2023

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

CERCOM, Molloy University

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CERCOM

Center for Environmental Research and Coastal Oceans Monitoring

at MOLLOY UNIVERSITY

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(CERCOM)

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FINAL REPORT

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

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

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2023

Student Intern

Participation:

Caroline Kane	Volunteer	N/A
Jaimee Rancy	Intern	Molloy University

The Center for Environmental Research and Coastal Oceans Monitoring (CERCOM) conducts monitoring activities at 11 designated sites within the Great South Bay, spanning from Memorial Day to Labor Day. The focus of this effort is the assessment of various water quality parameters, including dissolved oxygen (DO), pH, salinity, clarity, and temperature. A key component of this program involves the training of students under the guidance of CERCOM's research assistant, Mr. Kyle Maurelli. Remarkably, this comprehensive water quality monitoring initiative has been consistently executed over a span of 20 years.

The collected data, encompassing these essential parameters, plays an instrumental role in the evaluation of long-term water quality conditions within the estuaries of Long Island. This ongoing endeavor contributes significantly to the scientific understanding of environmental dynamics and aids in the preservation of the region's aquatic ecosystems.

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. 2023 WQ Averages

2023

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)	22.3	13.5	14.9	6.8	9.9	10.4	8.0	6.5	6.6	8.6	9.6	10.6
Clarity (in)	5.0	5.3	4.9	3.3	3.8	4.0	4.5	4.4	3.9	3.6	3.2	4.2
Salinity Bot (ppth)	29.54	29.53	28.94	28.63	28.46	28.11	26.35	25.91	27.94	27.08	27.98	28.10
Salinity Top (ppth)	29.44	29.50	29.37	28.77	28.43	28.42	28.02	27.63	27.62	26.88	27.36	28.31
Temp Bot (oF)	74.7	75.4	75.6	75.5	75.5	76.4	75.6	75.3	73.5	74.1	76.1	75.2
Temp Top (oF)	75.2	75.4	75.6	75.5	75.4	75.3	75.4	75.1	73.9	76.0	68.1	74.63
pH	8.04	8.03	8.03	8.08	8.08	8.1	8.15	8.14	8.07	7.98	8.0	8.06
DO Bot (mg/L)	5.11	5.24	5.02	5.01	5.79	5.12	5.41	5.65	5.99	5.83	5.90	5.46
DO Top (mg/L)	5.15	5.25	5.10	5.07	5.82	5.22	5.41	5.88	5.92	5.90	5.92	5.51

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

Figure 2. 12 Year Trend of the Great South Bay Top and Bottom Dissolved Oxygen Value

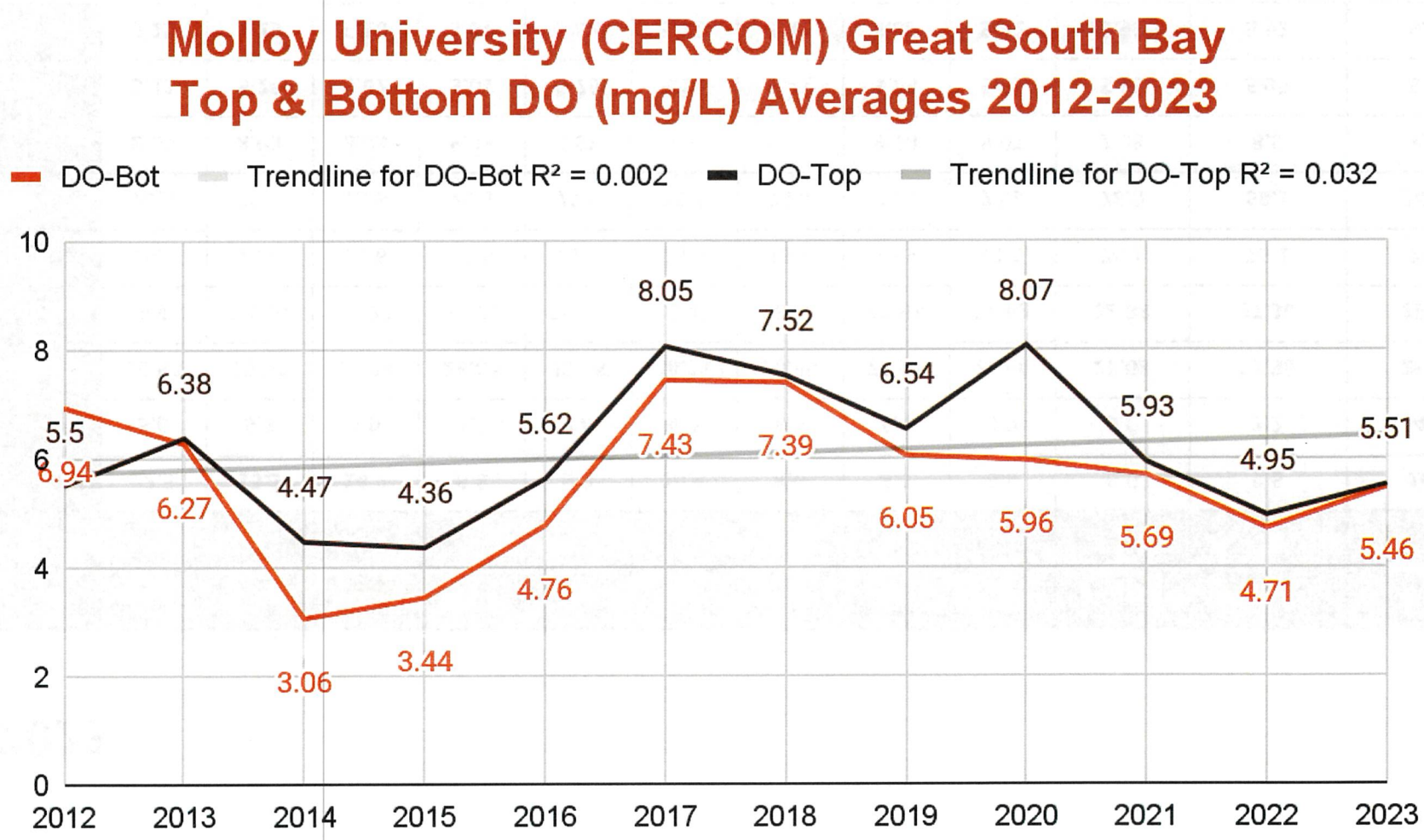
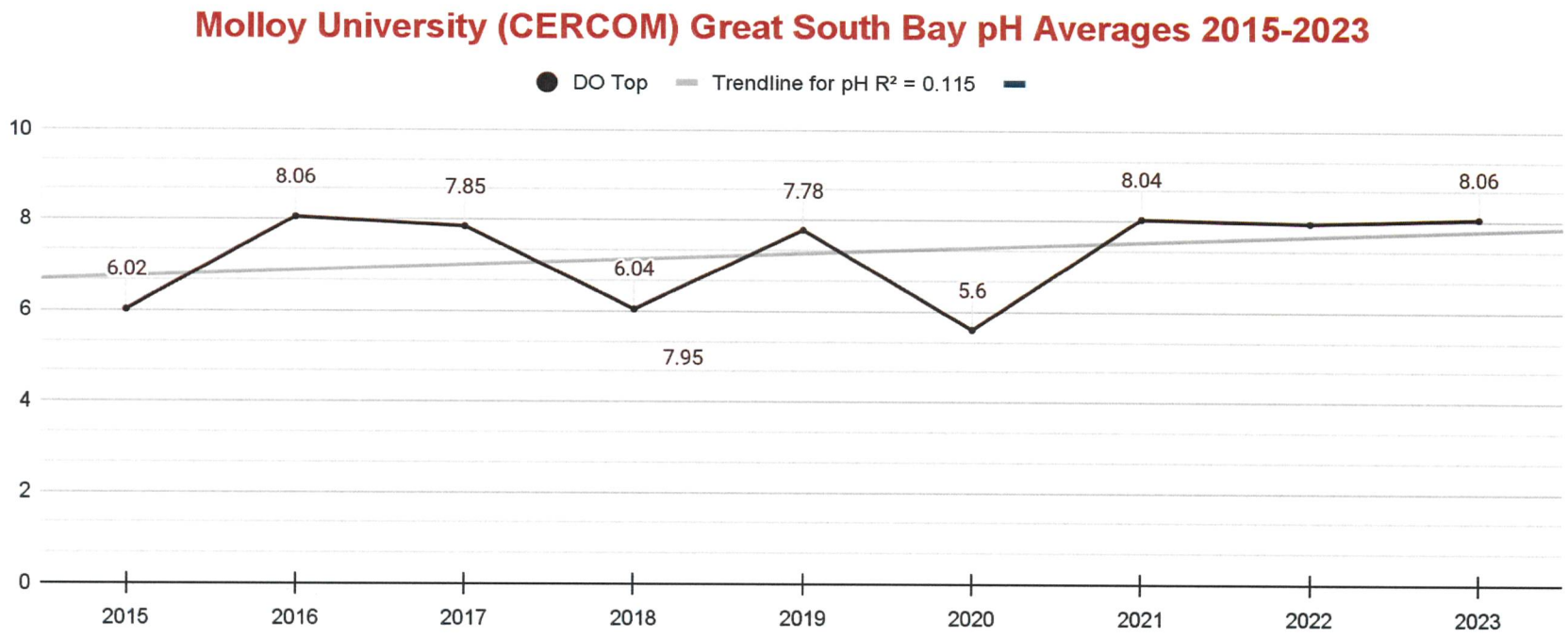


Figure 3. 9 Year Trend of the Great South Bay pH Values



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