor truck to recover as much standing sewage and clean up the area. -----April 18, 2025 09:28 AM-----	570	470	0	\$750

QUARTERLY REPORT APRIL 1 – JUNE 30, 2025

Table 2. Detailed Listing of HRSD Treatment Plant Unusual Discharges (April 1, 2025 to June 30, 2025)									
Date	Location	Description/Cause	Duration of Event (minutes)	Corrective Action	Estimated Quantity Discharged (gallons)	Estimated Quantity to State Waters (gallons)	Type of Overflow	Receiving Water	Force Majeure Rationale Or Stipulated Penalty
4/20/2025	Boat Harbor	A manhole on the southwest corner of the treatment plant was discovered to have overflowed sometime between the hours of 04:00 and 09:45. The manhole carries domestic waste (DW) and scum from secondary clarifiers. The overflow had already ceased when discovered, but it was noticed that some material had made it into the adjacent creek via a storm drain, which feeds to the James River.	8	While the active overflow had already stopped, a mat was placed over the storm drain grating to prevent any more spills from entering the storm drain/creek. The manhole was approximately 75% cleaned as of April 23, 2025.	200	200	Scum/Solids & Domestic Waste	Creek to James River	\$750
5/31/2025	Nansemond	A non-potable water (NPW) valve was stuck in an open position, which filled the wetwell. The pumps did not start up as they should have when the water level increased. A total of approximately 8,000 gallons of chlorinated NPW was spilled, with approximately 3,000 gallons recovered, and approximately 5,000 gallons lost to the ground and storm drain.	2	The valve was secured, and the pumps were started manually.	8000	5000	Non-Potable Water (NPW)	Ground/ Storm Drain	NPW
6/18/2025	Boat Harbor	Sodium hypochlorite (hypo) was found on the ground in the soil next to the contact tank coming from a tubing vault at 06:35 on the morning of June 18th. The flow of hypo coming from the vault saturated the ground and flowed down to the asphalt, and along the curb of the back road. The problem is believed to have started the day before, on June 17th, and was caused by an operator pumping against a closed valve, which caused the band clamps on the hypo tubing to give way. The leak likely began when a maintenance operator used the line around 14:15 on June 17th to prime a final pump and smelled hypo, but did not see any leaks at that time. When the tubing vault filled and eventually overflowed, it was discovered the following morning, and the lead operator secured the suction and discharge valve of the hypo pump and lines for flushing, stopping the leak.	5	The lead operator secured all offline suction and discharge pump valves, as well as the hypo line valves, to ensure that no hypo could reach those lines. The storm drains were blocked off. Approximately 65 gallons of hypochlorite were recovered by pump, 10 gallons were recovered using oil absorbents, and an additional 75 gallons were recovered through solids removal.	175	25	Sodium Hypochlorite	asphalt, curb, ground	\$100

Note: NPW (non-potable water) is fully treated and chlorinated final effluent.

Appendix A. Post-Storm Synopses Reports

There were two (2) qualifying events this quarter.

Appendix B. Definitions

“Bypass” shall mean the intentional diversion of waste streams from any portion of a treatment facility, as defined by 40 C.F.R. § 122.41(m).

“HRSD SS System” or “HRSD Sanitary Sewer System” shall mean the wastewater collection and transmission systems, including all pipes, Force Mains, Gravity Sewer Lines, lift stations, Pumping Stations, Pressure Reducing Stations, manholes, and any other appurtenances thereto, which are owned or operated by HRSD as of the Effective Date of this Consent Decree, and which serve the Localities. It does not include the portions of the sewer system that serves the Middle Peninsula communities within King William County, King and Queen County, Middlesex County, and Mathews County.

“Non-potable water (NPW)” is fully treated and chlorinated final effluent.

“Prohibited Bypass” shall mean a Bypass within the meaning of 40 C.F.R § 122.41(m)(4).

“Sanitary Sewer Overflow” or “SSO” shall mean an overflow, spill, diversion, or release of wastewater from or caused by the Regional SS System. This term shall include: (i) discharges to waters of the State or United States from the Regional SS System and (ii) any release of wastewater from the Regional SS System to public or private property that does not reach waters of the United States or the State, including Building/Private Property Backups.

“Sanitary Sewer Discharge” or “SSD” shall mean any discharge to waters of the State or the United States from the HRSD SS System through a point source not authorized in any Permit.

Hampton Roads Sanitation District

Post-Storm Report



5/12/2025 – 5/15/2025

DISCLAIMER:

About the information on this HRSD server

This report is intended to provide the HRSD regional community summary information about the HRSD system during select wet weather events/anomalies. The attached report contains a selection of *official* Interceptor and Treatment data, as well as other environmental and meteorological data provided through other services. In an effort to enhance the HRSD system, the attached products have been made accessible on this server and care must be taken when using such products as they are intended for informational and not operational, legal, or other purposes.

This report is located on an HRSD server and is intended to be available 24 hours a day, seven days a week. However, timely availability and/or delivery of data and products from this server through the Internet is subject to numerous potential constraints and is, therefore, not guaranteed. Official HRSD dissemination of information is available only through a written response to a formal written request for data from the user.

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These data are part of HRSD's governmental function and HRSD reserves all rights and immunities relating to these data and the terms and manner in which it is made available.

Summary

From May 12th through May 15th, there was an approximate 65-hour rainfall event that resulted in 4 sites on the North Shore that met a 1 to 10-year rainfall recurrence interval throughout the HRSD rain gauge network. A combination of upper low and surface low systems contributed to this multi day rain event. A warm front pushed in from south into the area bringing in light showers in the morning. During the evening showers became more widespread with some areas experiencing heavy downpours. Southeast wind gusts of 25 mph pulled more moisture in, bringing a band of heavy rainfall to the area. Flood watches were issued for the area on Tuesday evening. Scattered showers with some heavy downpours continued the next day. There was a low risk for tornadoes. The two low systems slowly drifted away from the area. The final day had a few scattered storms from the departing systems. North Shore sites averaged around 1.89 inches of rain. There was a small impact on groundwater levels compared to May 2024. See Appendix C for the Historical Shallow Well comparison.

3 Locality interceptor weather-related overflow(s) were reported.

HRSD flow and pressure meters met data reliability requirements per the MOM program. For all pressure meters in the aggregate and all pressure-side flow meters in the aggregate for each treatment plant service area listed below, at least 90% reliable data was achieved, based on the duration of system response to this rainfall event. The data reliability for the gravity flow meters is not included in this synopsis.

- Duration of system response: See Table Below
- Aggregate flow meter validity: 94.60%
- Aggregate pressure meter validity: 96.88%

Currently, rainfall recurrence intervals are only analyzed for a maximum of 96-hours. Rainfall analysis begins after 0.1 inches of rain has occurred. A 72-hour dry period of less than 0.1 inches of rain is typically used to signify two separate events. However, if a site returns to “dry weather” conditions prior to the next rainfall that occurs within 72 hours of the previous event, it is also considered for separate analysis. See Appendix A for the Rainfall Total System Maps.

The current criteria for publishing a post-storm analysis are the following:

- One or more rain gauge sites meet a two-year or greater RRI (rainfall recurrence interval) and at least 50% of sites in any treatment plant service area receive one inch of rainfall or greater,
- A rain gauge site meets a five-year or greater RRI, or
- A weather-related SSO occurs.

May 12th – May 15th, 2025 – Post-Storm Rain Event Synopsis

Sanitary Sewer Overflows:

North Shore		
Location	Jurisdiction	Start Date
179 Red Oak Landing	James City	5/13/2025
5349 Rockingham Dr	James City	5/13/2025
115 Depot Street	James City	5/13/2025

Treatment Plant Data: *(Data obtained from Telog Database)*
See Appendix B for HRSD Treatment Plant Flows

HRSD Treatment Plant Data 5/12/2025 – 5/15/2025

North Shore				
Treatment Plant	Date of Peak Hourly Flow	Peak Hourly Flow (MGD)	Peak Hour	TPSA Total Rainfall Avg (in)
Boat Harbor	5/12/2025	11.41	16:00	0.01
	5/13/2025	13.12	10:00	0.71
	5/14/2025	27.33	21:00	0.55
	5/15/2025	18.67	00:00	0.00
James River	5/12/2025	14.96	21:00	0.03
	5/13/2025	24.68	11:00	1.25
	5/14/2025	33.11	20:00	1.85
	5/15/2025	16.39	08:00	0.01
Williamsburg	5/12/2025	11.02	21:00	0.08
	5/13/2025	32.01	11:00	1.85
	5/14/2025	15.65	20:00	0.50
	5/15/2025	10.40	08:00	0.01
York River	5/12/2025	16.15	21:00	0.02*
	5/13/2025	20.20	18:00	1.18*
	5/14/2025	22.42	20:00	0.55
	5/15/2025	20.74	06:00	0.02

- Wolfe Trappe rainfall used due to comm loss

May 12th – May 15th, 2025 – Post-Storm Rain Event Synopsis

North Shore

Weather:

Rainfall (HRSD Rainfall Gauges): *Recurrence intervals based on NOAA Atlas 14*

Rain Gauge Site	Peak Rainfall RI (Duration)	Locality
<i>Boat Harbor Treatment Plant Service Area¹</i>		
Bayshore PS	DNQ	HAMP
Bridge Street Tide Gate	DNQ	HAMP
Boat Harbor	DNQ	NEWP
Copeland Park PS	DNQ	NEWP
Hampton PS 159	Invalid	HAMP
<i>James River Treatment Plant Service Area¹</i>		
Hilton School PS	10-year (1hr)	NEWP
James River Main Flow (Influent)	DNQ	NEWP
Lee Hall PRS	DNQ	NEWP
Lucas Creek PS	DNQ	NEWP
Morrison PS	2-year (3hr)	NEWP
<i>Williamsburg Treatment Plant Service Area¹</i>		
Ford's Colony	1-year (1hr)	JCSA
Fort Eustis PS	DNQ	NEWP
Greensprings PS	DNQ	JCA
Solarex	DNQ	JCSA
Williamsburg Main Flow (Effluent)	DNQ	JCSA
Williamsburg PS	DNQ	WILL
York Skimino Hills PS	DNQ	YORK
<i>York River Treatment Plant Service Area¹</i>		
Big Bethel PRS	DNQ	HAMP
Freeman PS	DNQ	HAMP
Gloucester Court House	Invalid	GLOU
Guinea Rd at Maryus Rd	DNQ	GLOU
Ordinary PCV	DNQ	GLOU
Poquoson PS 6	Invalid	POQ
Wolf Trappe PCV	DNQ	YORK
York Kiln Creek 1 PS	1- to 2-year (1hr)	YORK
York PS 15	Invalid	YORK
York River Main Flow (Influent)	Invalid	YORK
York River Crossing (York River Rectifier)	DNQ	GLOU

Note:

1. Typical treatment plant service area.

May 12th – May 15th, 2025 – Post-Storm Rain Event Synopsis

Newport News-Williamsburg International (PHF)

○ Wind and Rainfall (daily total):

Date	Gust (max)	Sustained (max)	Sustained (avg)	Direction	Rainfall (in)
5/12/2025	17 mph	13 mph	6 mph	ESE	0.03
5/13/2025	33 mph	20 mph	10 mph	ESE	0.99
5/14/2025	28 mph	16 mph	4 mph	WSW	0.99
5/15/2025	-	8 mph	4 mph	WSW	0.00

Tide:

- Yorktown USCG Training Center:
 - Storm Surge: An approximate 1.0-foot storm surge was observed.

NOAA/NOS/CO-OPS Observed Water Levels at YorktownUSCG Unverified Preliminary Data

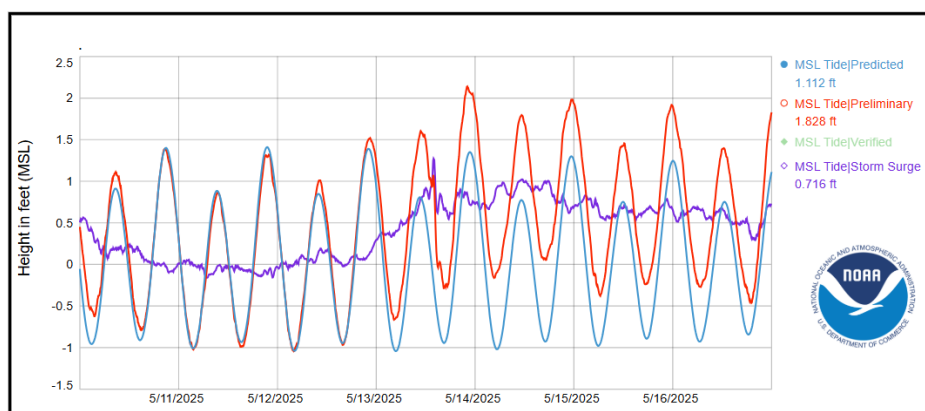
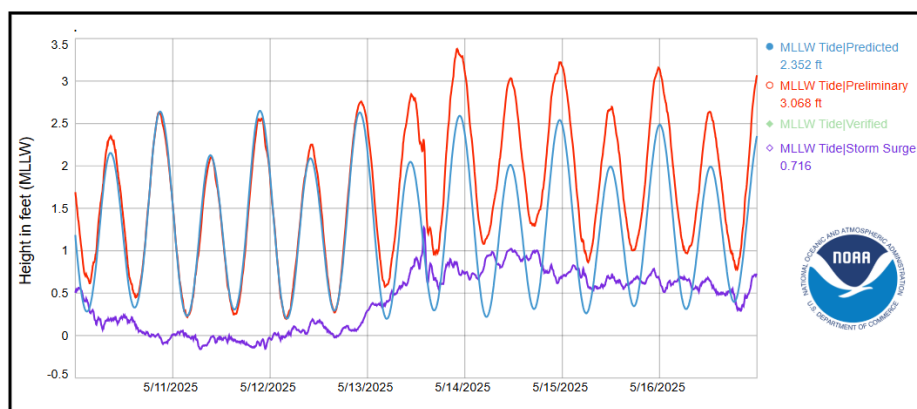


Figure 1. Preliminary data obtained from NOAA and a connection with Open Weather

May 12th – May 15th, 2025 – Post-Storm Rain Event Synopsis

- Sewells Point Tide Station:
 - Storm Surge: An approximate 1.09 foot storm surge was observed.

NOAA/NOS/CO-OPS Observed Water Levels at SewellsPoint Unverified Preliminary Data

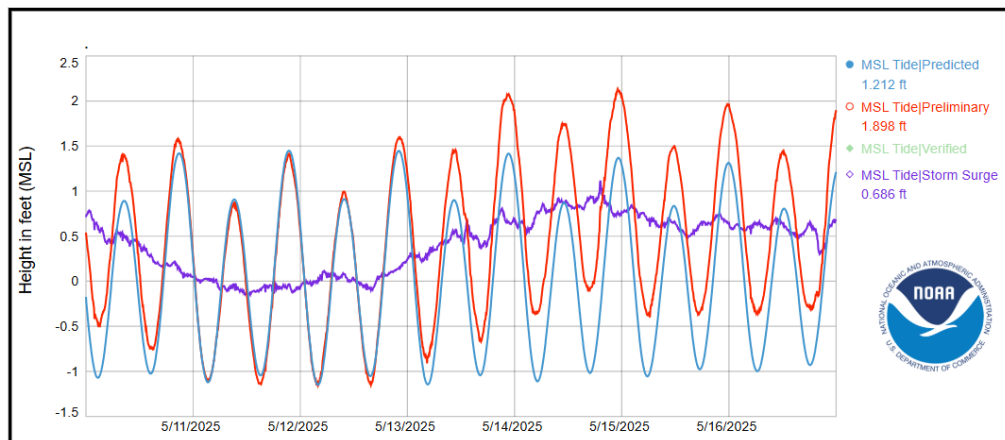
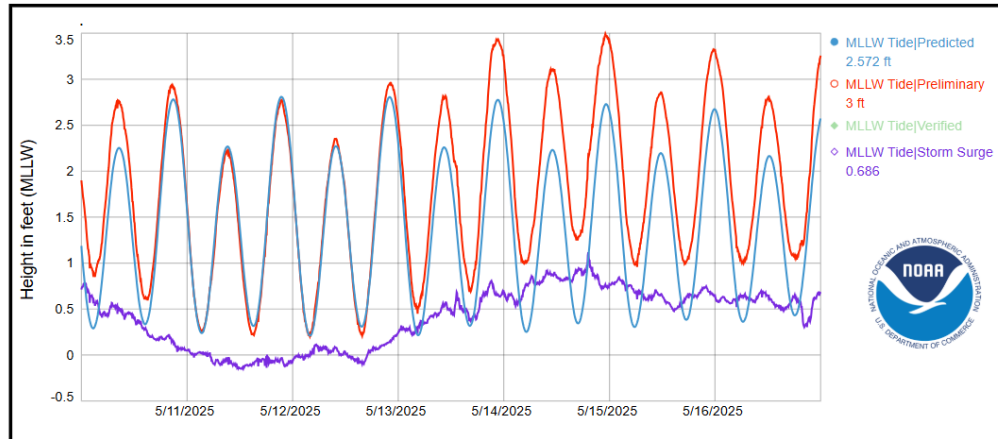


Figure 2. Preliminary data obtained from NOAA and a connection with Open Weather

Shallow Well Analysis:

Shallow wells are located at/or near HRSD Pump Stations to measure groundwater levels. The water column is measured using a pressure transducer located near the bottom of the well. The installed sensor measures gauge pressure in inches of water. The Shallow Well_NAVD88 measurement referenced in Appendix C refers to the elevation (referenced as NAVD 88) of the sensor plus the gauge measurement in feet.

DRAFT

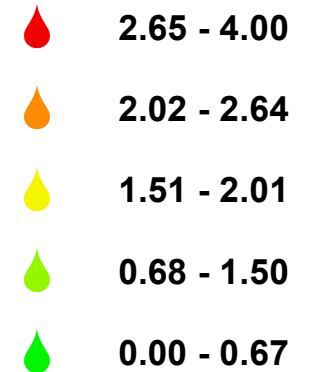
Appendix A

HRSD Rain Gauge Network Rainfall Totals

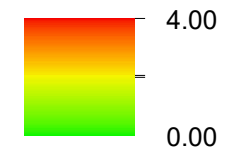
North Shore

May 12th-15th, 2025 Rainfall Analysis Total Rainfall

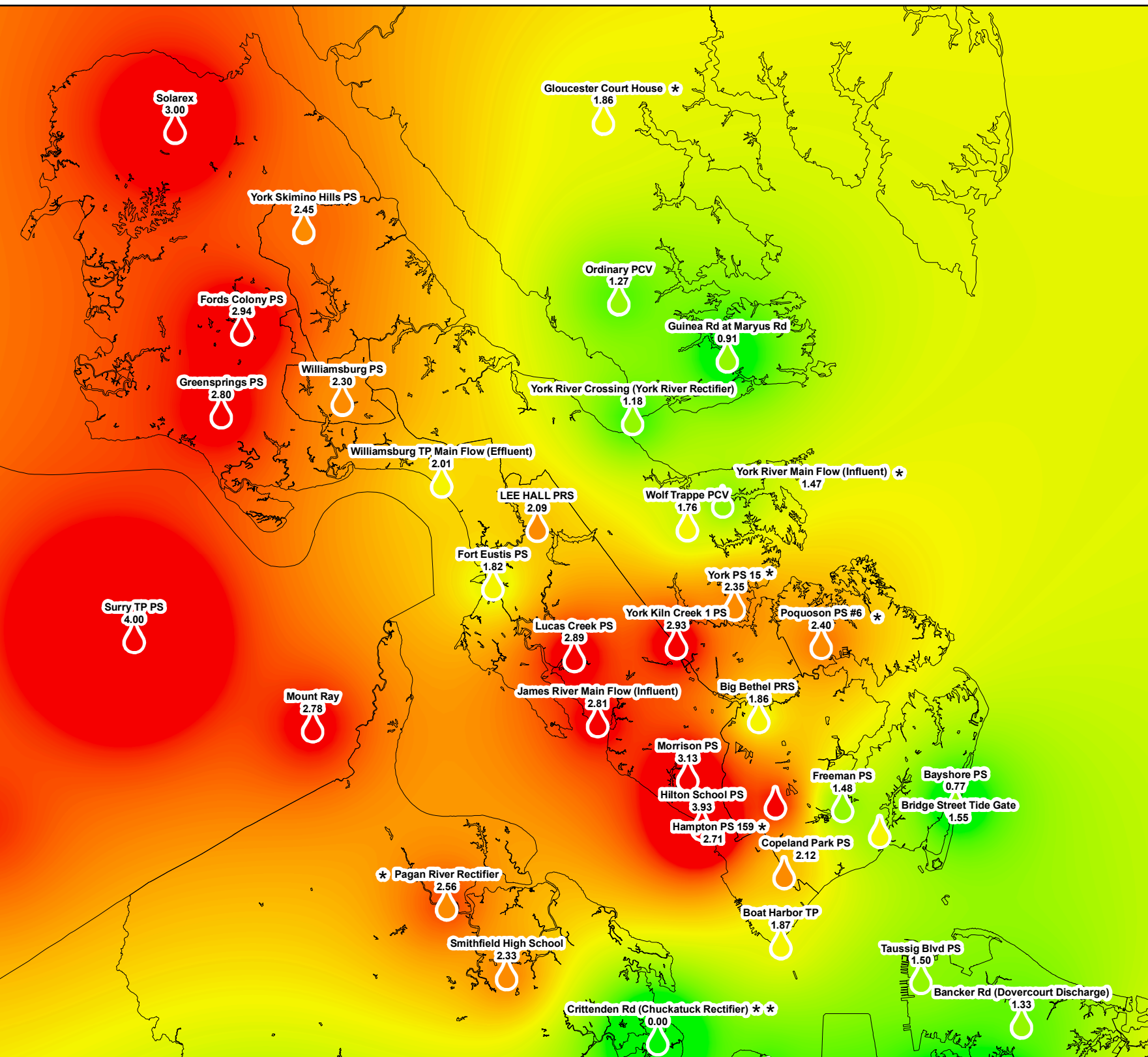
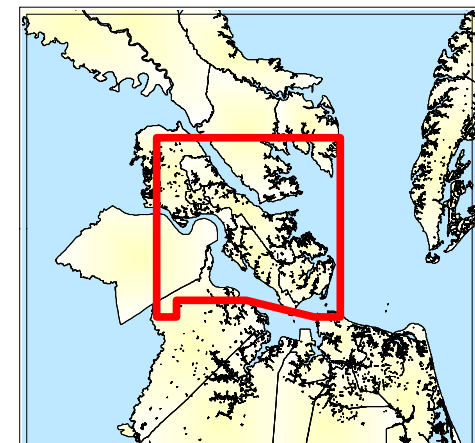
Rain Gauges (in):



Value



HRSD
Cleaning wastewater every day for a better Bay.



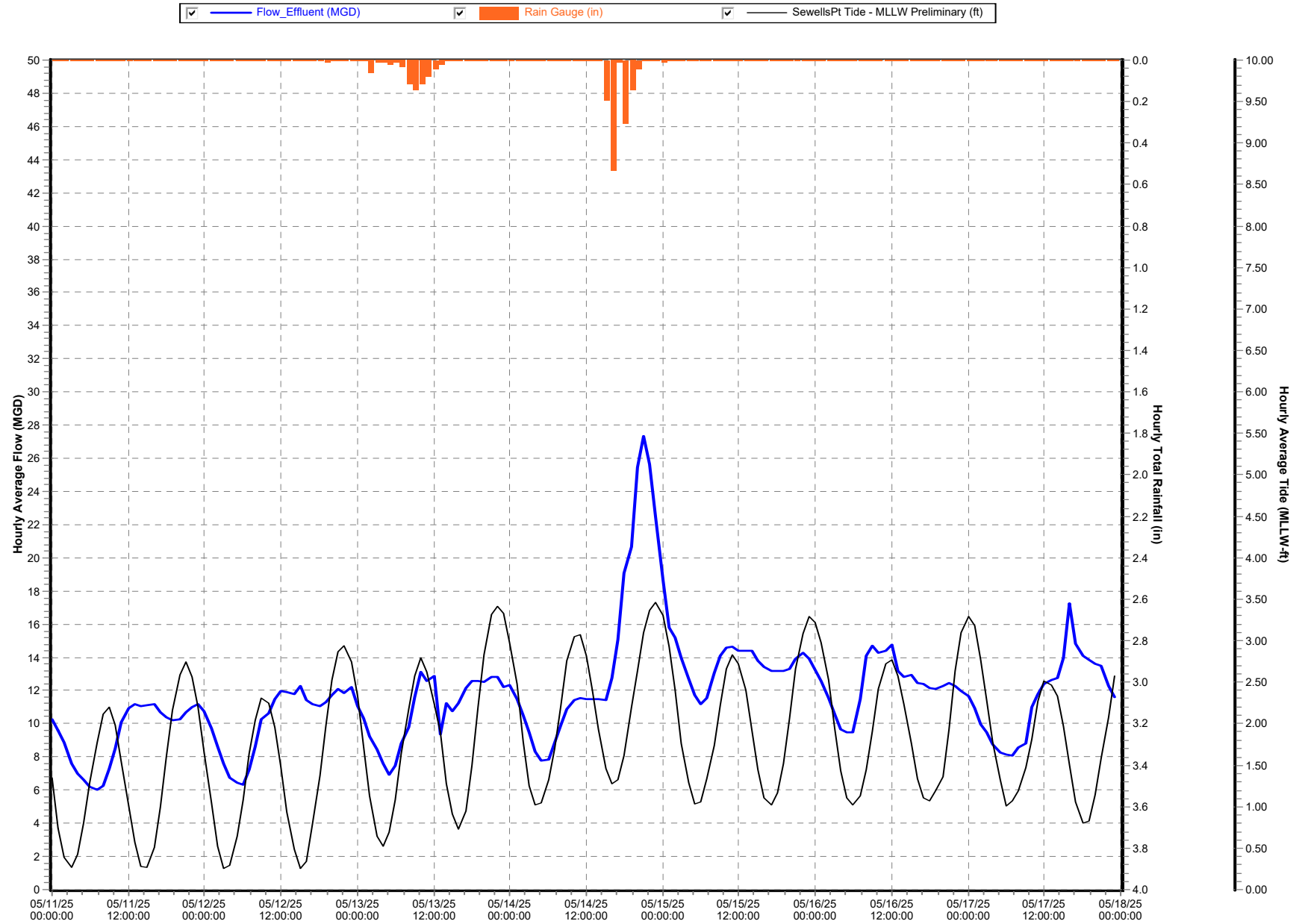
*Note: Rain Gauge was invalid for event and an average of surrounding sites was used. **Rain Gauge disconnected during event

Appendix B

HRSD Treatment Plant Flows

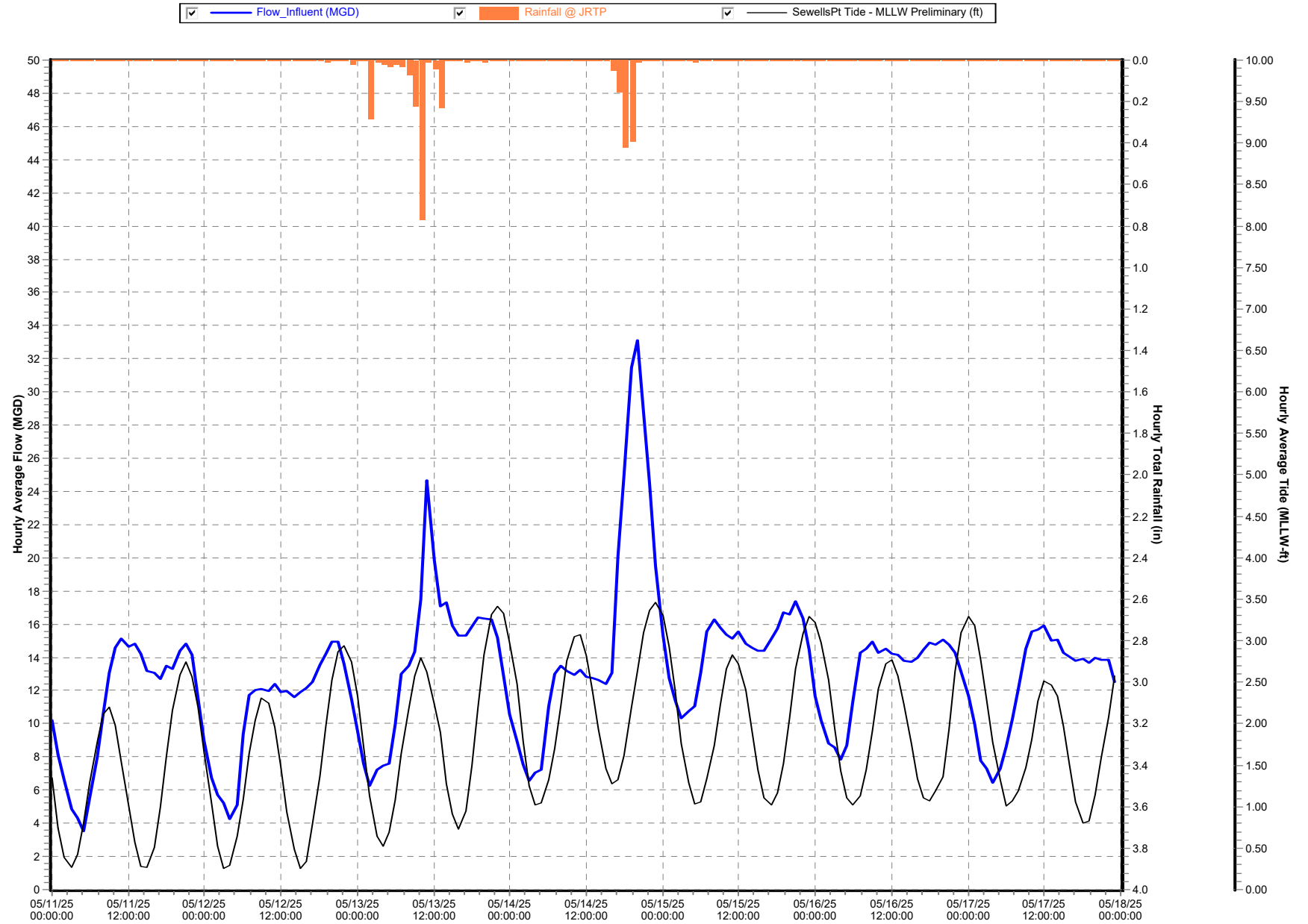
Boat Harbor Treatment Plant

MMPS-075 (05/11/25 to 05/18/25)



James River Treatment Plant

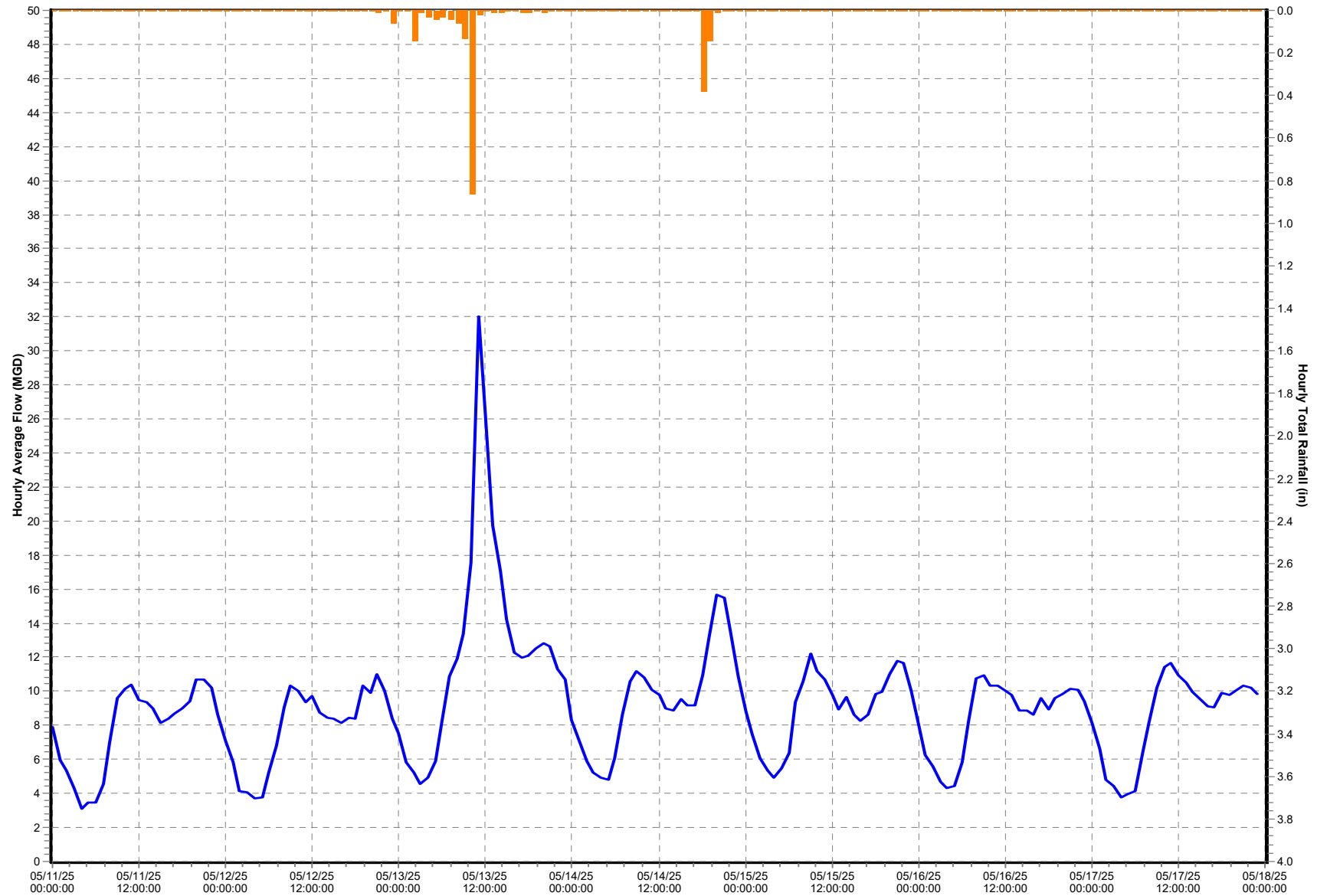
MMPS-184 (05/11/25 to 05/18/25)



Williamsburg Treatment Plant

MMPS-222 (05/11/25 to 05/18/25)

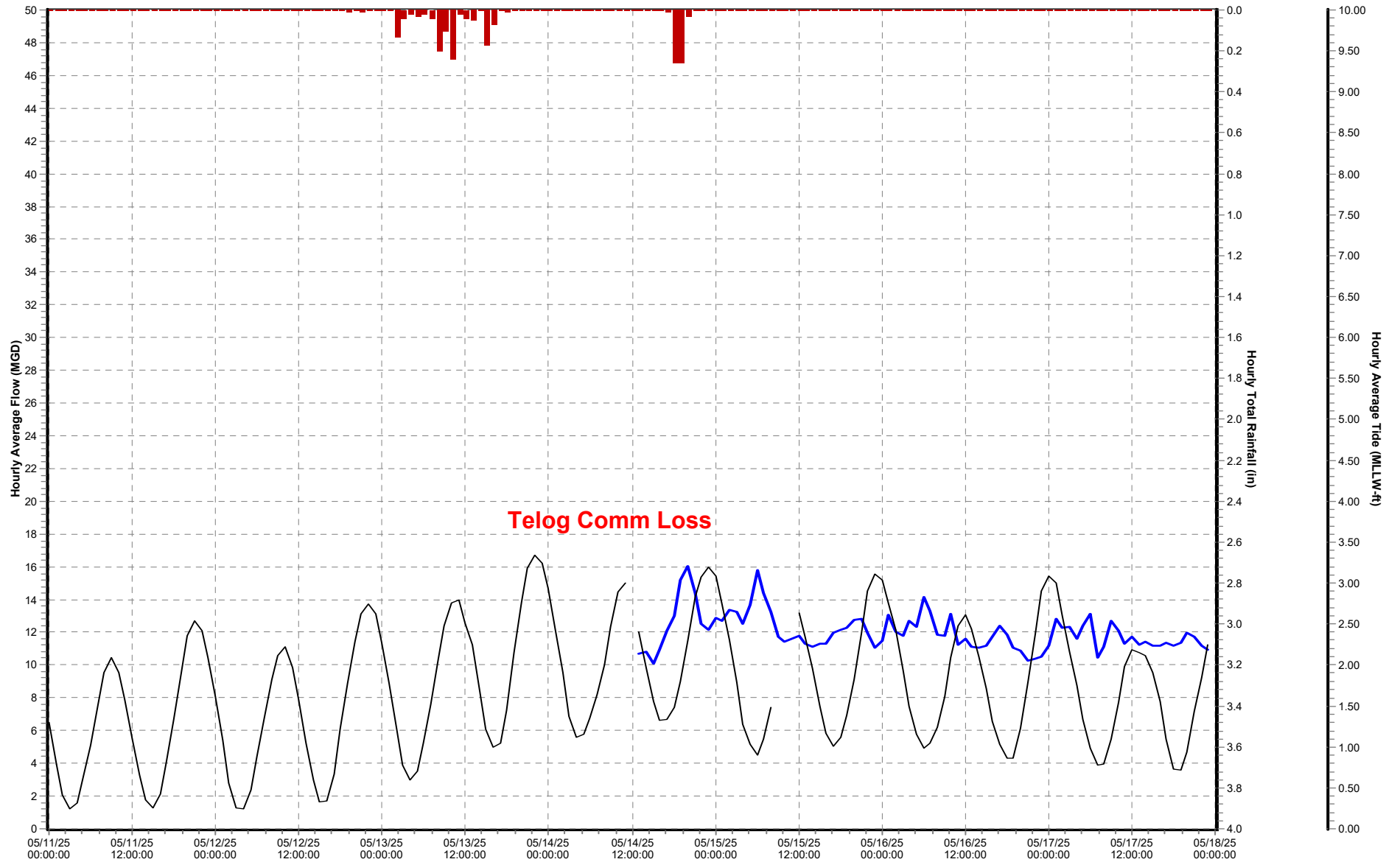
☒ Flow_Effluent (MGD) ☒ Rainfall @ WBTP



York River Treatment Plant

MMPS-235 (05/11/25 to 05/18/25)

☒ Flow_Influent (MGD) ☒ MMPS-234.MMPS-234.Rain Gauge (in) ☒ YorktownUSCG Tide - MLLW Preliminary (ft)

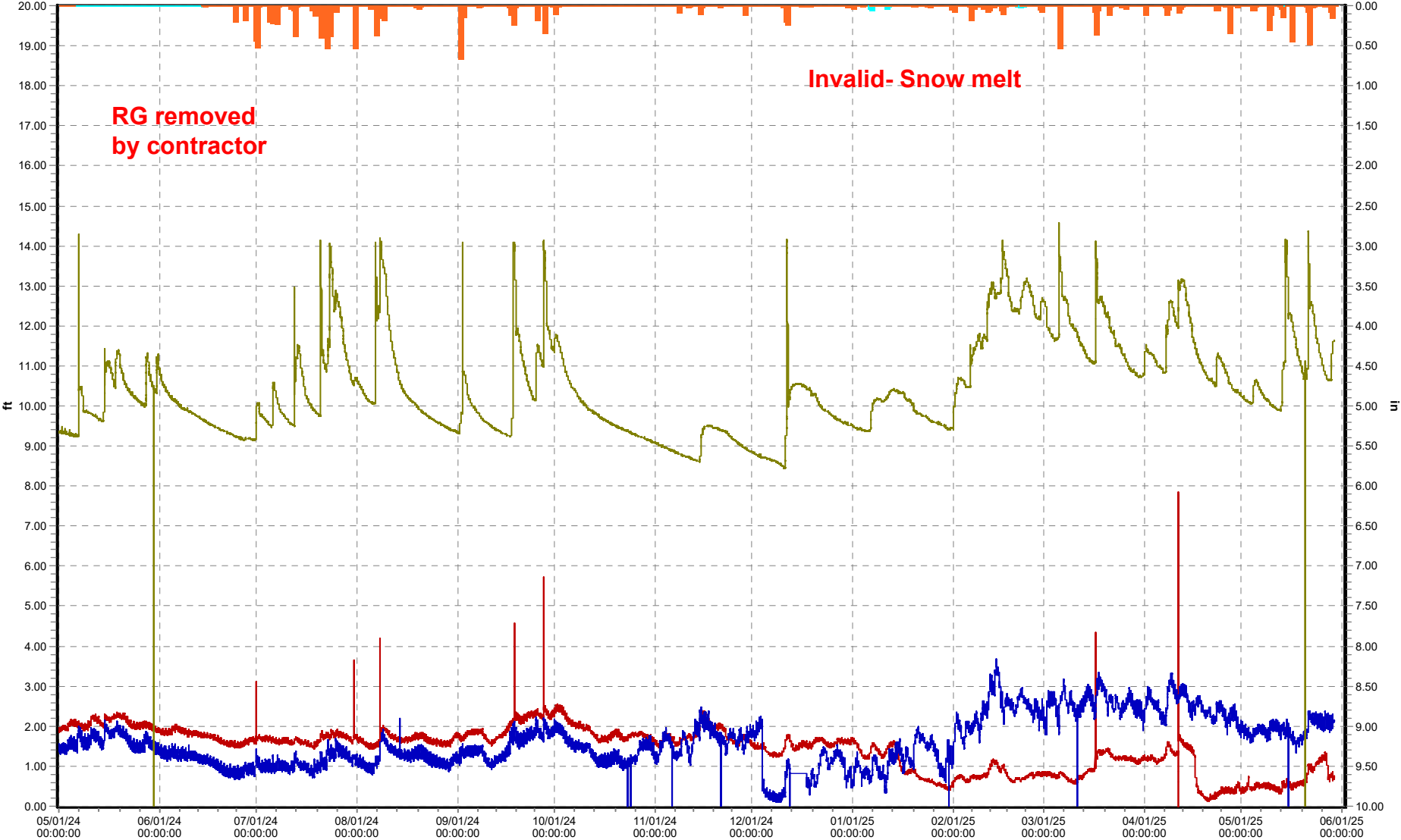


Appendix C

Shallow Well Analysis

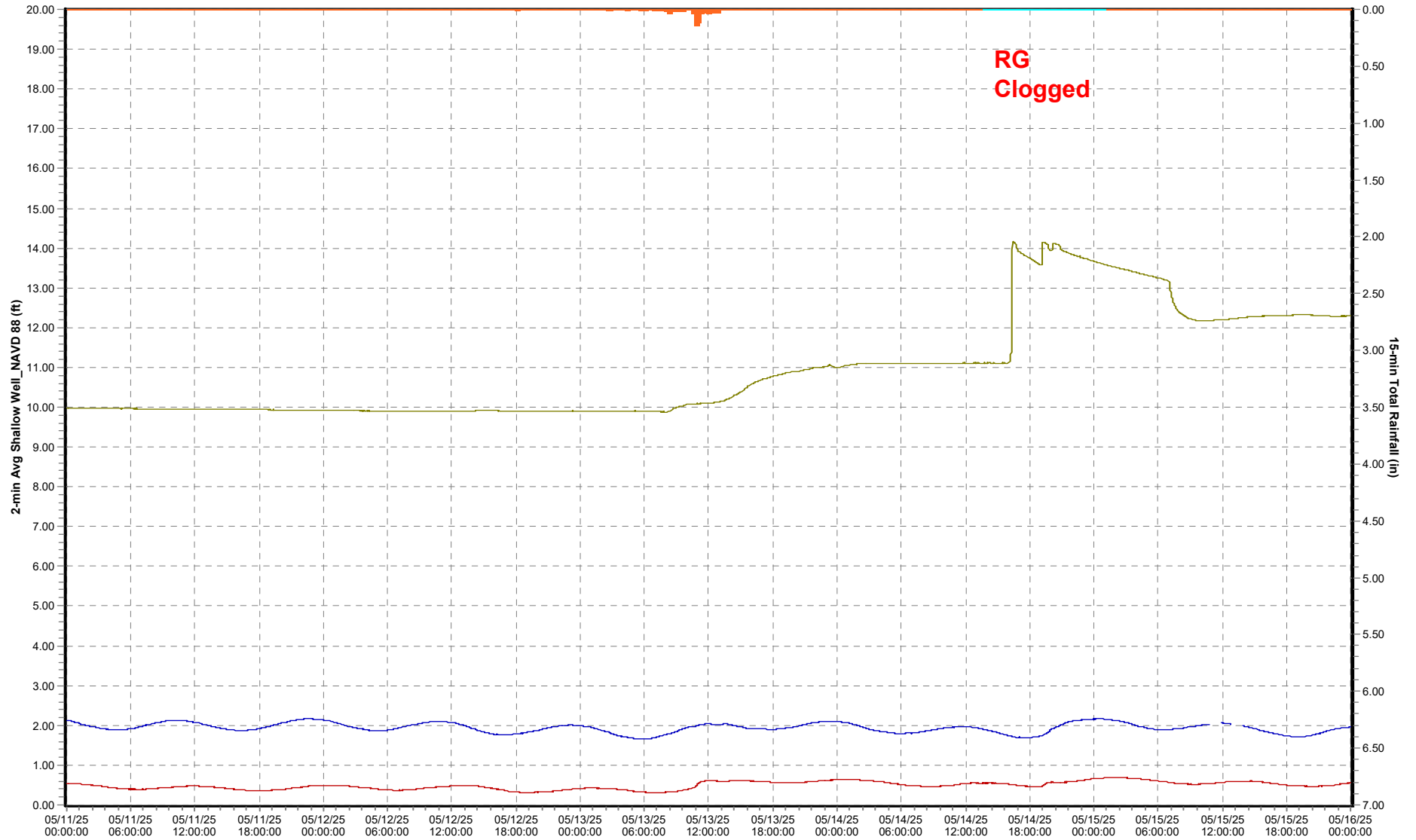
HRSD NP - Lucas Creek PS

MMPS-148 (05/01/24 to 06/01/25)



North Shore Shallow Well Graphs

05/11/25 to 05/16/25



Hampton Roads Sanitation District

Post-Storm Report



6/7/2025 – 6/10/2025

DISCLAIMER:

About the information on this HRSD server

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Summary

From June 7th through June 10th, there was an approximate 72-hour rainfall event that resulted in 4 sites on the North Shore and 1 site on the South Shore that met a 1 to 10-year rainfall recurrence interval throughout the HRSD rain gauge network. High humidity in the area combined with a cold front bringing heavy rain and thunderstorms in the morning followed by a short break then more showers in the afternoon. The next day brought more showers in the afternoon as temperatures rose followed by rain in the evening causing some flash flood warnings. On the last day a lingering area of low pressure offshore brought temperatures down but some heavy downpours, especially in the Norfolk area. North Shore sites averaged around 1.13 inches of rain while South Shore sites averaged around 0.90 inches. There was minimal impact on groundwater levels compared to June 2024 . See Appendix C for the Historical Shallow Well comparison.

HRSD flow and pressure meters met data reliability requirements per the MOM program. For all pressure meters in the aggregate and all pressure-side flow meters in the aggregate for each treatment plant service area listed below, at least 90% reliable data was achieved, based on the duration of system response to this rainfall event. The data reliability for the gravity flow meters is not included in this synopsis.

- Duration of system response: See Table Below
- Aggregate flow meter validity: 93.01%
- Aggregate pressure meter validity: 97.82%

Currently, rainfall recurrence intervals are only analyzed for a maximum of 96-hours. Rainfall analysis begins after 0.1 inches of rain has occurred. A 72-hour dry period of less than 0.1 inches of rain is typically used to signify two separate events. However, if a site returns to “dry weather” conditions prior to the next rainfall that occurs within 72 hours of the previous event, it is also considered for separate analysis. See Appendix A for the Rainfall Total System Maps.

The current criteria for publishing a post-storm analysis are the following:

- One or more rain gauge sites meet a two-year or greater RRI (rainfall recurrence interval) and at least 50% of sites in any treatment plant service area receive one inch of rainfall or greater,
- A rain gauge site meets a five-year or greater RRI, or
- A weather-related SSO occurs.

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

Treatment Plant Data: *(Data obtained from Telog Database)*
 See Appendix B for HRSD Treatment Plant Flows

HRSD Treatment Plant Data 6/7/2025 – 6/10/2025

North Shore				
Treatment Plant	Date of Peak Hourly Flow	Peak Hourly Flow (MGD)	Peak Hour	TPSA Total Rainfall Avg (in)
Boat Harbor	6/7/2025	12.36	13:00	0.01
	6/8/2025	13.37	21:00	0.24
	6/9/2025	18.38	09:00	0.95
	6/10/2025	14.05	10:00	0.03
James River	6/7/2025	15.11	13:00	0.10
	6/8/2025	16.23	13:00	0.05
	6/9/2025	17.32	02:00	0.76
	6/10/2025	13.77	07:00	0.04
Williamsburg	6/7/2025	11.54	13:00	0.14
	6/8/2025	13.08	17:00	0.69
	6/9/2025	15.09	00:00	0.20
	6/10/2025	11.46	09:00	0.04
York River	6/7/2025	11.66	19:00	0.14
	6/8/2025	13.52	07:00	0.47
	6/9/2025	19.09	07:00	0.86
	6/10/2025	16.85	06:00	0.05

HRSD Treatment Plant Data 6/7/2025 – 6/10/2025

South Shore				
Treatment Plant	Date of Peak Hourly Flow	Peak Hourly Flow (MGD)	Peak Hour	TPSA Total Rainfall Avg (in)
Army Base	6/7/2025	11.12	17:00	0.27
	6/8/2025	14.67	19:00	0.58
	6/9/2025	15.73	20:00	0.72
	6/10/2025	10.51	08:00	0.02
Atlantic	6/7/2025	57.91	13:00	0.04
	6/8/2025	66.65	09:00	0.61
	6/9/2025	66.97	20:00	0.29
	6/10/2025	57.16	11:00	0.00
Nansemond	6/7/2025	22.30	13:00	0.04
	6/8/2025	24.63	10:00	0.67
	6/9/2025	24.29	20:00	0.54
	6/10/2025	20.15	08:00	0.00
VIP	6/7/2025	28.00	12:00	0.03
	6/8/2025	31.60	11:00	0.34
	6/9/2025	42.96	20:00	0.69
	6/10/2025	30.55	00:00	0.03

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

North Shore

Weather:

Rainfall (HRSD Rainfall Gauges): *Recurrence intervals based on NOAA Atlas 14*

Rain Gauge Site	Peak Rainfall RI (Duration)	Locality
<i>Boat Harbor Treatment Plant Service Area¹</i>		
Bayshore PS	DNQ	HAMP
Bridge Street Tide Gate	1- to 2-year (1hr)	HAMP
Boat Harbor	DNQ	NEWP
Copeland Park PS	DNQ	NEWP
Hampton PS 159	Invalid	HAMP
<i>James River Treatment Plant Service Area¹</i>		
Hilton School PS	Invalid	NEWP
James River Main Flow (Influent)	DNQ	NEWP
Lee Hall PRS	DNQ	NEWP
Lucas Creek PS	Disconnected	NEWP
Morrison PS	5- to 10-year (1hr)	NEWP
<i>Williamsburg Treatment Plant Service Area¹</i>		
Ford's Colony	DNQ	JCSA
Fort Eustis PS	DNQ	NEWP
Greensprings PS	DNQ	JCA
Solarex	DNQ	JCSA
Williamsburg Main Flow (Effluent)	DNQ	JCSA
Williamsburg PS	DNQ	WILL
York Skimino Hills PS	DNQ	YORK
<i>York River Treatment Plant Service Area¹</i>		
Big Bethel PRS	2- to 5-year (1hr)	HAMP
Freeman PS	2- to 5-year (1hr)	HAMP
Gloucester Court House	DNQ	GLOU
Guinea Rd at Maryus Rd	DNQ	GLOU
Ordinary PCV	DNQ	GLOU
Poquoson PS 6	DNQ	POQ
Wolf Trappe PCV	DNQ	YORK
York Kiln Creek 1 PS	DNQ	YORK
York PS 15	DNQ	YORK
York River Main Flow (Influent)	DNQ	YORK
York River Crossing (York River Rectifier)	DNQ	GLOU

Note:

1. Typical treatment plant service area.

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

Newport News-Williamsburg International (PHF)

○ Wind and Rainfall (daily total):

Date	Gust (max)	Sustained (max)	Sustained (avg)	Direction	Rainfall (in)
06/7/2025	23 mph	15 mph	6 mph	SW	0.00
06/8/2025	20 mph	12 mph	6 mph	NW	0.11
06/9/2025	-	14 mph	6 mph	SE	0.21
06/10/2025	-	-	-	-	0.45

Tide:

- Yorktown USCG Training Center:
 - Storm Surge: An approximate 1.08-foot storm surge was observed.

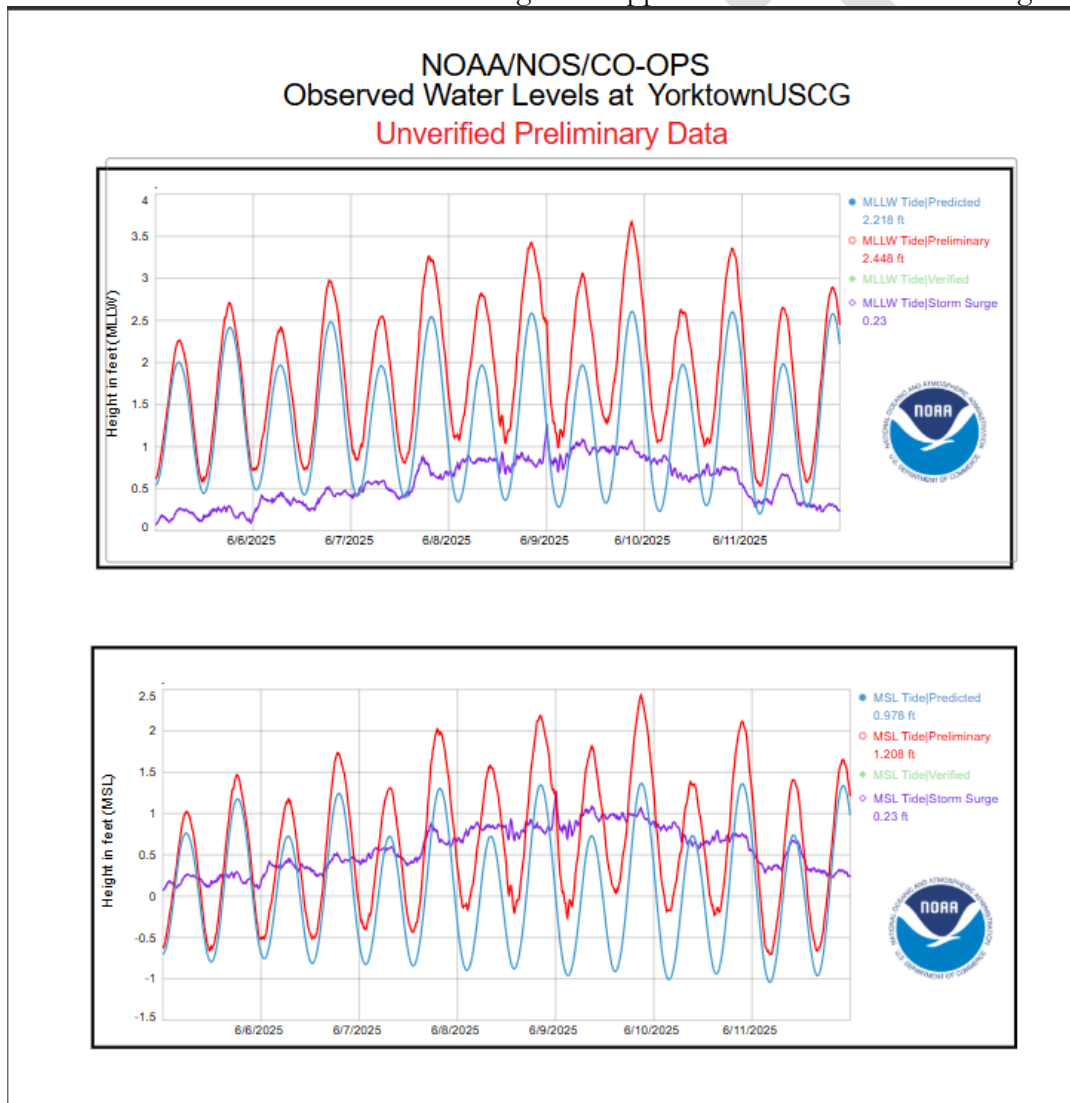


Figure 1. Preliminary data obtained from NOAA and a connection with Open Weather

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

- Sewells Point Tide Station:
 - Storm Surge: An approximate 1.12 foot storm surge was observed.

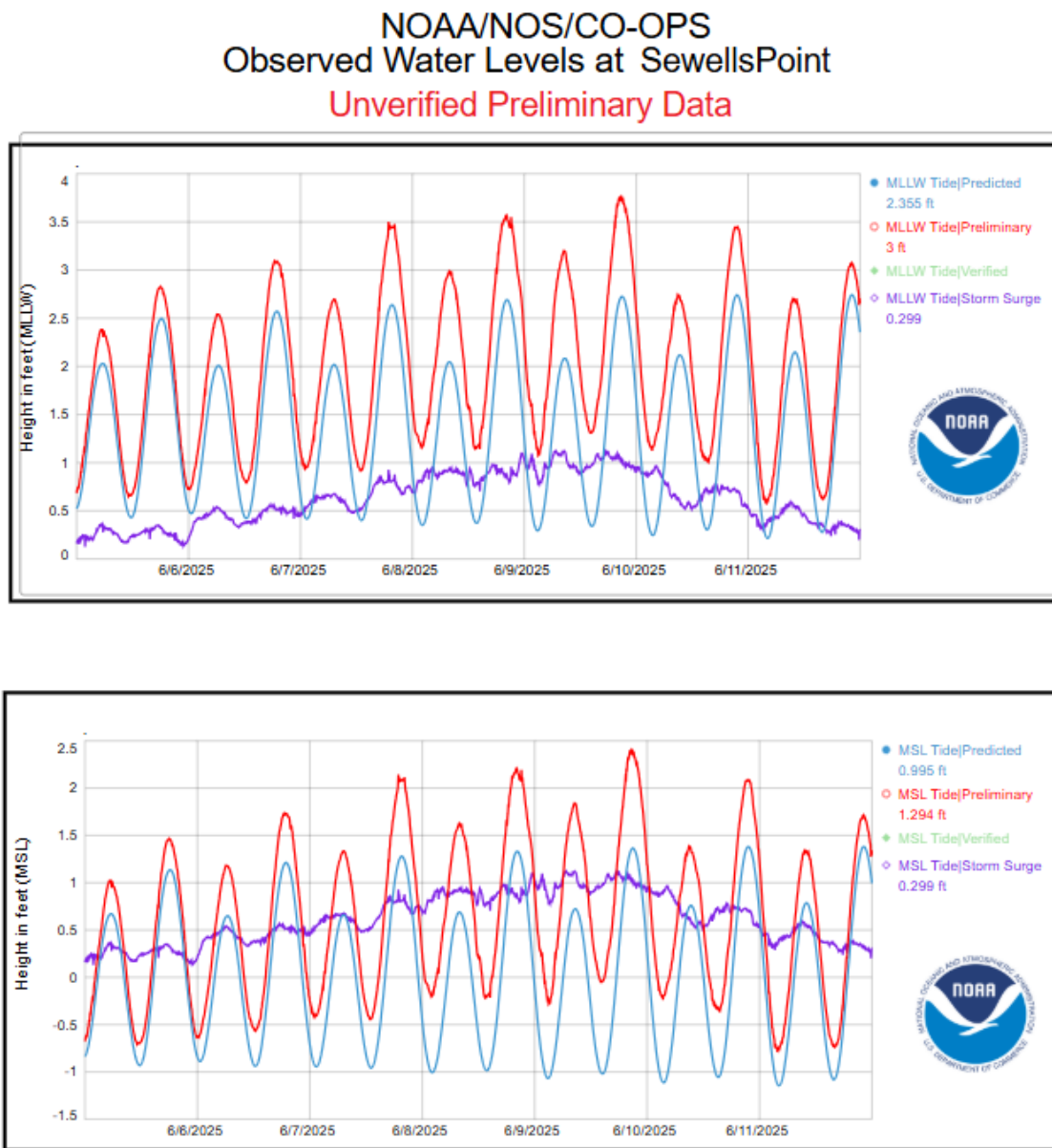


Figure 2. Preliminary data obtained from NOAA and a connection with Open Weather

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

South Shore

Weather:

Rainfall (HRSD Rainfall Gauges): *Recurrence intervals based on NOAA Atlas 14*

Rain Gauge Site	Peak Rainfall RI (Duration)	Locality
<i>Army Base Treatment Plant Service Area¹</i>		
Bancker Rd (Dovercourt Discharge)	DNQ	NORF
Taussig Blvd PS	DNQ	NORF
<i>Atlantic Treatment Plant Service Area¹</i>		
Callison at GB Locks	DNQ	CHES
Chesapeake PS 243	DNQ	CHES
Chesapeake PS 254	Disconnected	CHES
Courthouse PRS	DNQ	VAB
Elbow Rd PRS	DNQ	CHES
John B. Dey MLV-AT side	DNQ	VAB
Hickory EOL	DNQ	CHES
Kempsville PRS	DNQ	VAB
Lagomar IFM at Atlantic TP	DNQ	VAB
Laskin Rd PRS	DNQ	VAB
Pine Tree PRS	DNQ	VAB
Shipps Corner PRS	DNQ	VAB
<i>Ches-Liz Treatment Plant Service Area¹</i>		
Dozier's Corner PS	DNQ	CHES
Independence PRS	DNQ	VAB
Northampton Blvd at Wesleyan Dr	DNQ	NORF
Providence PRS	DNQ	VAB
Shore Dr @ Jack Frost	DNQ	CHES
<i>Nansemond Treatment Plant Service Area¹</i>		
Bowers Hill PRS	DNQ	CHES
Cedar Lane PS	DNQ	PORT
Cedar Rd at Dominion Blvd	DNQ	CHES
Chesapeake PS 20	DNQ	CHES
Chesapeake PS 238	Disconnected	CHES
Crittenden Rd_Chuckatuck Rectifier	Disconnected	SUFF
Deep Creek PRS	DNQ	CHES
Hill Point Rectifier	2- to 5-year (1hr)	SUFF
Lake Kilby WTP	DNQ	SUFF
Nansemond Main Flow (Effluent)	DNQ	SUFF
Pagan River Rectifier	DNQ	IOW
Pughsville PS	DNQ	SUFF
Route 337 PRS	DNQ	CHES
Smithfield High School	DNQ	IOW
Suffolk PS	DNQ	SUFF
Suffolk PS 81	DNQ	SUFF
Suffolk PS 87	DNQ	SUFF

June 7th – June 10th, 2025 – Post-Storm Rain Event Synopsis

Rain Gauge Site	Peak Rainfall RI (Duration)	Locality
Windsor Duke St PS	Disconnected	IOW
<i>VIP Treatment Plant Service Area¹</i>		
Elizabeth River Crossing_Eastern Branch	DNQ	NORF
Ferebee Avenue PS	Invalid	CHES
Luxembourg Avenue PS	Disconnected	NORF
Rodman Ave PS	DNQ	PORT
Va Beach Blvd PS	DNQ	NORF
VIP Main Flow (Effluent)	DNQ	NORF

Note:

1. Typical treatment plant service area.

*Duration represents the minimum amount of time it took to reach the specified RRI.

Norfolk International Airport (ORF)

○ Wind and Rainfall (daily total):

Date	Gust (max)	Sustained (max)	Sustained (avg)	Direction	Rainfall (in)
06/7/2025	26 mph	15 mph	5 mph	W	0.10
06/8/2025	20 mph	14 mph	6 mph	E	0.27
06/9/2025	38 mph	28 mph	6 mph	SW	0.99
06/10/2025	31 mph	22 mph	14 mph	SW	0.00

Tide:

- Sewells Point Tide Station:
 - Storm Surge: An approximate 1.12 foot storm surge was observed.

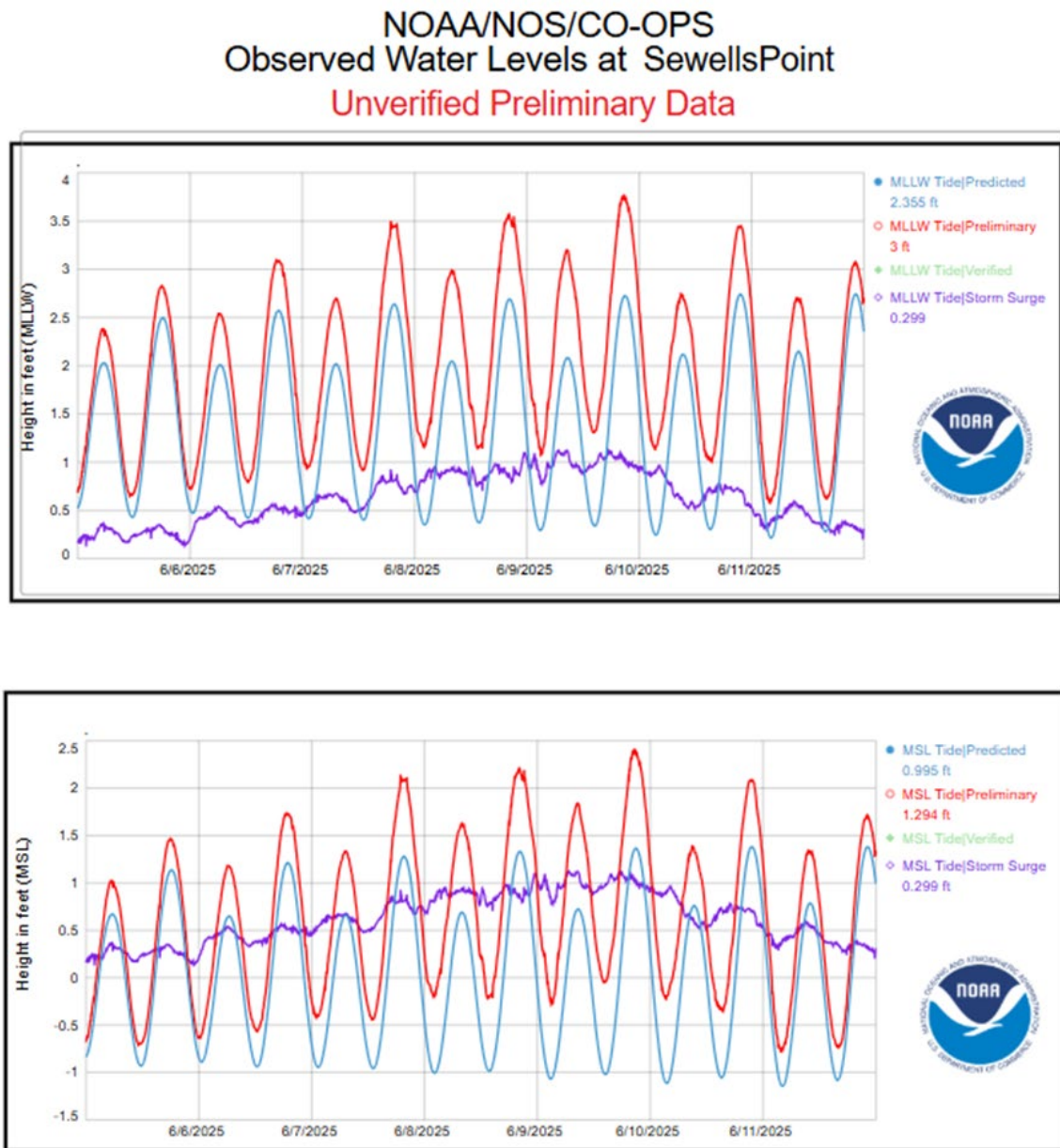


Figure 3. Preliminary data obtained from NOAA and a connection with Open Weather

Shallow Well Analysis:

Shallow wells are located at/or near HRSD Pump Stations to measure groundwater levels. The water column is measured using a pressure transducer located near the bottom of the well. The installed sensor measures gauge pressure in inches of water. The Shallow Well_NAVD88 measurement referenced in Appendix C refers to the elevation (referenced as NAVD 88) of the sensor plus the gauge measurement in feet.

DRAFT

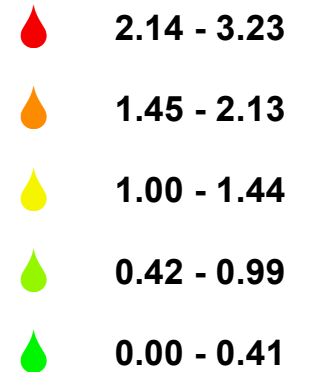
Appendix A

HRSD Rain Gauge Network Rainfall Totals

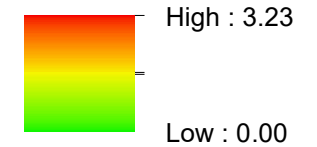
North Shore

June 7th - 10th, 2025
Rainfall Analysis
Total Rainfall

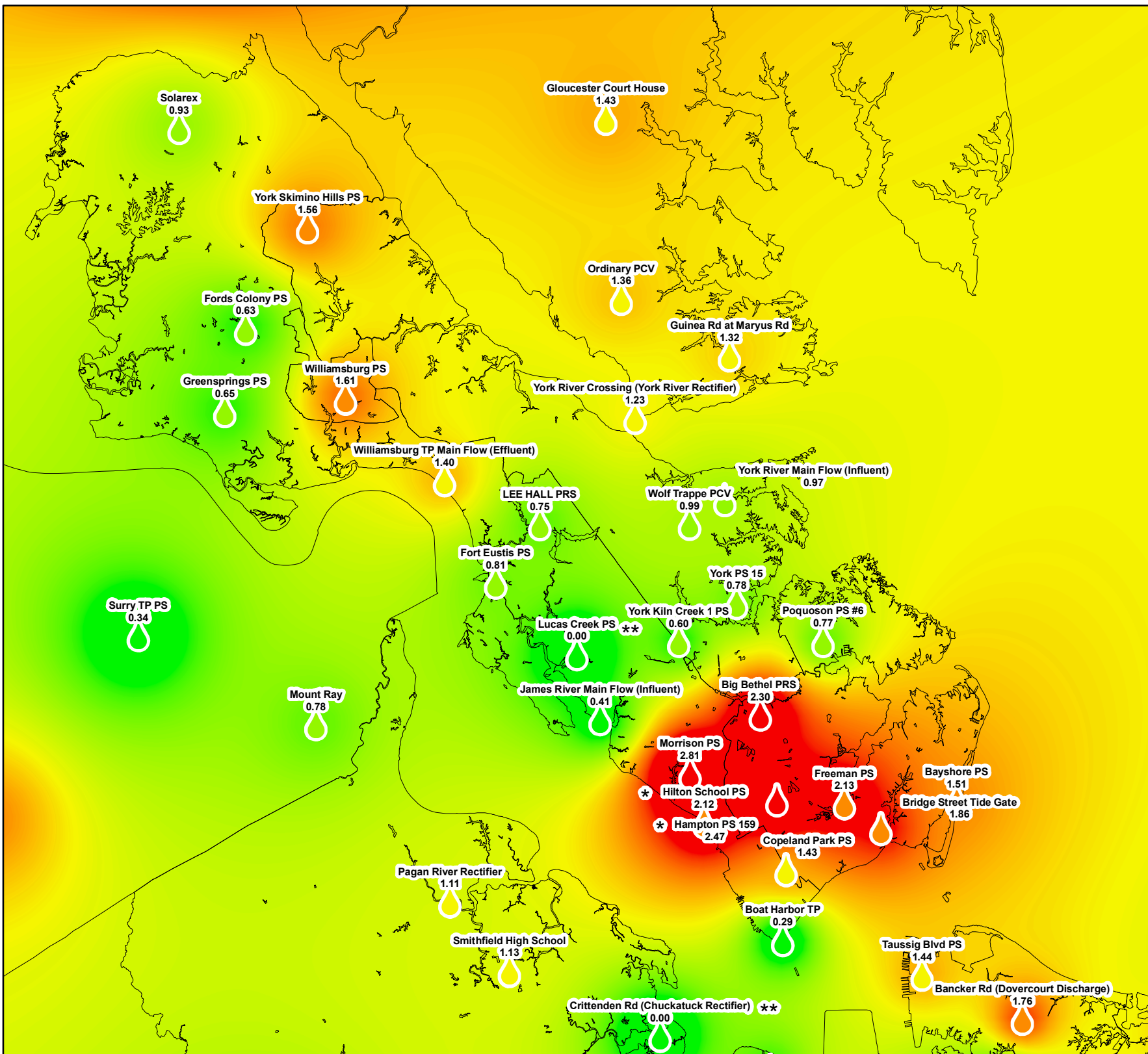
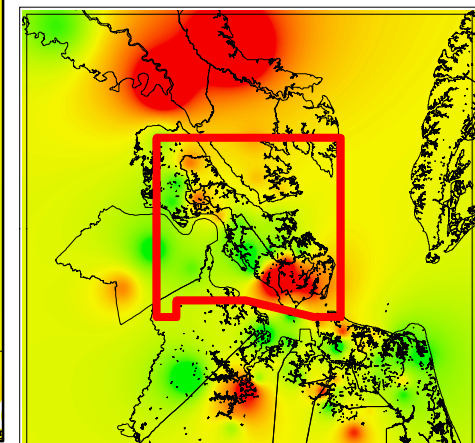
Rain Gauges (in):



Value



HRSD
Cleaning wastewater every day for a better Bay.

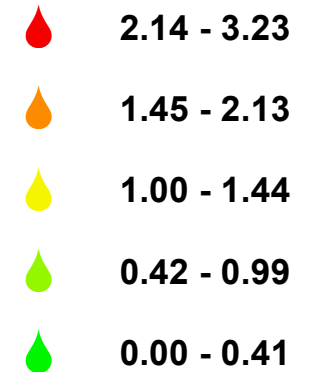


*Note: Rain Gauge was invalid for event and an average of surrounding sites was used. **Rain Gauge disconnected during event

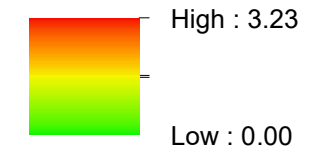
South Shore - East

June 7th - 10th, 2025
Rainfall Analysis
Total Rainfall

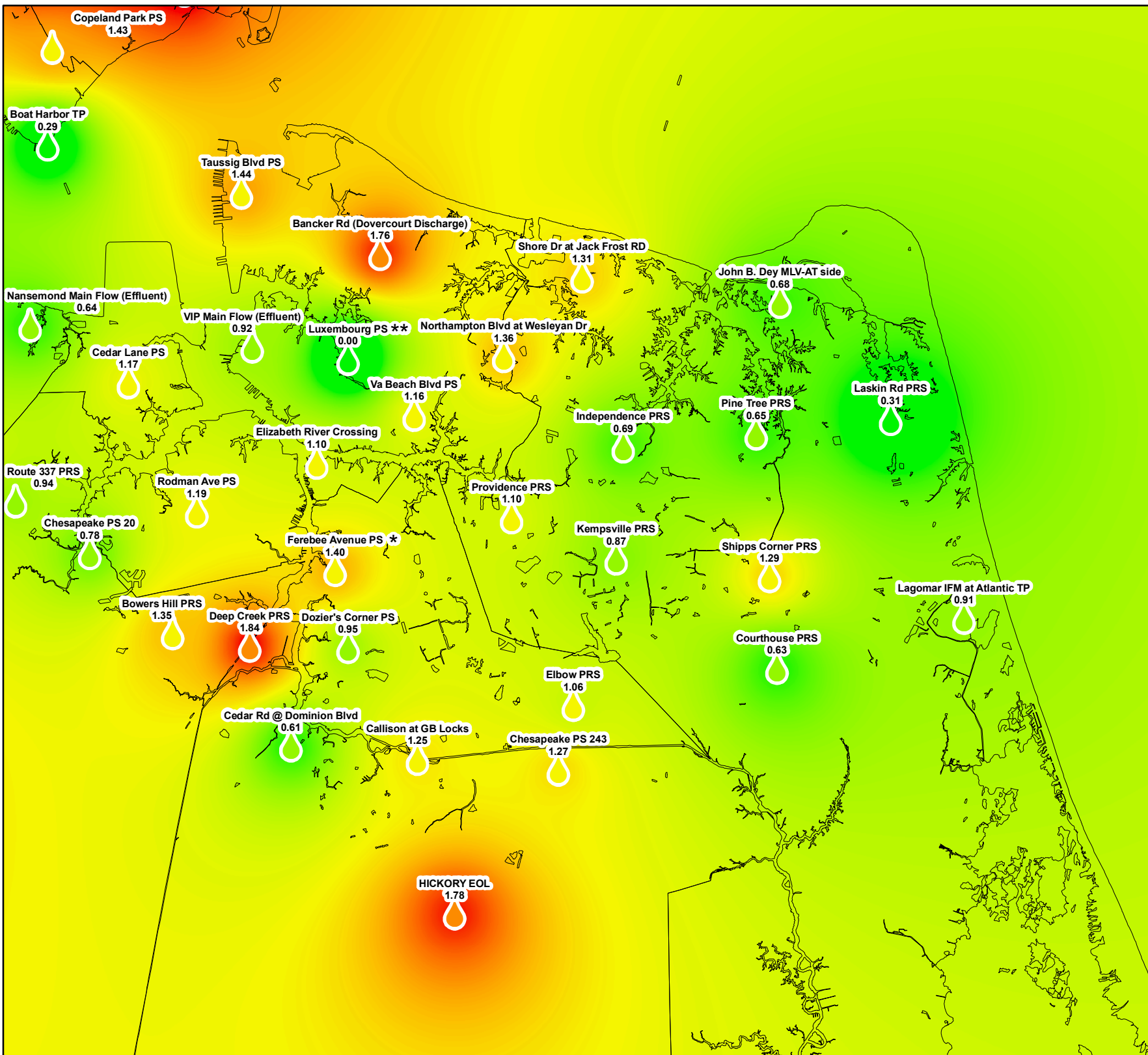
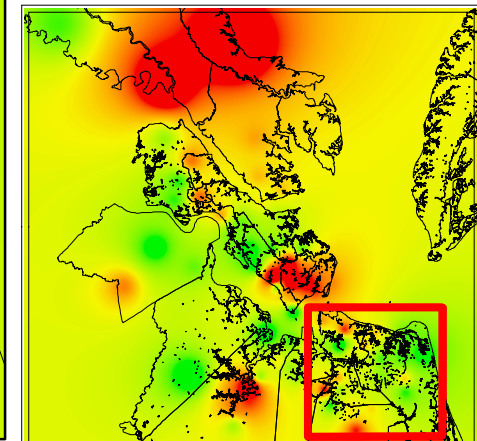
Rain Gauges (in):



Value



HRSD
Cleaning wastewater every day for a better Bay.

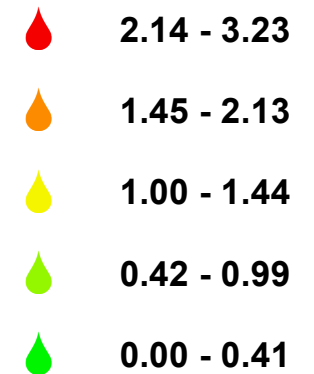


*Note: Rain Gauge was invalid for event and an average of surrounding sites was used. **Rain Gauge disconnected during event

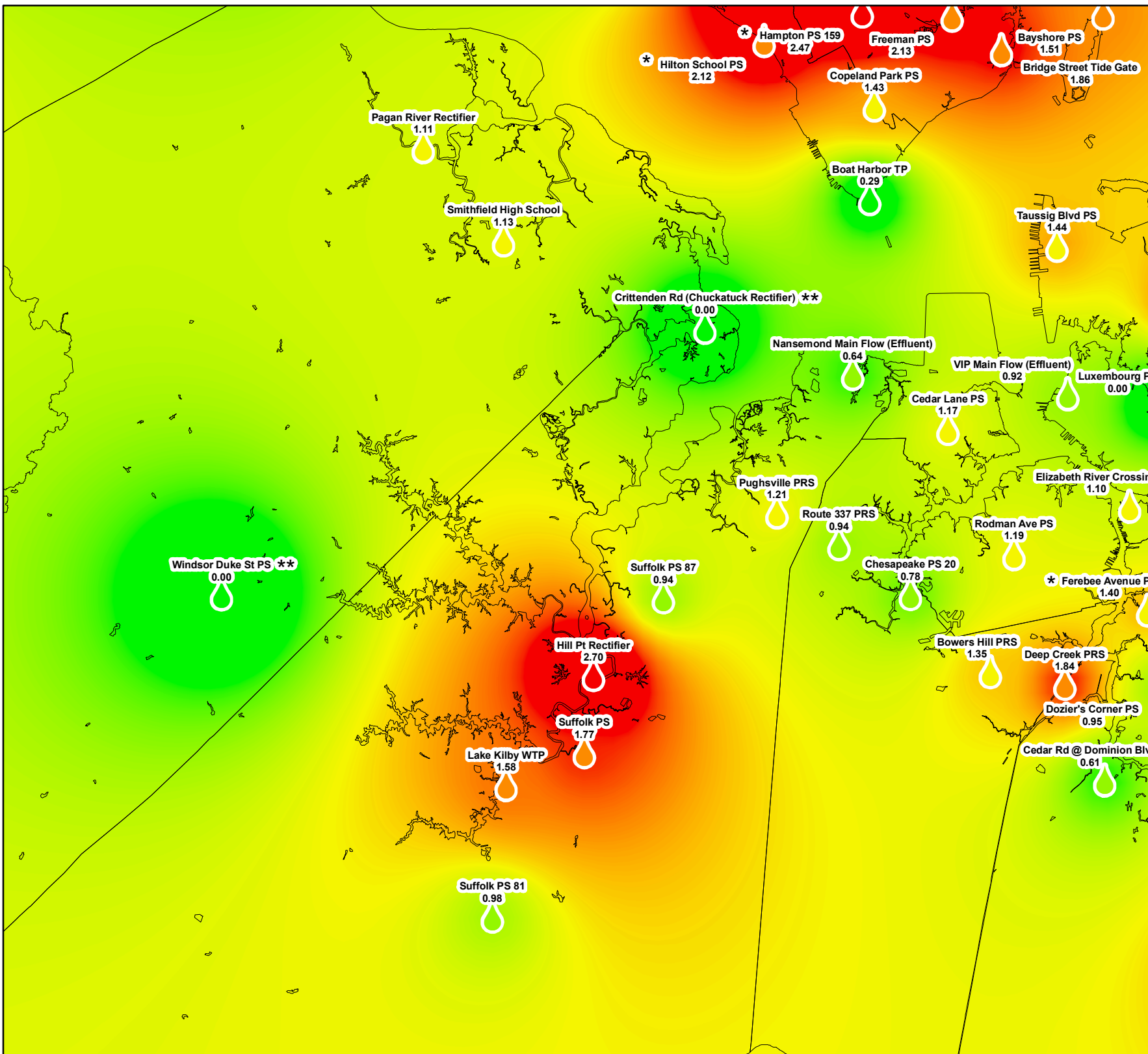
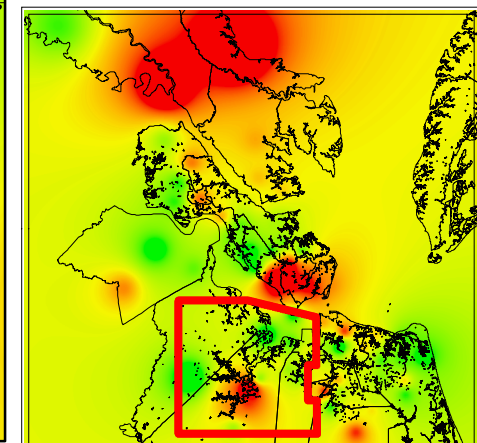
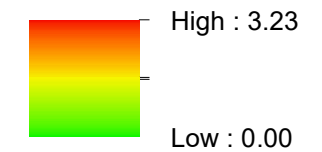
South Shore - West

June 7th - 10th, 2025 Rainfall Analysis Total Rainfall

Rain Gauges (in):



Value



*Note: Rain Gauge was invalid for event and an average of surrounding sites was used. **Rain Gauge disconnected during event

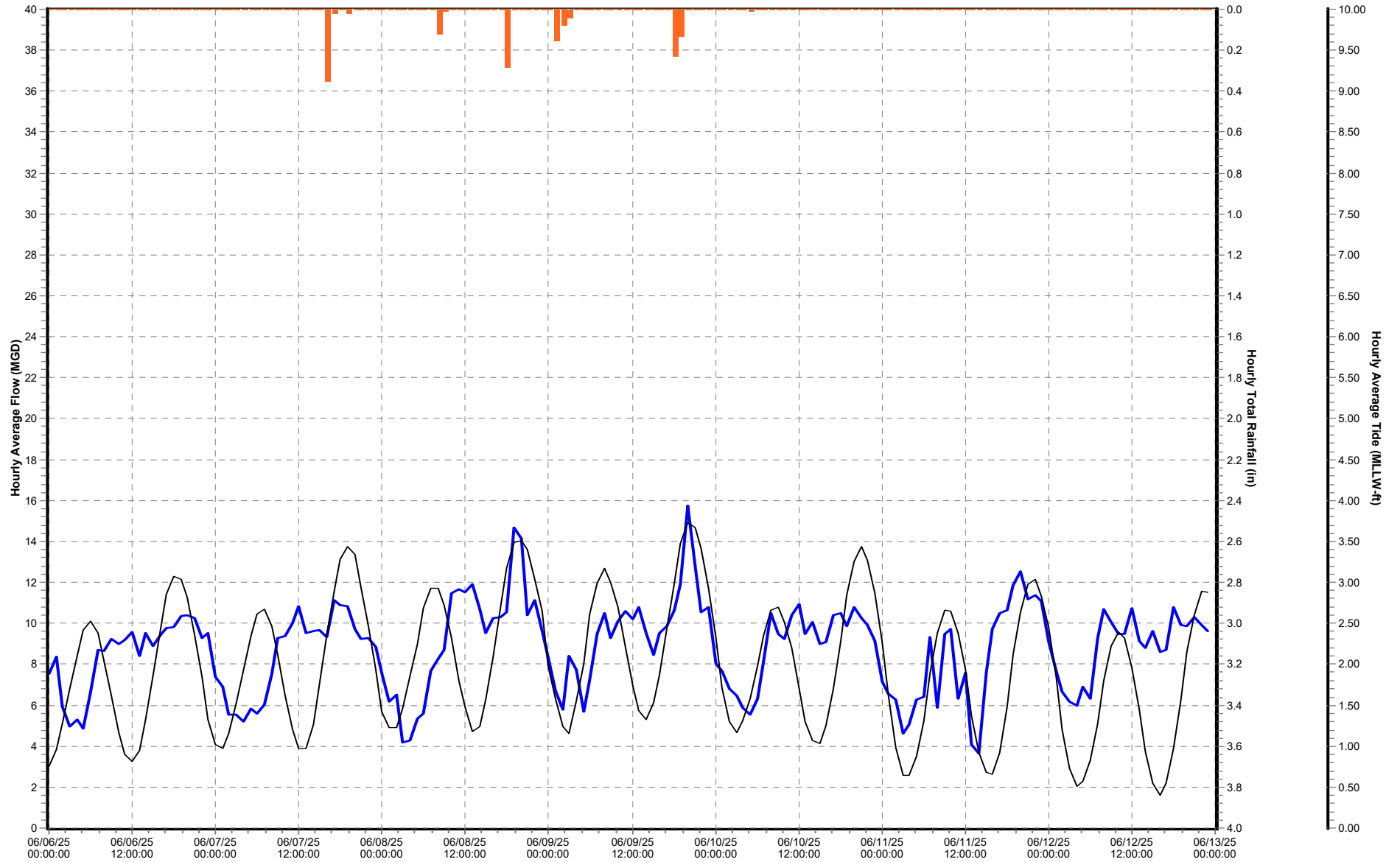
Appendix B

HRSD Treatment Plant Flows

Army Base Treatment Plant

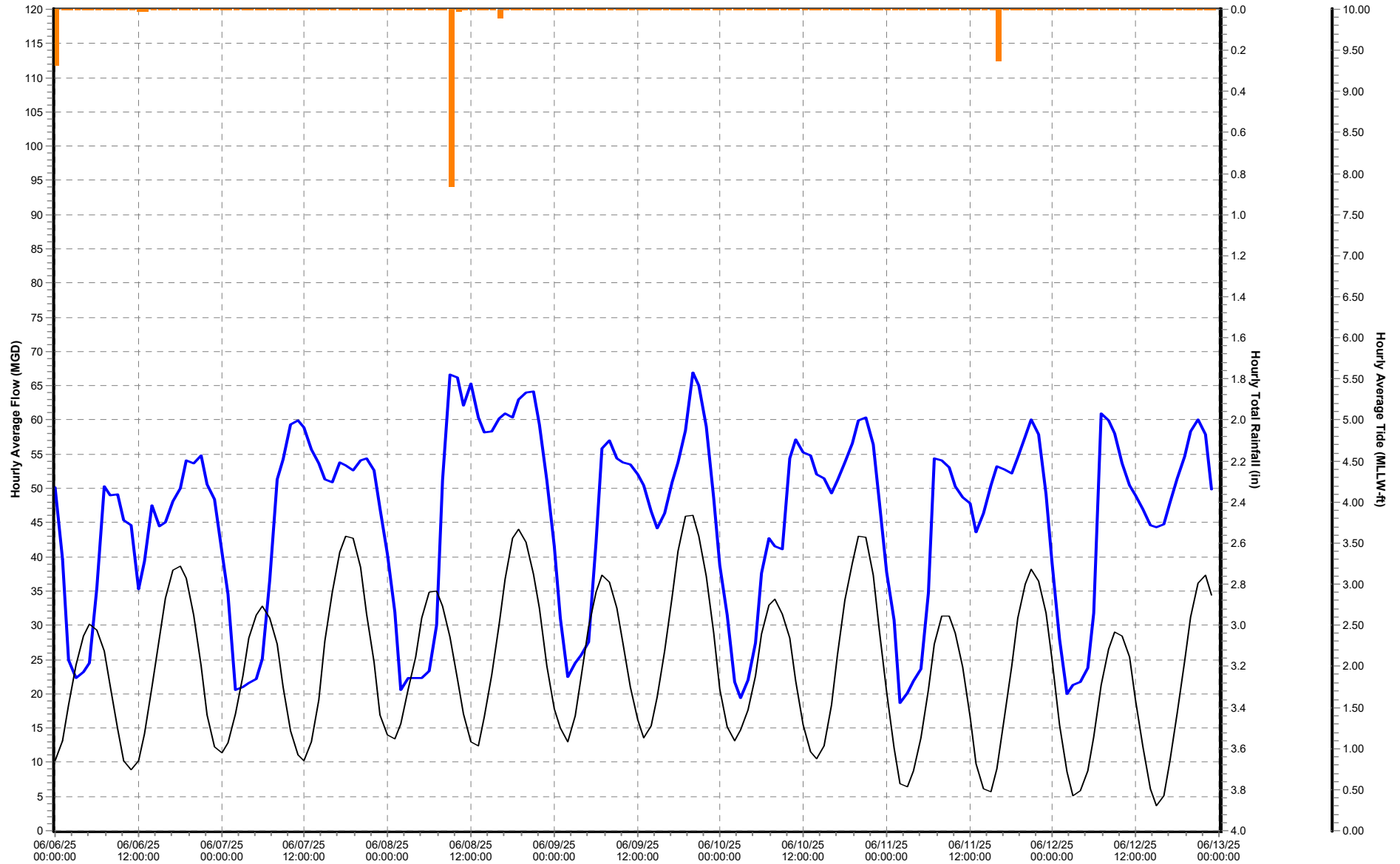
MMPS-035 (06/06/25 to 06/13/25)

☒ MMPS-035.Flow_Effluent (MGD) ☒ MMPS-175: Taussig Blvd PS Rain Gauge ☒ SewellsPt Tide - MLLW Preliminary (ft)



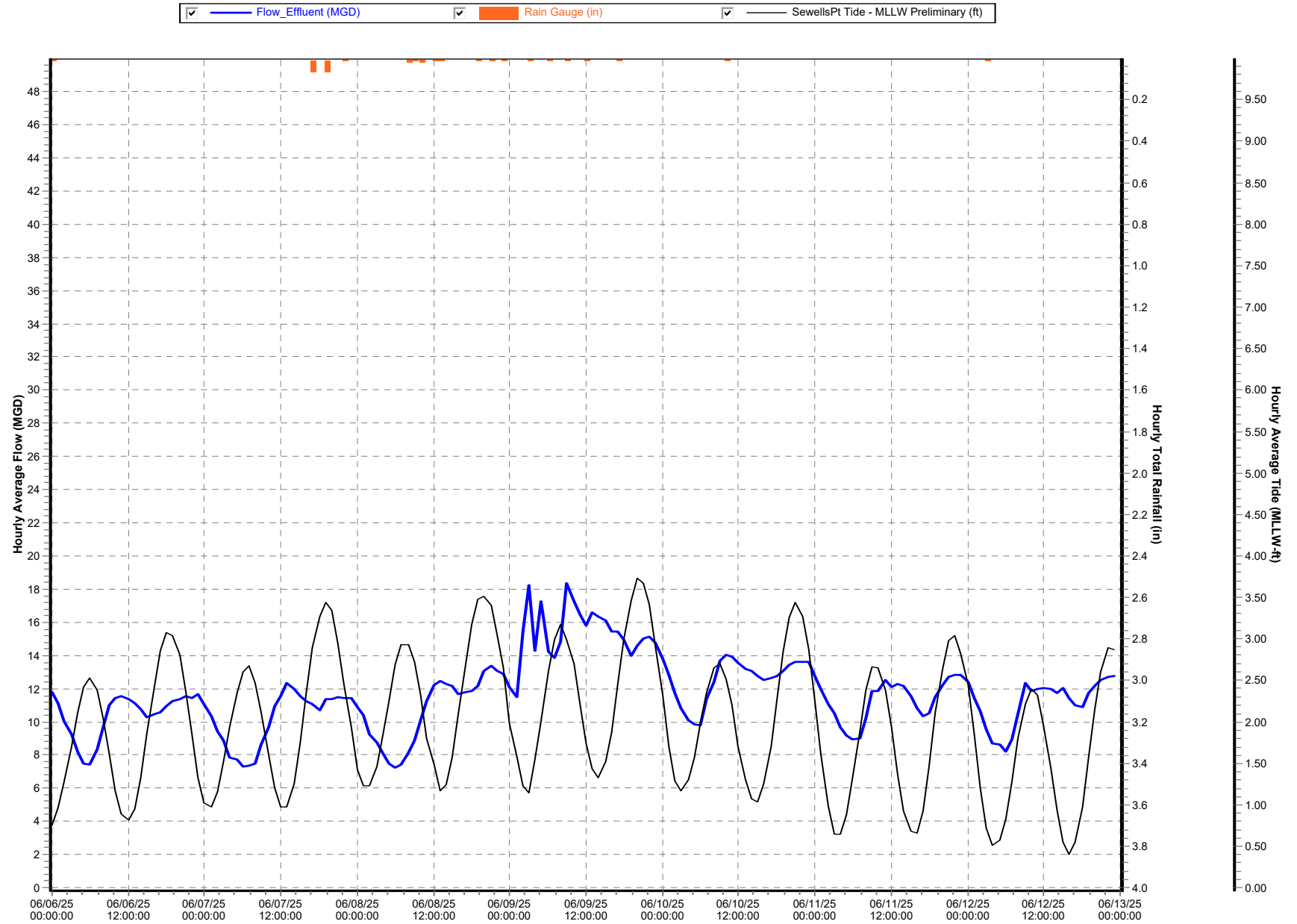
Atlantic Treatment Plant
MMPS-071 (06/06/25 to 06/13/25)

☒ Flow_Effluent (MGD) ☒ MMPS-185: Lagomar IFM at Atlantic TP Rain Gauge ☒ CBBT Tide - MLLW Preliminary (ft)



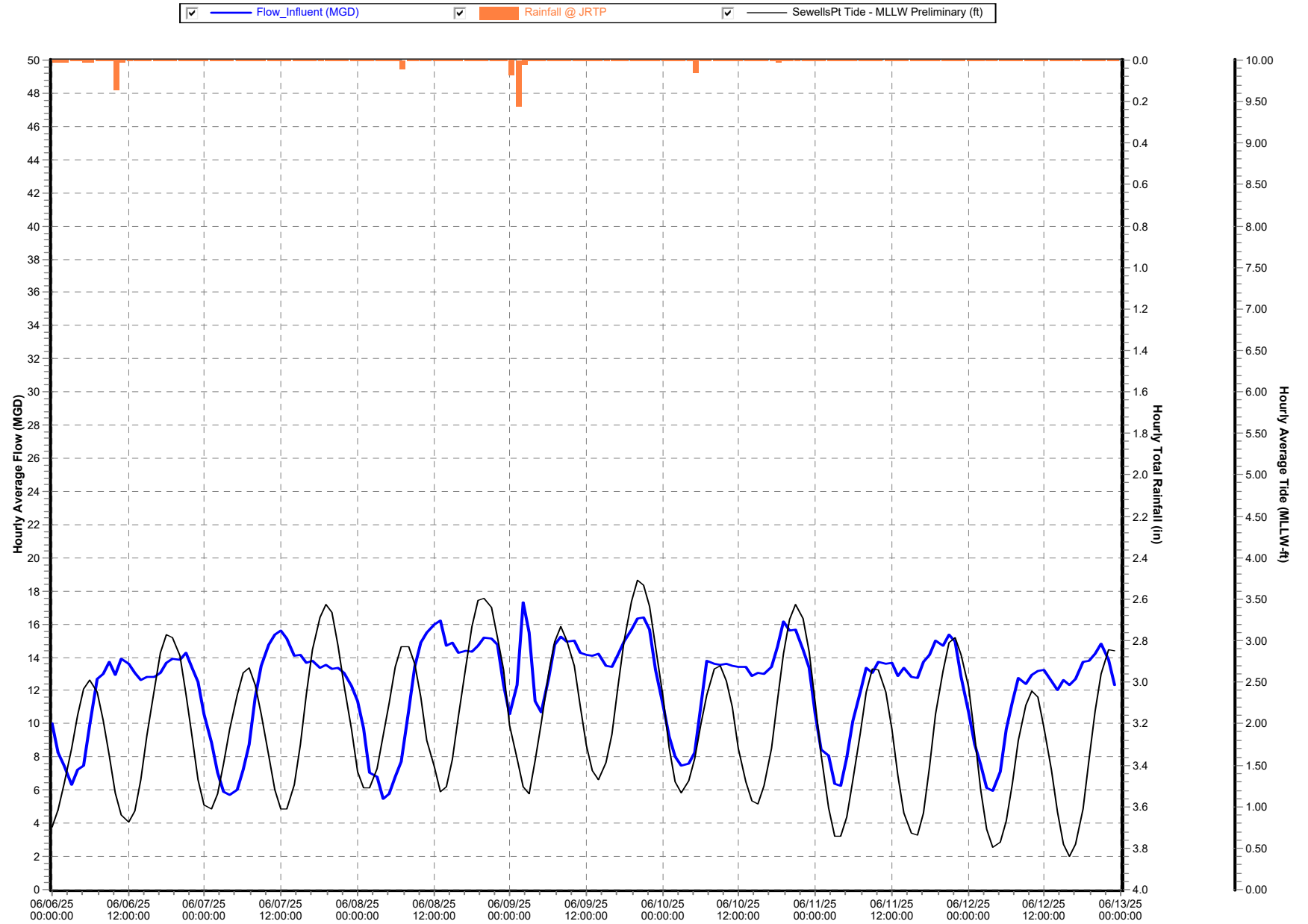
Boat Harbor Treatment Plant

MMPS-075 (06/06/25 to 06/13/25)



James River Treatment Plant

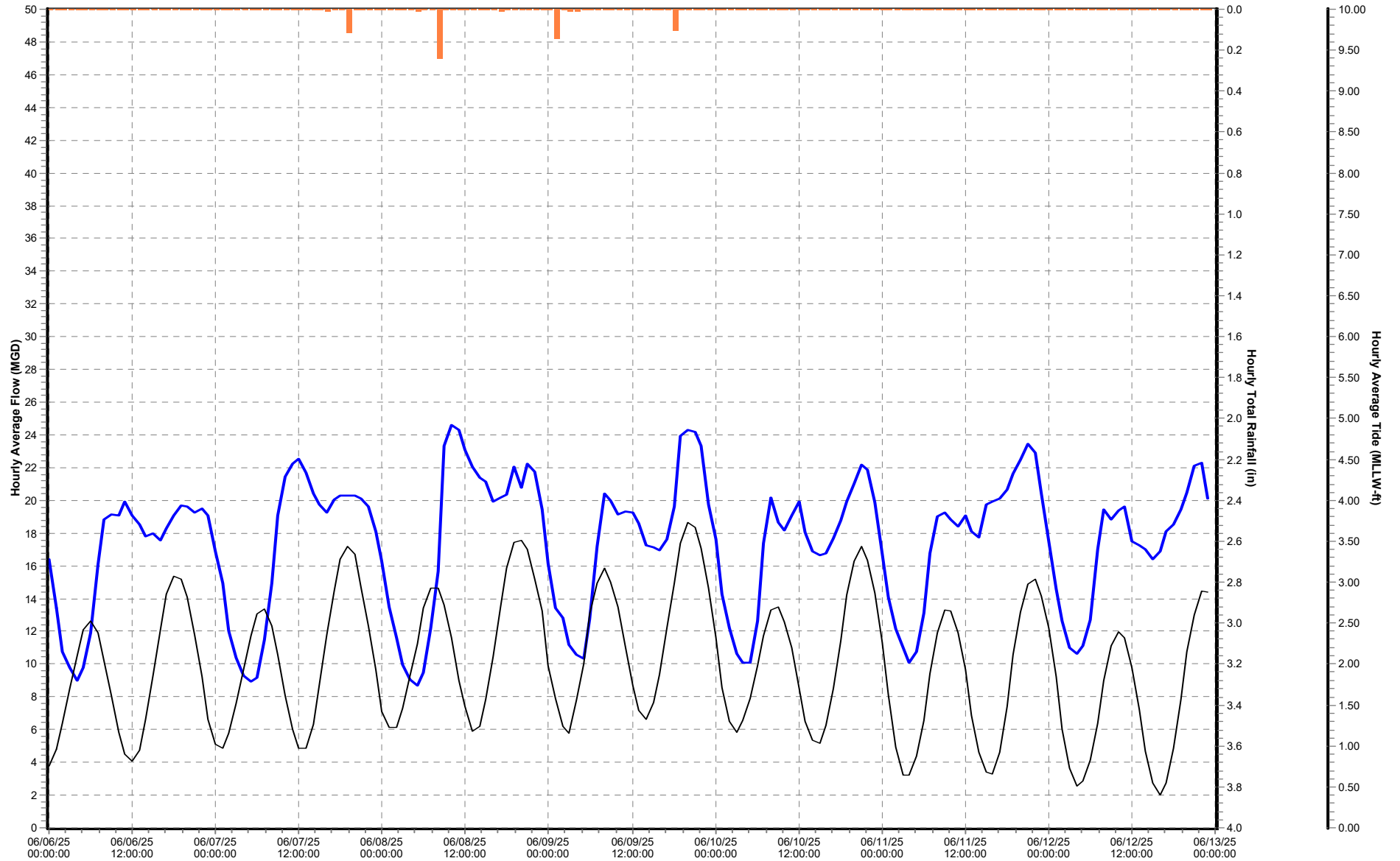
MMPS-184 (06/06/25 to 06/13/25)



Nansemond Treatment Plant

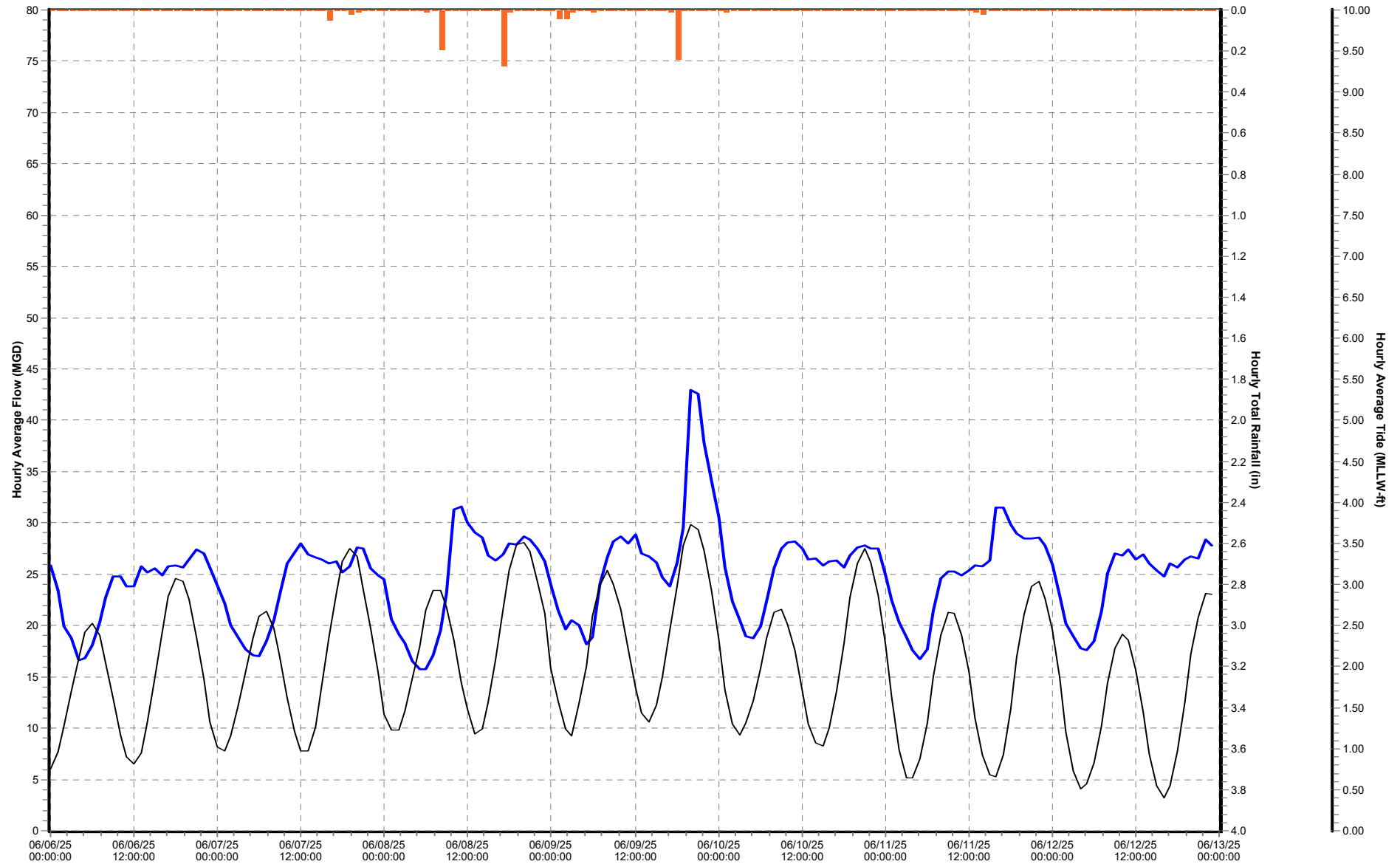
MMPS-202 (06/06/25 to 06/13/25)

☒ Flow_Effluent (MGD) ☒ MMPS-202: Nansemond Main Flow_Effluent Rain Gauge ☒ SewellsPt Tide - MLLW Preliminary (ft)



VIP Treatment Plant

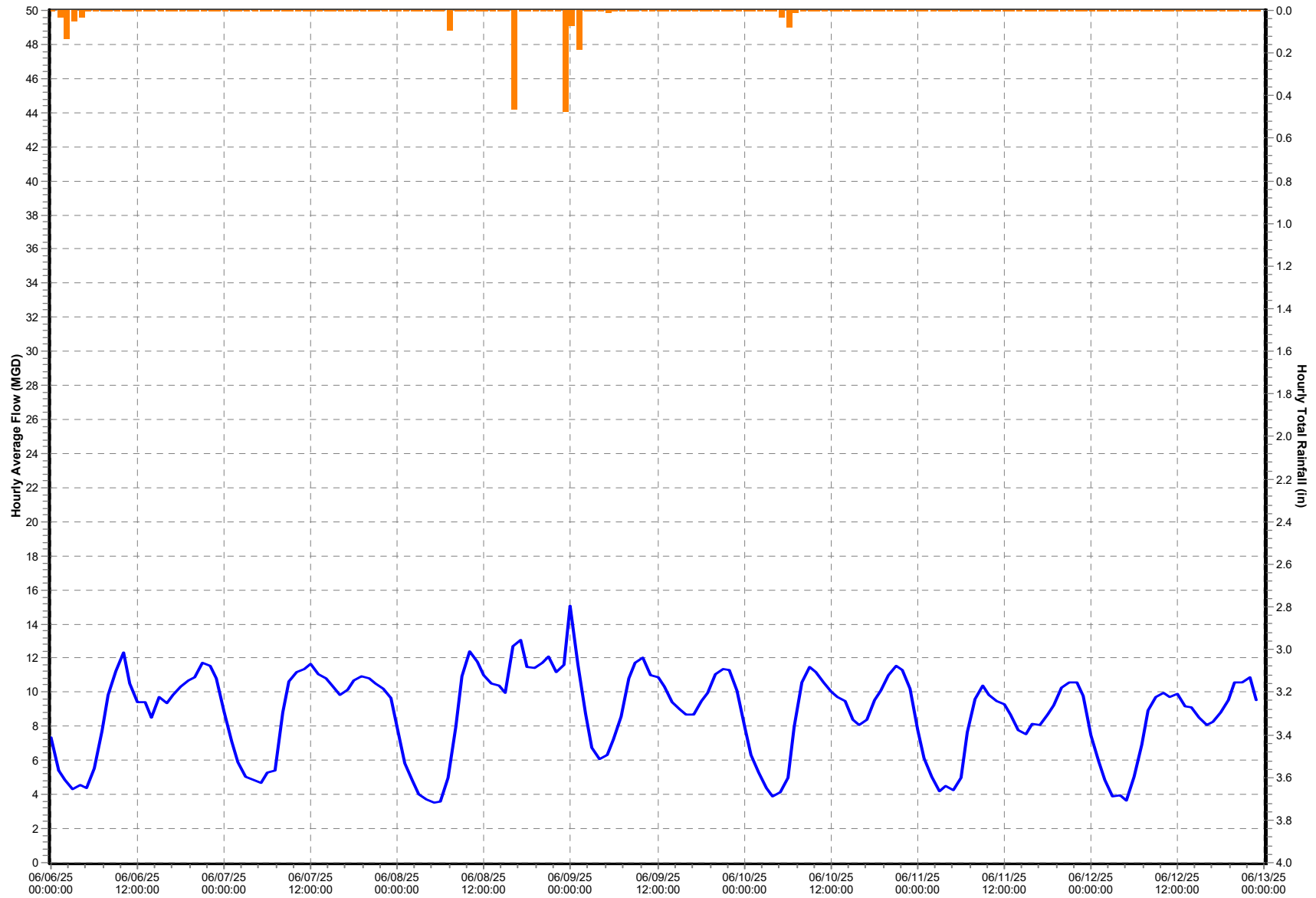
MMPS-003 (06/06/25 to 06/13/25)



Williamsburg Treatment Plant

MMPS-222 (06/06/25 to 06/13/25)

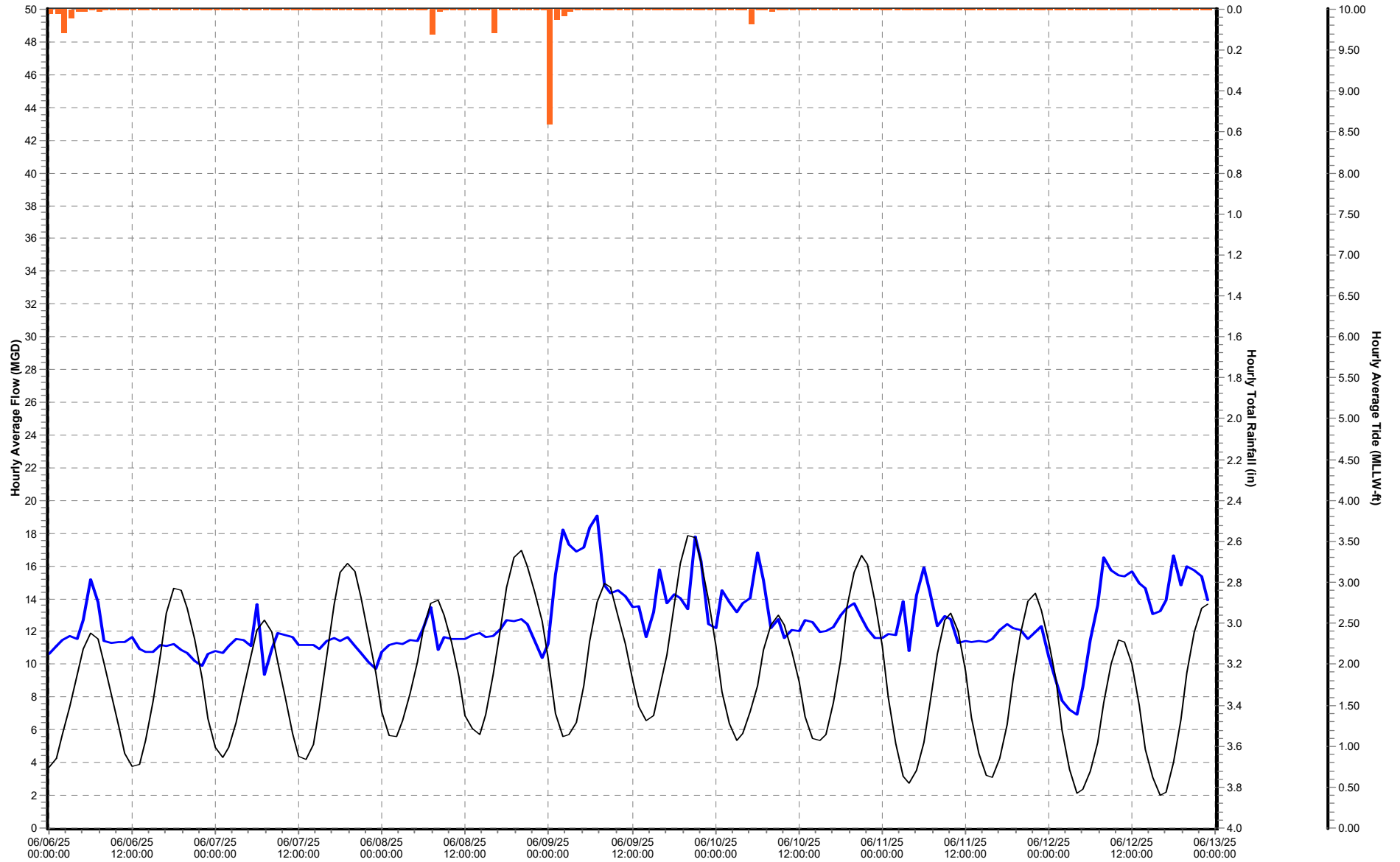
☒ Flow_Effluent (MGD) ☒ Rainfall @ WBTP



York River Treatment Plant

MMPS-235 (06/06/25 to 06/13/25)

☒ Flow_Influent (MGD) ☒ Rain Gauge (in) ☒ YorktownUSCG Tide - MLLW Preliminary (ft)



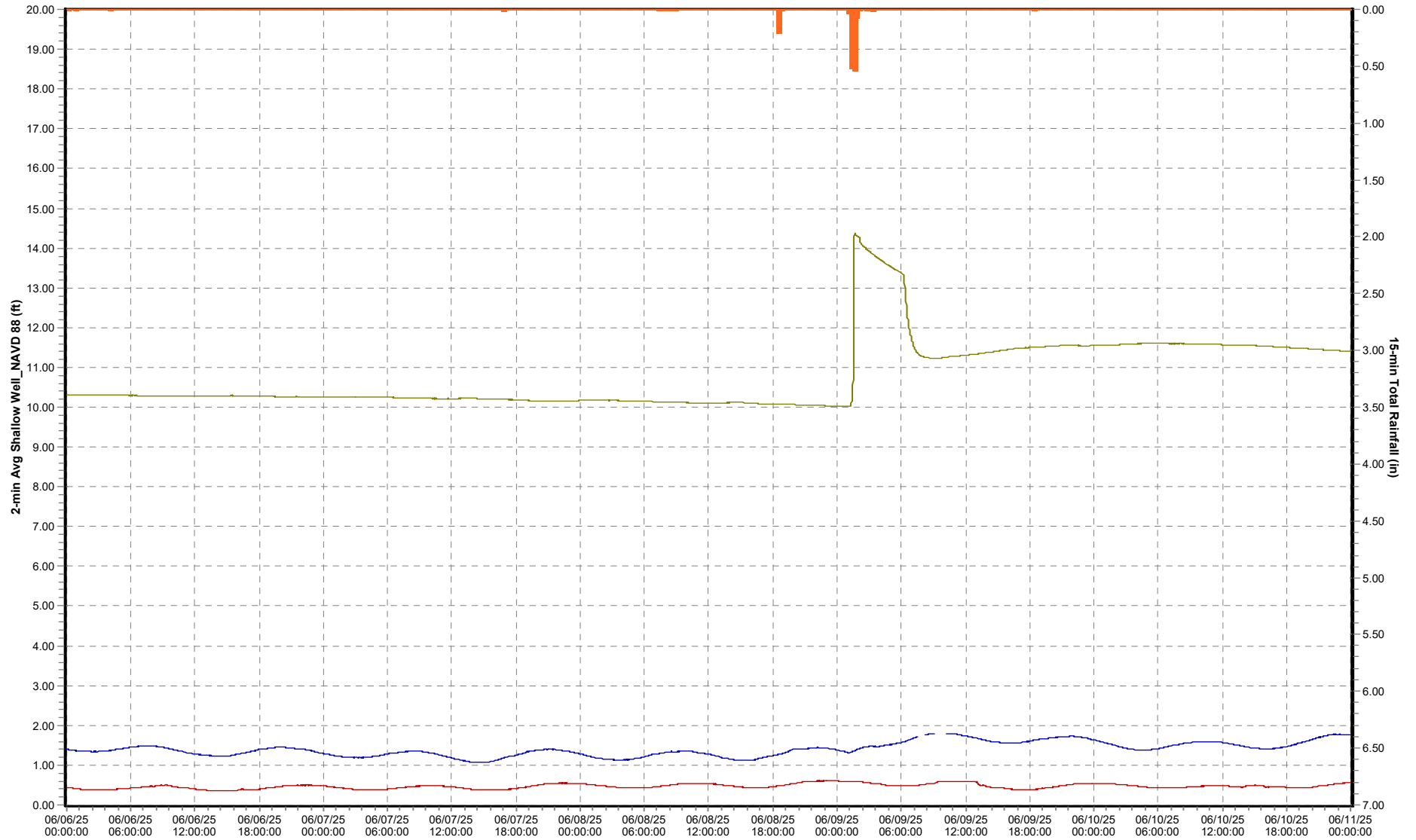
Appendix C

Shallow Well Analysis

5 Day

North Shore Shallow Well Graphs

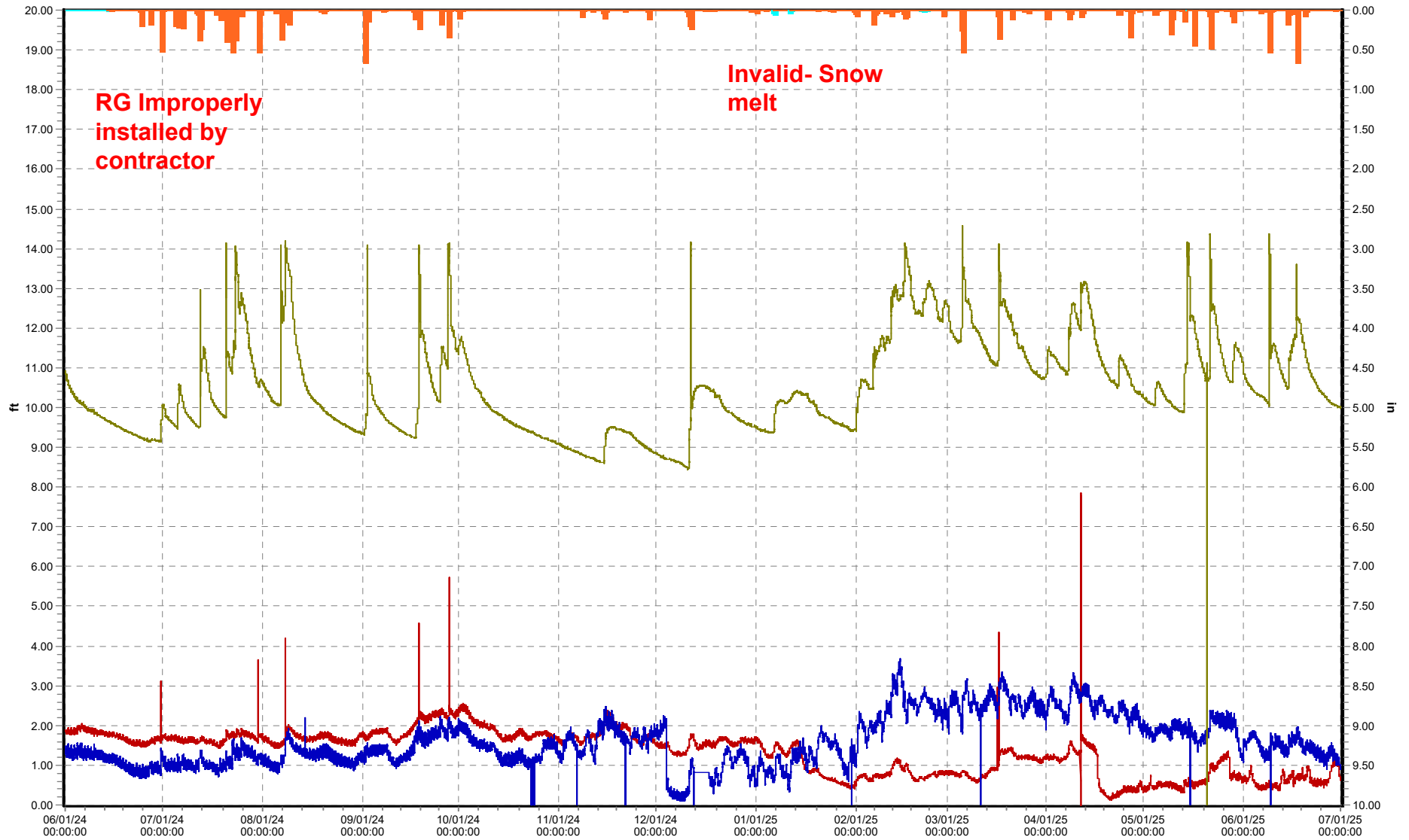
06/06/25 to 06/11/25



1 Year

HRSD NP - Lucas Creek PS

MMPS-148 (06/01/24 to 07/01/25)

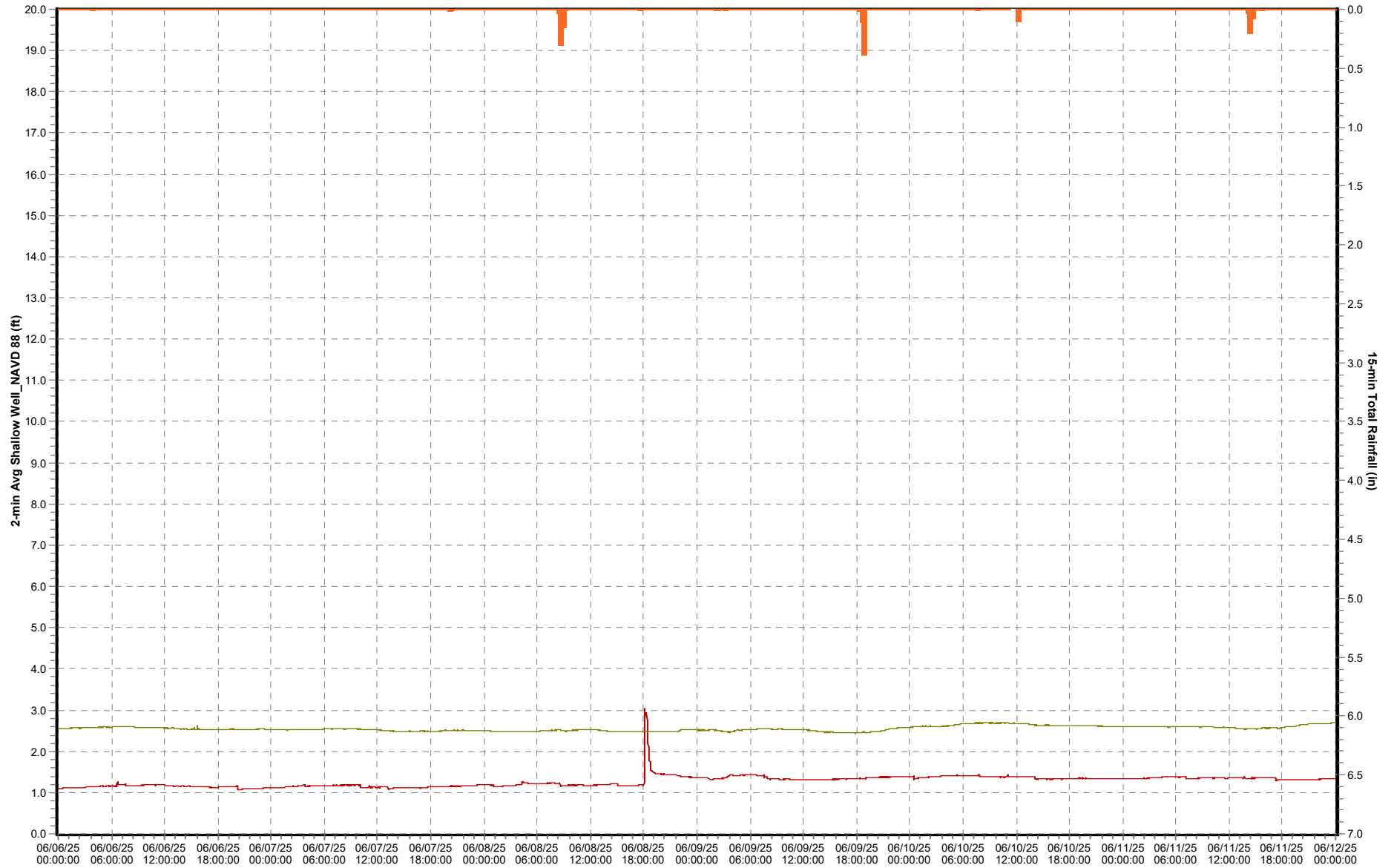


5 Day

South Shore Shallow Well Graphs

06/06/25 to 06/12/25

☒ North Shore Rd PS. Rain Gauge (ft) ☒ Camden Ave PS. Shallow Well_NAVD 88 (ft) ☒ Rodman Ave PS. Rain Gauge (in)



1 Year

South Shore Shallow Well Graphs

06/01/24 to 07/01/25

