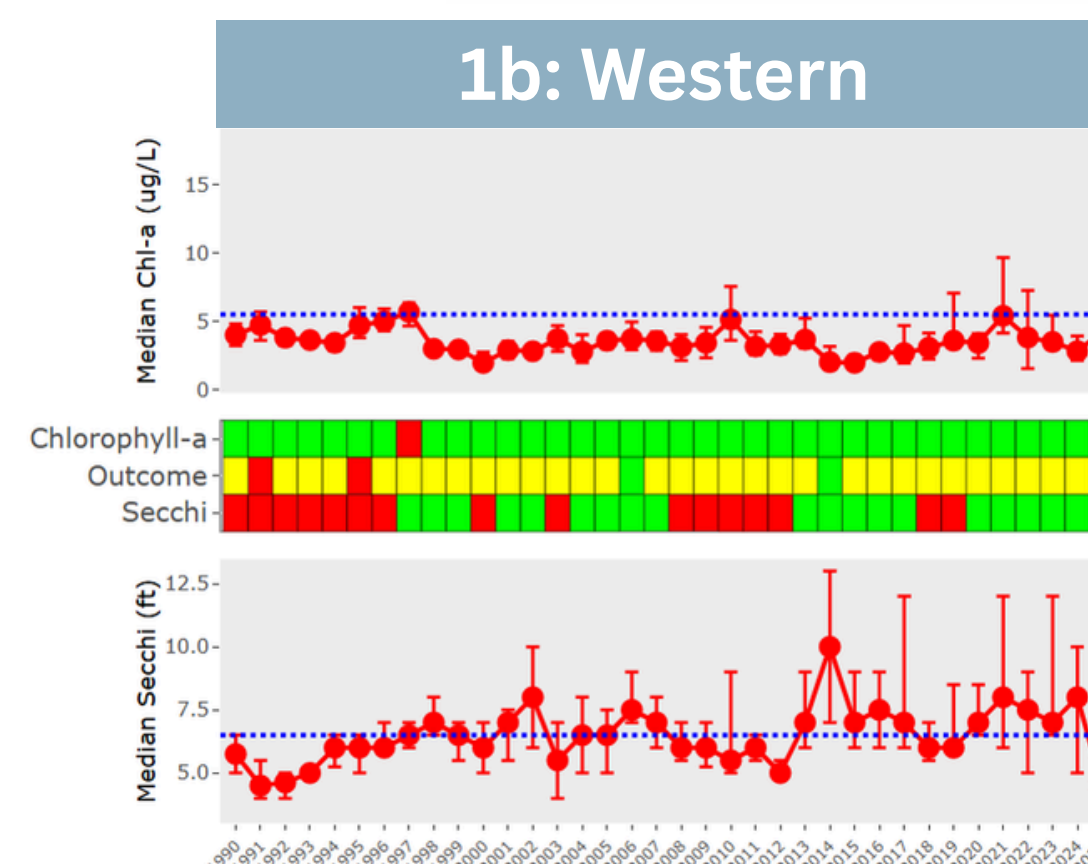
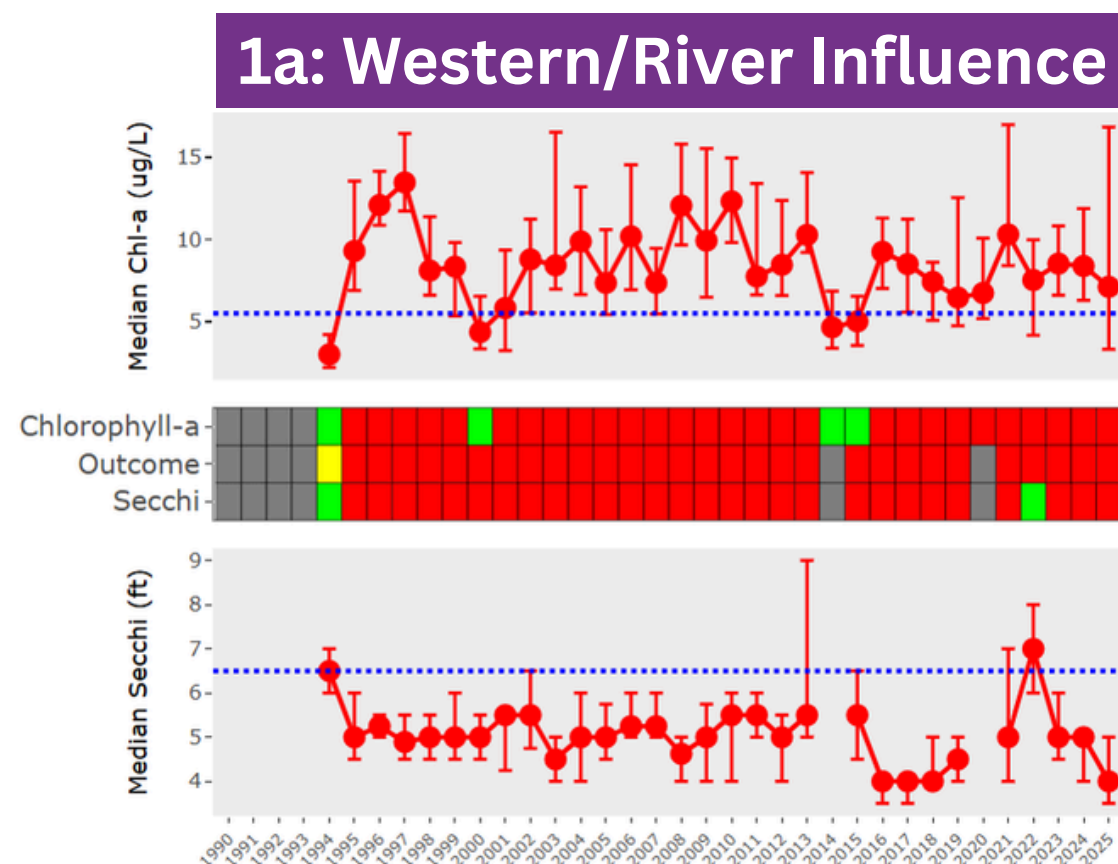
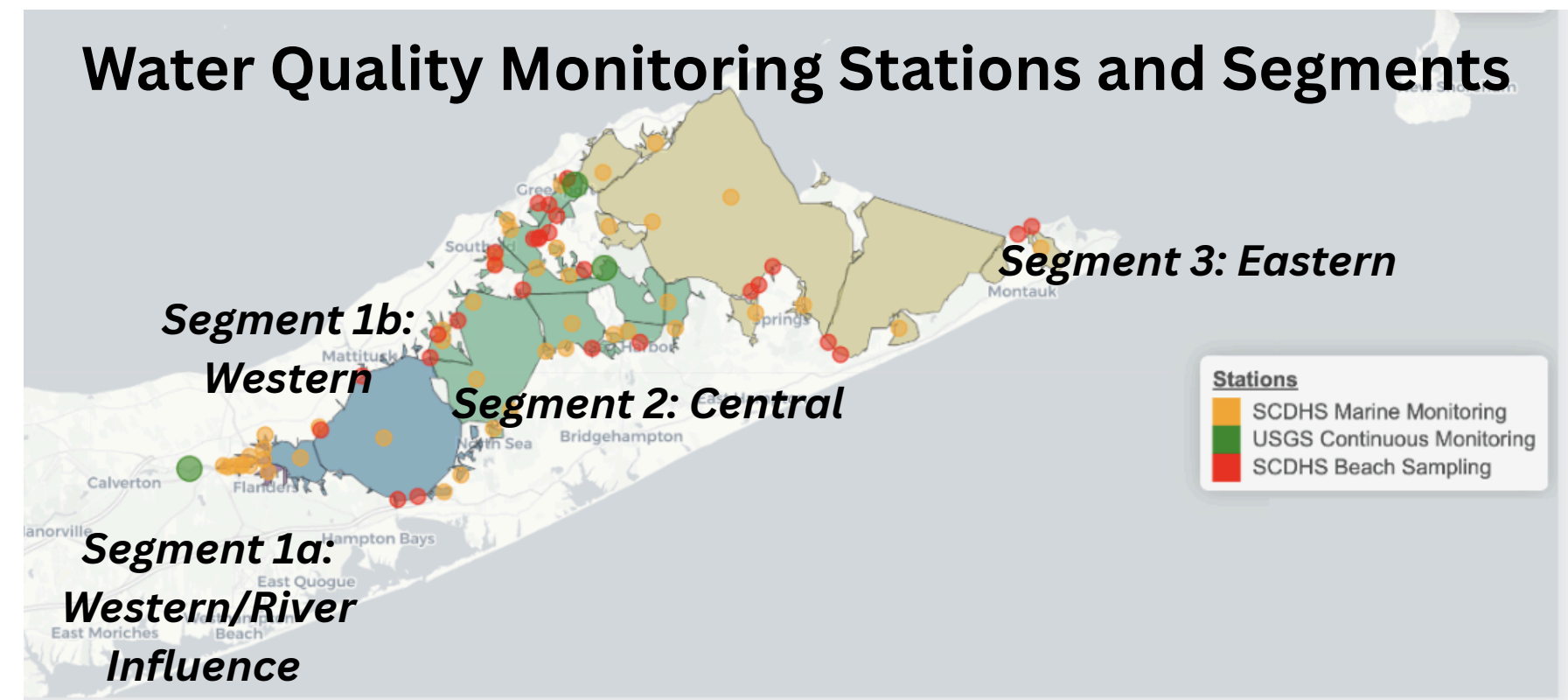


Peconic Estuary Partnership Water Quality Report 2026

Improvements Made in Eastern Open Waters, Challenges Remain in Western Estuary

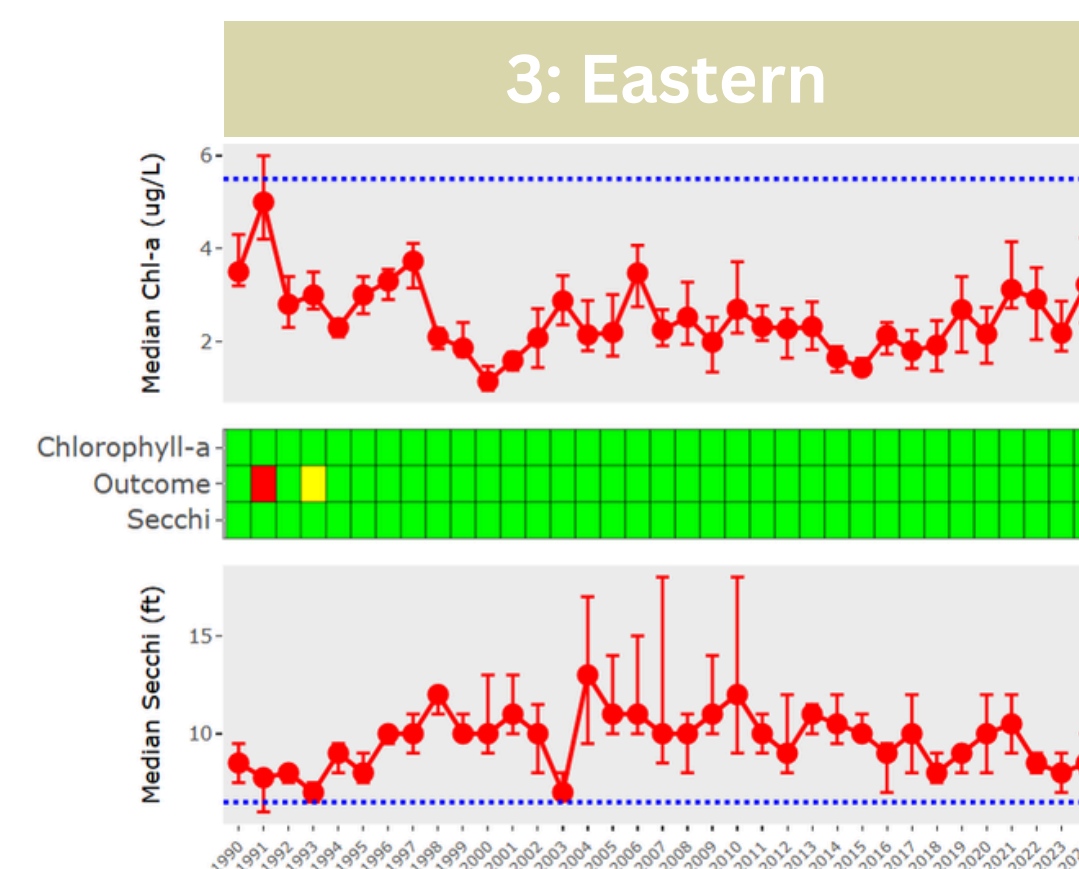
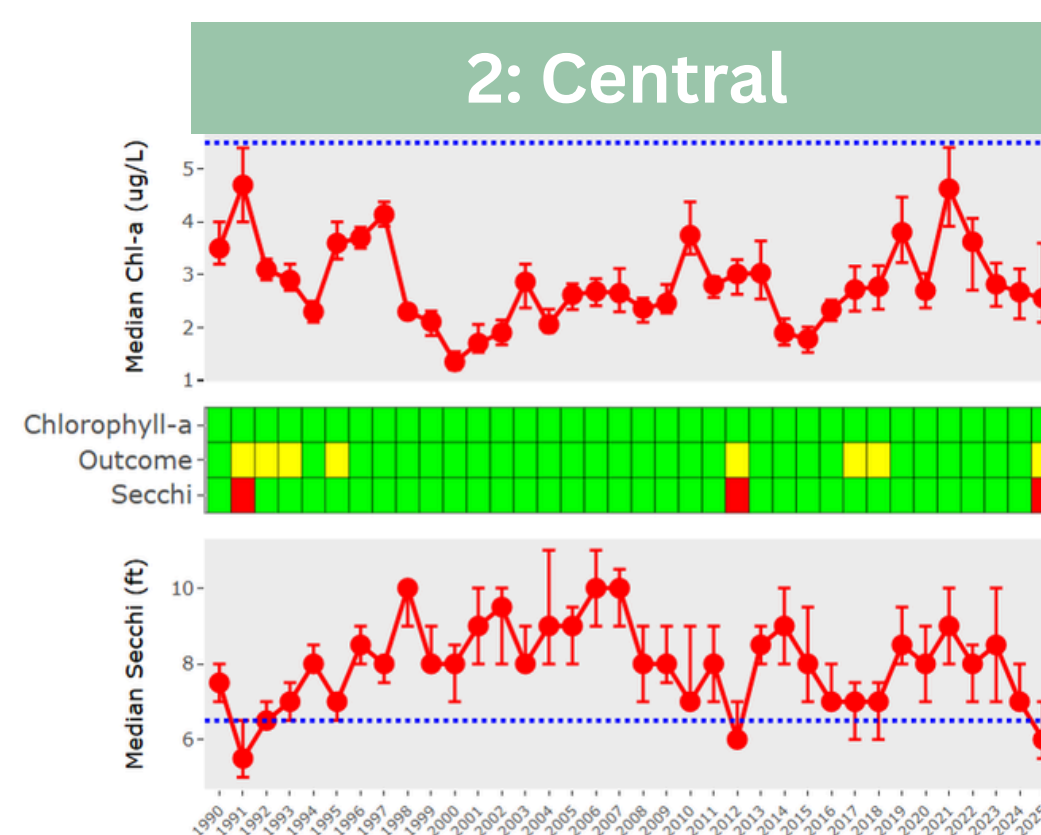
Water quality monitoring is conducted across the Peconic Estuary by multiple partners and data is compiled to assess whether segments of the bay meet targets for each water quality parameter. Our water quality monitoring efforts show that open waters in the eastern segment of the Peconic Estuary have seen great improvement, and the western estuary remains impaired.



These four panels show stoplight graphics for water quality across four segments of the Peconic Estuary, from 1990-2025. Dashed blue lines indicate thresholds for chlorophyll-a (5.5 $\mu\text{g/L}$) and Secchi depth (6.5 ft). Water quality has improved further east in open waters, but challenges remain for water quality in the western segments of the estuary.

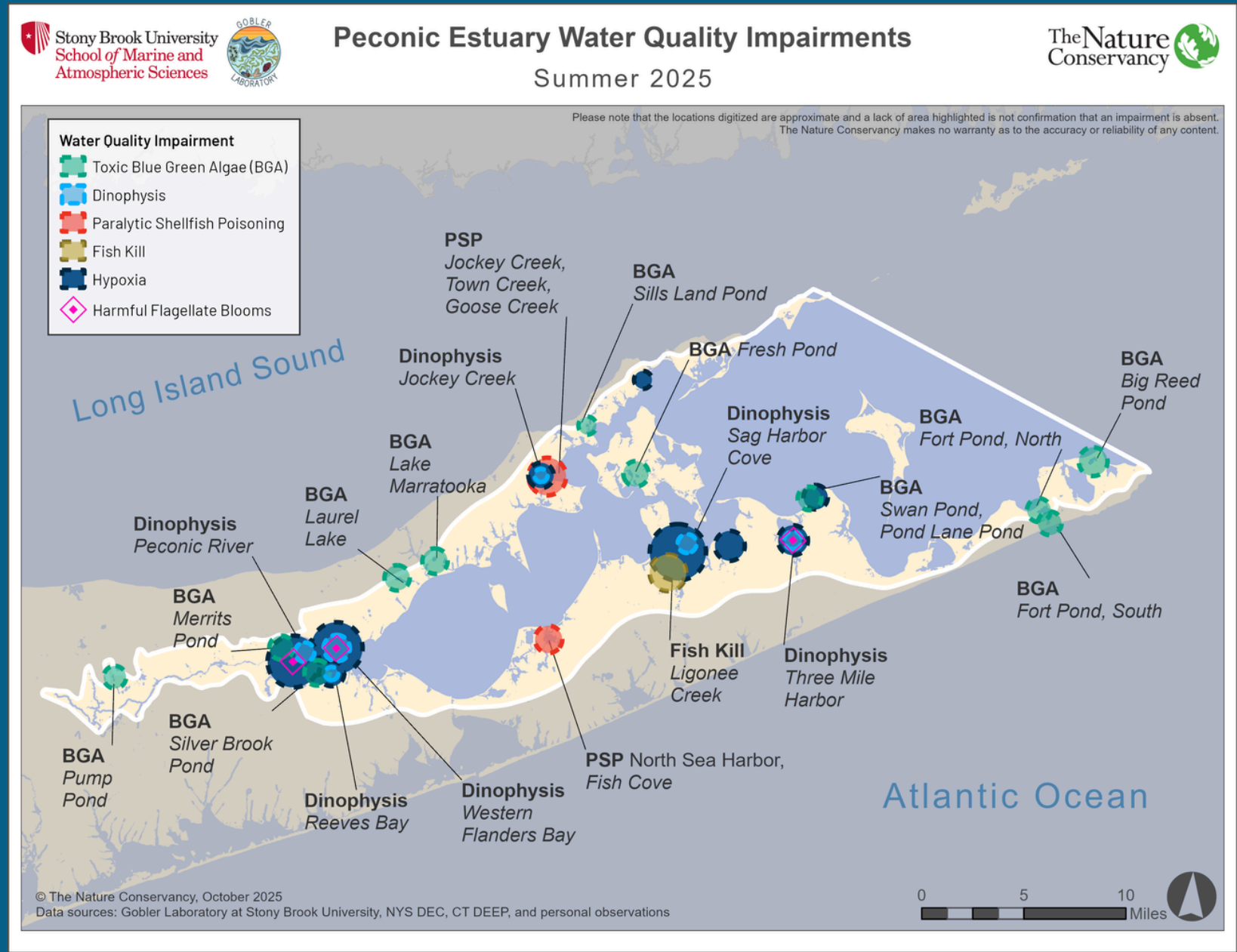
■ ■ ■ ■ Threshold
● Annual Median

Red: On Alert
Yellow: Caution
Green: Stay the course



The Peconic Estuary Water Quality Report is available on the [PEP Datahub](#)





Water quality impairments across the Peconic Estuary can include low dissolved oxygen levels (called hypoxia) and the presence of harmful algal blooms (HABs), including species that produce toxins causing paralytic shellfish poisoning, diarrhetic shellfish poisoning, and fish kills. Knowing the location, prevalence, and intensity of these HABs can inform the public's use of the estuary, including fishing, recreational and commercial shellfish harvesting, and swimming and boating activities.

Green: Stay the course

Yellow: Caution

Red: On Alert

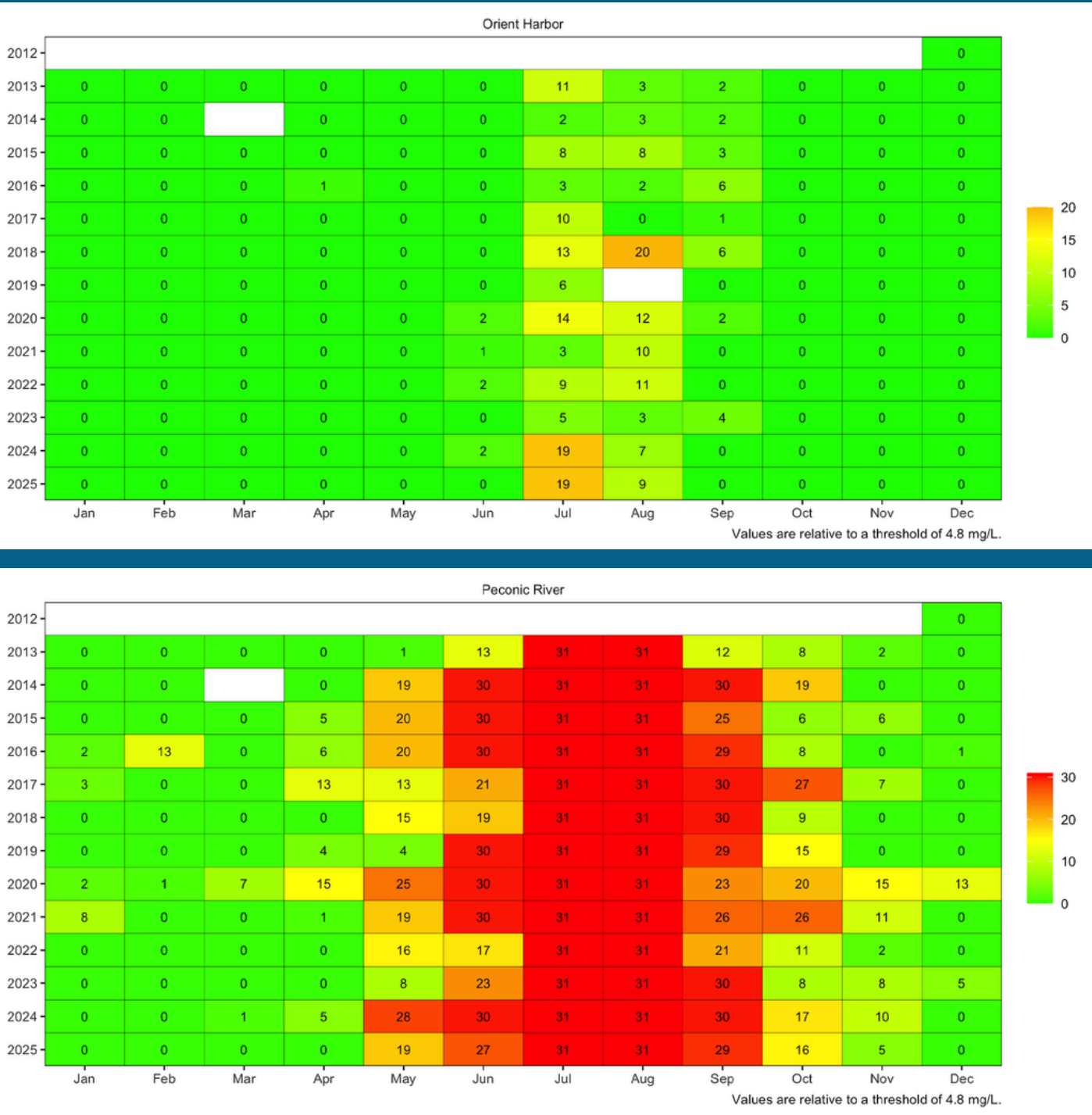
Combined Outcomes for Estuary Segment

	1a	1b	2	3
1990		yellow	green	green
1991		red	yellow	red
1992		yellow	yellow	green
1993		yellow	yellow	yellow
1994	yellow	yellow	green	green
1995	red	red	yellow	green
1996	red	yellow	green	green
1997	red	yellow	green	green
1998	red	yellow	green	green
1999	red	yellow	green	green
2000	red	yellow	green	green
2001	red	yellow	green	green
2002	red	yellow	green	green
2003	red	yellow	green	green
2004	red	yellow	green	green
2005	red	yellow	green	green
2006	red	green	green	green
2007	red	yellow	green	green
2008	red	yellow	green	green
2009	red	yellow	green	green
2010	red	yellow	green	green
2011	red	yellow	green	green
2012	red	yellow	yellow	green
2013	red	yellow	green	green
2014		green	green	green
2015	red	yellow	green	green
2016	red	yellow	green	green
2017	red	yellow	yellow	green
2018	red	yellow	yellow	green
2019	red	yellow	green	green
2020		yellow	green	green
2021	red	yellow	green	green
2022	red	yellow	green	green
2023	red	yellow	green	green
2024	red	yellow	green	green
2025	red	red	yellow	green

Dissolved oxygen (DO) in the water column is crucial for fish, shellfish, and other aquatic organisms. Concentrations of DO can be impacted by the amount of algae in the water, associated photosynthesis and decomposition rates, natural variations in temperature, and wave action and mixing. DO concentrations are measured every 6 minutes at USGS continuous monitoring stations in Orient Harbor and the Peconic River.

These figures on the right show the sequential number of days with a 24-hour mean measurement below the threshold for chronic low DO (4.8 mg/L(for Orient Harbor (top) and the Peconic River (bottom) and indicate a seasonal pattern, especially in the Peconic River: DO decreases during the spring and summer as marine animals consume oxygen at higher rates, and increases during the fall and winter.

Dissolved Oxygen



Tracking of attainment outcomes for chlorophyll-a and Secchi depth provides a framework from which bay management actions can be developed and initiated.