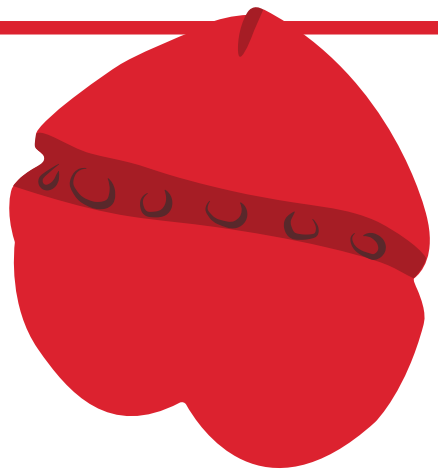
2018 Red Tide Impacts in Tampa Bay

In 2017–2019, an historically severe red tide bloomed off Southwest Florida's coast. Before it was over, it had spread to the Panhandle and the Atlantic Coast. The Tampa Bay area, including Pinellas, Hillsborough, Pasco, and Manatee Counties, experienced environmental, economic, and social impacts in 2018.



What is red tide?

Red tide is caused by a population bloom of the single-celled dinoflagellate *Karenia brevis*. Florida ride tides typically originate in the Gulf of Mexico and can be transported inshore by winds and currents, where coastal nutrient pollution can intensify and sustain them. Distribution and abundance of *K. brevis* can be highly variable through time and space.

Birds admitted to Seaside Seabird Sanctuary and Birds In Helping Hands

Red tide toxicity

K. brevis produces toxins that can cause respiratory distress and kill sealife. Decomposing sealife robs waters of oxygen necessary for life and releases nutrients that can fuel even more *K. brevis* growth. Airborne toxins can also cause burning eyes and respiratory distress in humans.

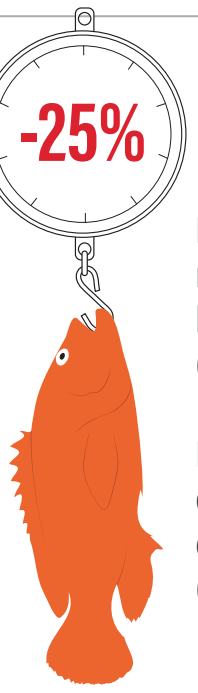
The highest regional cell count each day provides a snapshot of bloom intensity and duration. Note, some days lack data and the number and location of sampling stations varies among days.

- no data
- <10,000 cells/liter
- Above ~10,000 cells/l, fish begin to die and humans experience respiratory irritation
- 10,000–100,000 cells/l
- 100,000–1,000,000 cells/l
- >1,000,000 cells/l
- 26,355,589 cells/l (2018 record high)

2018

	S	M	T	W	T	F	S
AUG	19	20	21	22	23	24	25
	26	27	28	29	30	31	1
SEP	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
OCT	30	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
NOV	28	29	30	31	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	1

Dead sealife removed from beaches and waterways

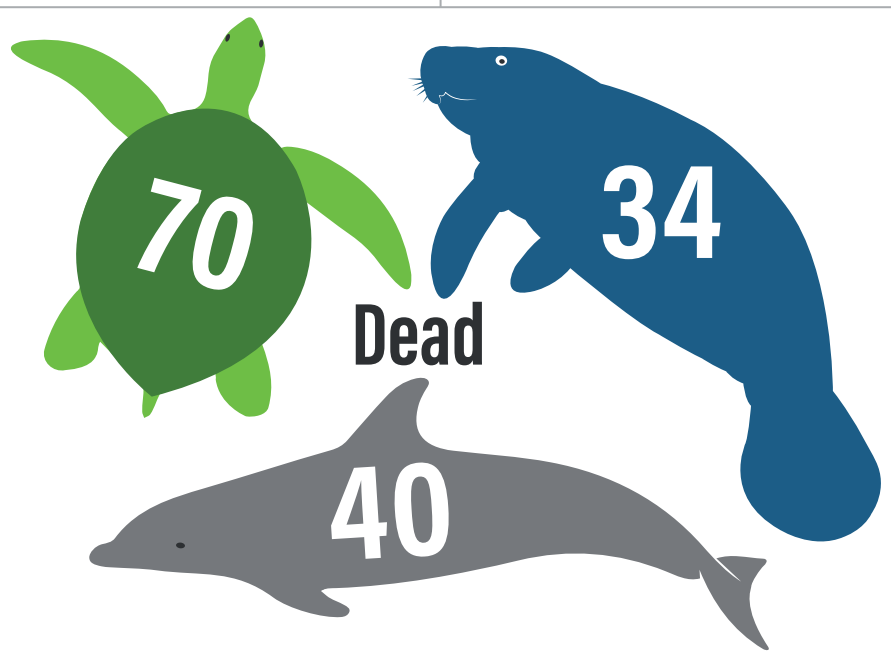


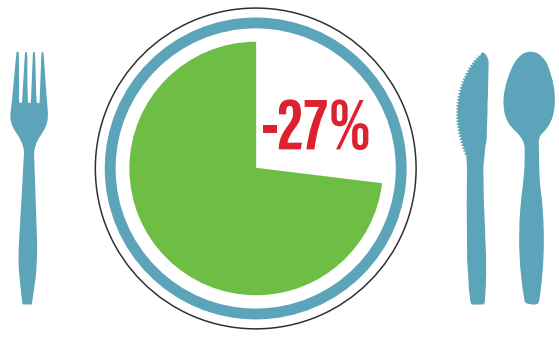
Pinellas County red grouper landings (-605k lbs)

Manatee County commercial catch (-1.9M lbs)

+400%

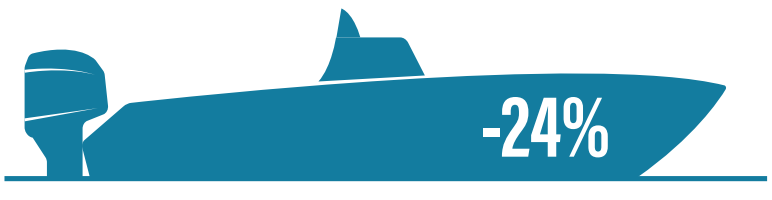
Fish kill reports to Florida Fish and Wildlife Conservation Commision





Manatee County Islands restaurant revenue

Visitor lodging

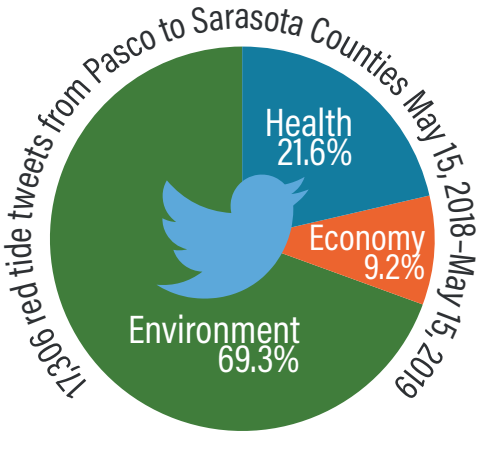


Boating activity in Pinellas County Aug–Nov 2017 vs Aug–Nov 2018

Help!

+471%

2-1-1 Calls for food, housing & utilities assistance in Manatee County Oct 2017 vs Oct 2018



Select results from Science and Environment Council's *2018 Regional Red Tide Impact and Response Assessment for Tampa Bay and Sarasota Bay.* The full study is available for download at www.scienceandenvironment.org. Graphic by Shafer Consulting. Funded by the Tampa Bay Environmental Restoration Fund, Tampa Bay Estuary Program, and Sunrise Rotary Club Foundation.