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Great South Bay, Long Island, New York Summer Water Quality Monitoring Program

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Center for Environmental Research and Coastal Oceans Monitoring

(CERCOM)

Molloy University

Great South Bay, Long Island, New York

Summer Water Quality Monitoring Program

2022

FINAL REPORT

Director; **Dr. John T. Tanacredi**

Scientific Research Technical Assistant; **Mr. Kyle F. Maurelli**

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2022

Student Intern

Participation:

Caroline Kane	Volunteer	N/A
Laura Munn	Biology	Molloy University
Eylin Garciaguirre Yanes	Biology	Molloy University
Nina Scanze	Biology	Molloy University

The Center for Environmental Research and Coastal Oceans Monitoring (CERCOM) visits 11 locations in the Great South Bay from Memorial Day – Labor Day to monitor dissolved oxygen (DO), pH, salinity, clarity and temperature. Students are trained to assist in CERCOM's water quality data collection by research assistant Mr. Kyle Maurelli. This monitoring program has been conducted for the past 17 years. These parameters are critical in determining long term water quality conditions in Long Island estuaries.

Water Quality Parameter Methodologies

Salinity, Dissolved Oxygen, Temperature Methodology

YSI Pro 2030 Professional Series; Probe

Clarity Methodology

8 inch Secchi Disk

pH Methodology

Orion Star model A121 pH Meter with low maintenance pH probe

Depth Methodology

Recorded from vessel's navigation GPS automatic system

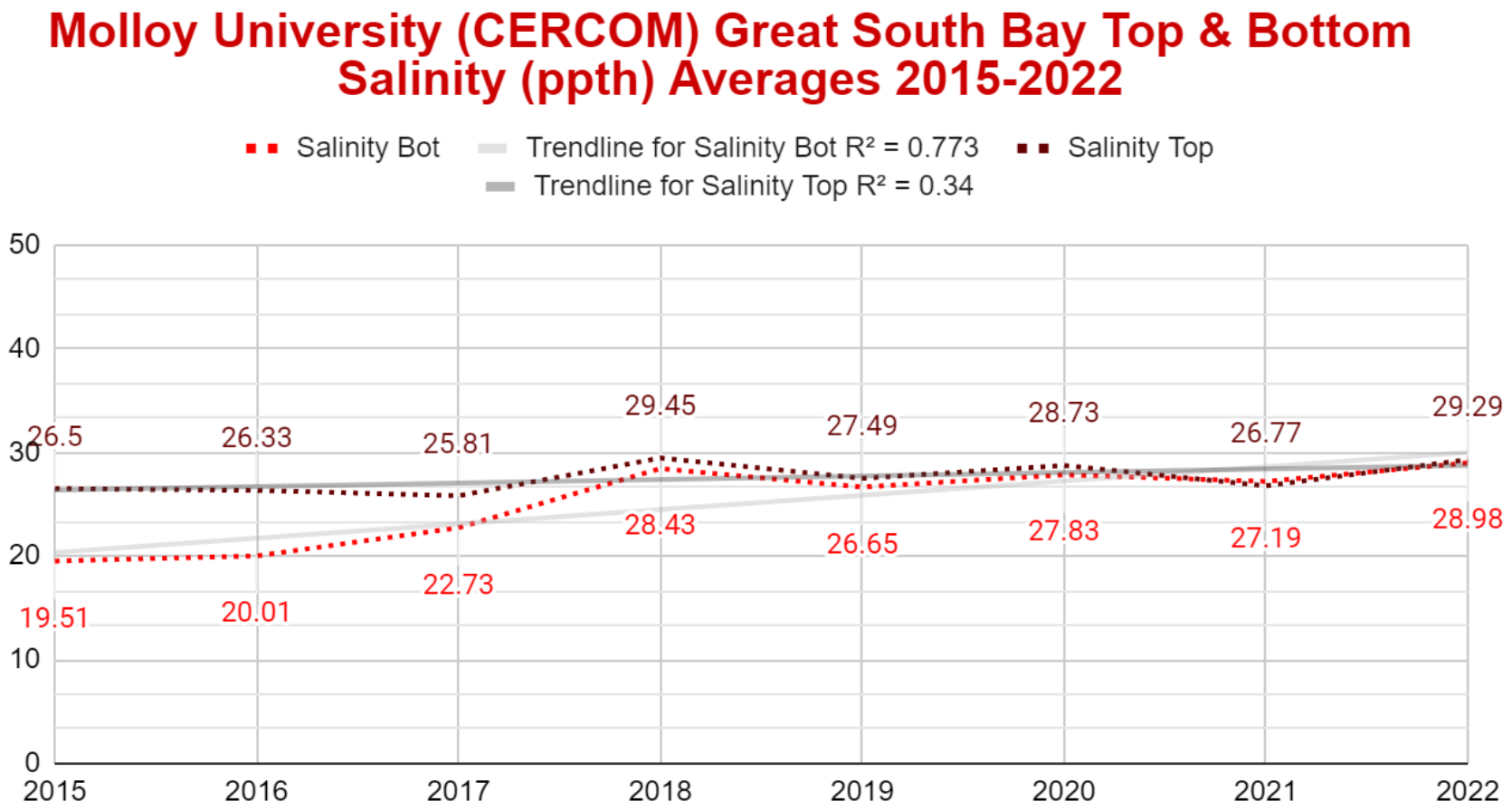
Figure 1. 2022 WQ Averages

2022

Parameter/ Site	Sexton	Ocean Beach	Ocean Bay Park	Sailor Haven	Cherry Grove	Pines	Barret Beach	Davis Park	Watch Hill	Patchogue Bay	Nicoll Bay	Yearly Averages
Depth (ft)	19.92	13.83	15.75	5.75	11.33	9.17	6.75	8.5	7.83	8.33	9.33	10.59
Clarity (in)	5.73	5.29	5.15	4.46	5.04	4.62	4.5	5.38	4.49	3.65	4.85	4.83
Salinity Bot (ppth)	29.79	30.26	30.44	28.9	29.43	29.01	28.68	27.41	27.95	27.68	29.28	28.98
Salinity Top (ppth)	30.66	30.49	30.35	29.85	29.34	29.34	28.66	28.83	28.22	27.6	28.79	29.29
Temp Bot (oC)	24.84	24.46	24.61	24.88	24.67	24.71	24.64	24.63	24.69	24.99	25.05	24.69
Temp Top (oC)	24.63	24.6	24.62	24.9	24.86	24.72	24.67	24.76	24.76	25.01	25.22	24.8
pH	7.94	7.89	7.91	7.95	7.94	7.94	8.0	8.0	7.98	7.94	7.97	7.95
DO Bot (mg/L)	4.47	4.53	4.61	4.87	4.96	4.8	4.82	4.77	5.14	4.96	4.73	4.71
DO Top (mg/L)	4.84	4.75	4.77	4.9	4.97	4.99	4.86	4.96	5.27	4.76	5.43	4.95

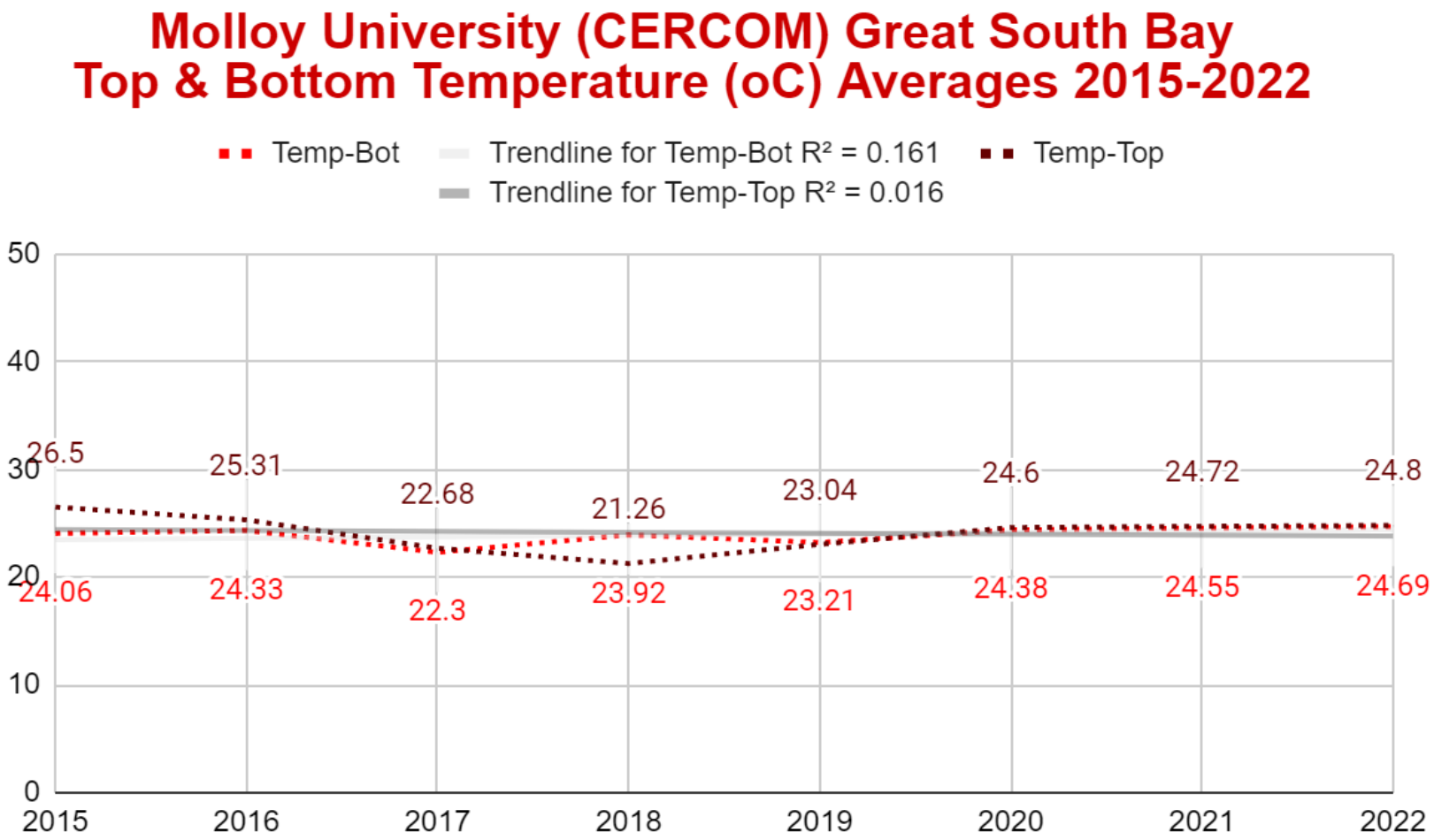
*All raw data is available upon request, held in reserve at CERCOM

Figure 2. 8 Year Trend of the Great South Bay Top and Bottom Salinity Values



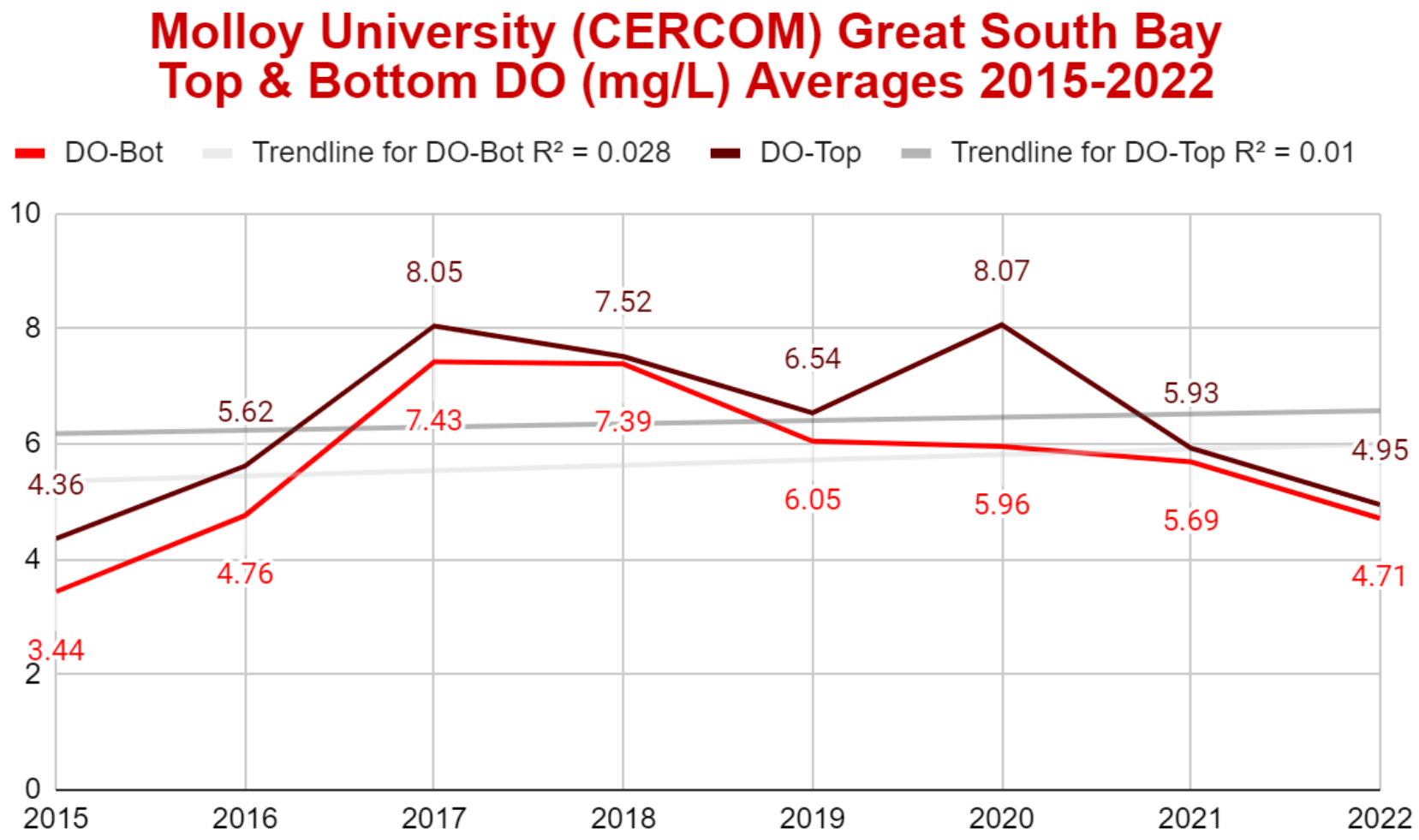
*All raw data is available upon request, held in reserve at CERCOM.

Figure 3. 8 Year Trend of the Great South Bay Top and Bottom Temperature Values



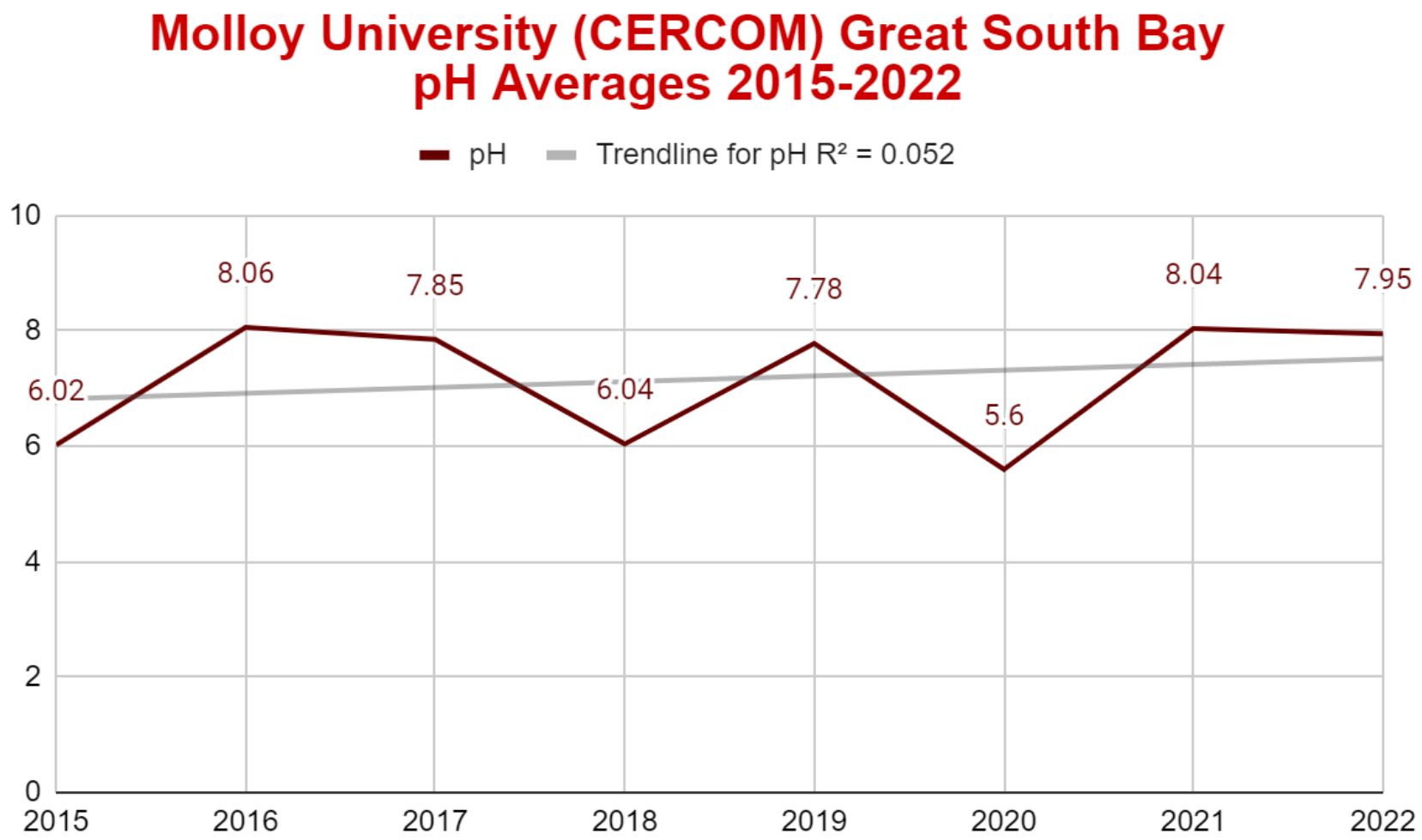
*All raw data is available upon request, held in reserve at CERCOM.

Figure 4. 8 Year Trend of the Great South Bay Top and Bottom Dissolved Oxygen Values



*All raw data is available upon request, held in reserve at CERCOM.

Figure 5. 8 Year Trend of the Great South Bay pH Values



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