

# 2017 Water Quality Year in Review

In 2017, GBF's Water Quality Monitoring Team collected and analyzed 615 water samples from 66 sites around Galveston Bay. Thank you to the 70+ volunteer water monitors who collected this information. Here is a summary of our findings from the Team's 2017 data.

## Water Temperature: Average of 23.0°C

This is **similar to** previous years.

This can impact biological factors such as reproduction and migration. It also impacts dissolved oxygen levels; cold water can hold more than warm water.

## Air Temperature: Average of 23.5°C

This is **similar to** previous years.

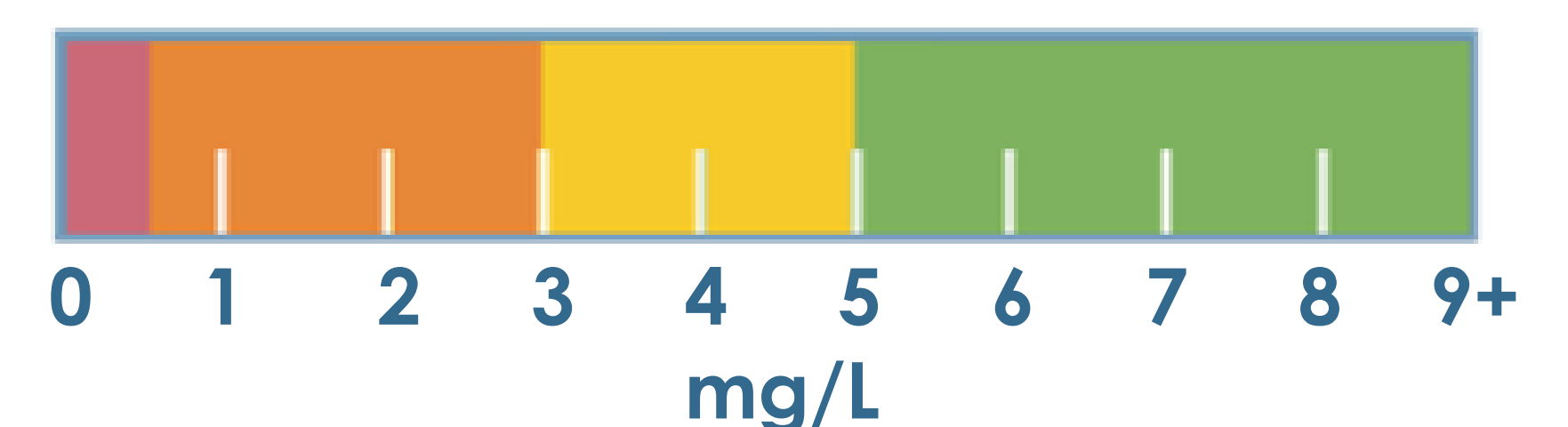


## Dissolved Oxygen: Average of 6.1 mg/L

This level is **good** for supporting animal life.

98% of 2017's DO samples could support life.

Fish and other aquatic life depend on DO to survive; if levels are too low they will suffocate. In 2017, 98% of DO samples collected were 5 mg/L or higher. Overall, Galveston Bay's dissolved oxygen levels appear to be healthy.

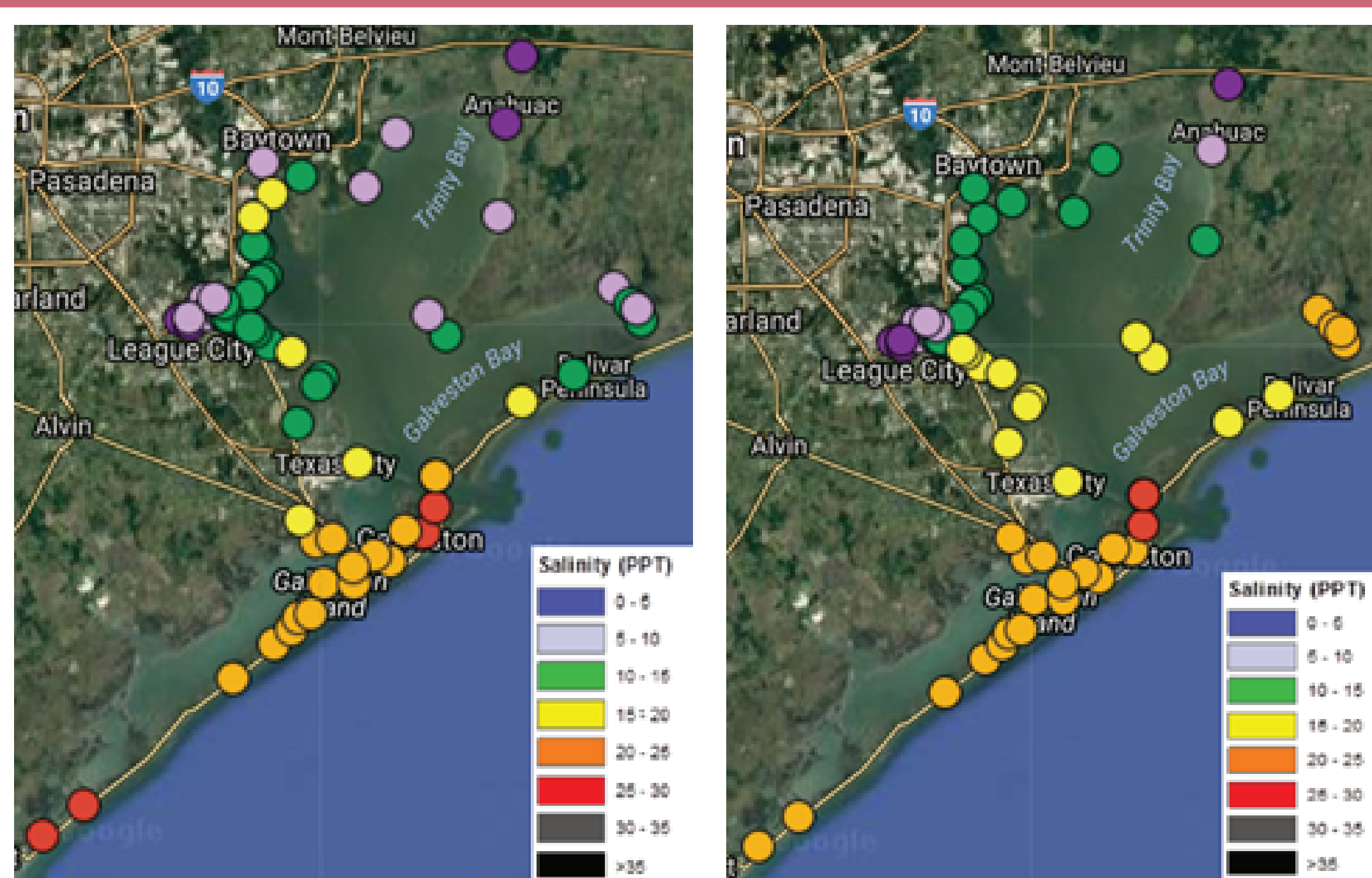
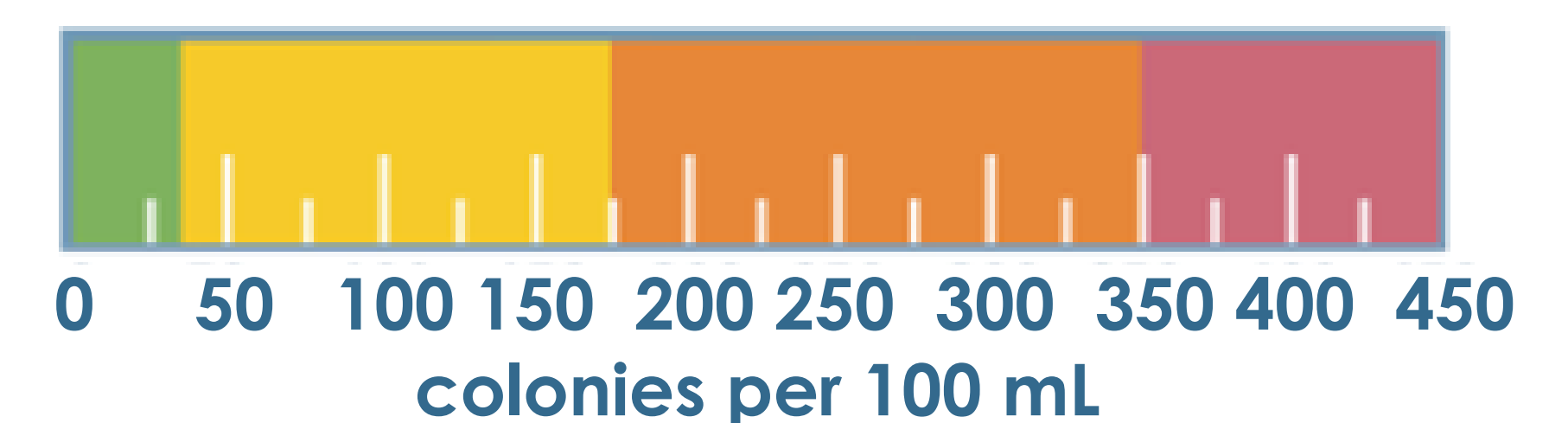


## Enterococci Bacteria: Geometric Mean of 8.0 MPN

This is considered **safe** for swimming by the EPA.

91% considered safe for swimming by EPA standards.

Enterococci are bacteria that indicate the presence of harmful fecal waste in the water. Most high levels of these bacteria are seen after major rain events, and dissipate after a few days. About half of GBF's monitoring sites test for Enterococci.



## Salinity: Average of 14.3 ppt

This is **higher** than previous years.

Much of Galveston Bay's wildlife rely on a salinity range that isn't too salty or too fresh, but brackish. Salinity that's too high or low can be stressful on the Bay's plants and animals, such as oysters and dolphins. Major rains can decrease salinity, while droughts or dry spells can increase it. While Harvey led to several months of very low salinity, much of 2017 was dryer than previous years, resulting in an overall higher average than the past two years.

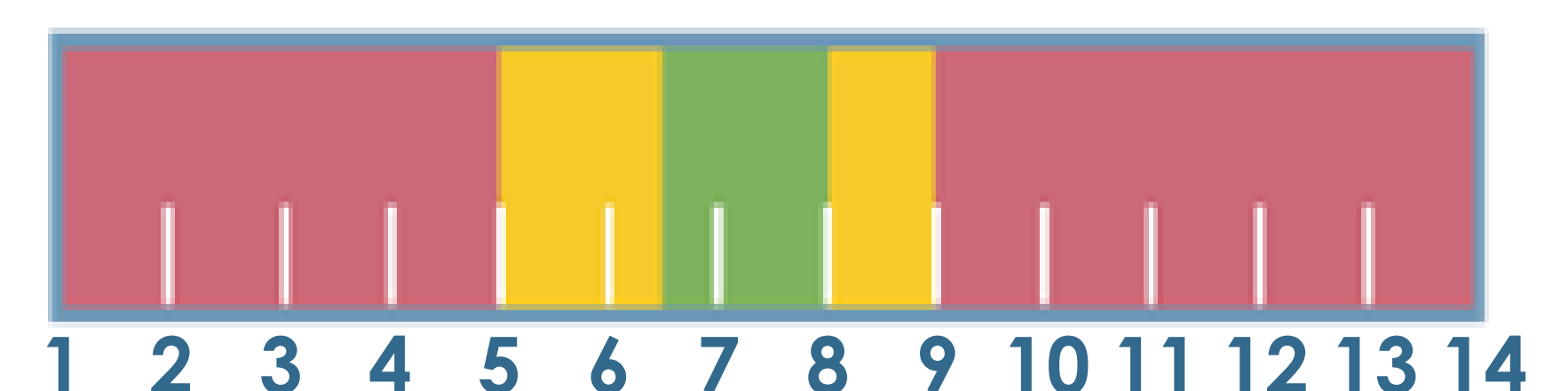
Left: Salinity averages by site, 2017

Right: Salinity averages by site, normal year

## pH: Average of 7.9 in 2017

This is **ideal** to support life. This is **similar to** previous years.

pH is a measurement of how acidic the water is. A pH range that's too low or too high can lead to stress and the death of Bay life. pH has been relatively stable in the Bay, and is considered to be within a healthy range.



## Water Transparency: Average of 0.5 meters

This is **the same as** in previous years.

Water transparency, or turbidity, measures how much solid matter is suspended in the water. The higher the transparency, the farther down the light passes and the clearer the water appears. In 2017, the average transparency measured by GBF's Water Monitoring Team was 0.5 meters, very similar to transparency measured in prior years.

