HAB MONITORING REPORT

From: 1/4/2021 To: 1/4/2021

Fish and Wildlife Research Institute

Collected by: Volunteer(s)
Collecting agency: EBAP
Sample condition: Preserved

HAB ID / Original ID / Sample Date	Location	County	Lat/Lon (DD.dddd)	Time	Depth (m)	Temp (C)	Sal (ppt)	DO (mg/L)	pH	Species	cells/liter
HABW210105-046 FDEP EBV001 1/4/2021	**Matanzas Pass (Estero Bay)**	Lee	26.4577 -81.9532	06:48	0.5	21.30	29.45	6.25	7.69		
Analyzed by: Henschen, K. on 1/5/2021 **Comments:** Wind NE @ 4 - 7 mph, overcast, air 16 C, outgoing tide, secchi = 1.5 m, water green brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	235,667 29,333 0
HABW210105-051 FDEP EBV003 1/4/2021	**Estero River; mouth of (Estero Bay)**	Lee	26.4294 -81.8580	07:54	0.5	21.70	29.51	4.86	7.86		
Analyzed by: Henschen, K. on 1/5/2021 **Comments:** Wind N @ 5 mph, overcast, air 15.7 C, outgoing tide, secchi = 0.6 m, water medium brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	56,333 48,333 0
HABW210105-052 FDEP EBV004 1/4/2021	**Carl Johnson Park Boat Ramp (Estero Bay)**	Lee	26.3936 -81.8655	07:15	0.5	21.20	32.35	4.87	7.91		
Analyzed by: Henschen, K. on 1/5/2021 **Comments:** Wind N @ 4 - 7 mph, partly sunny becoming overcast, air 15.9 C, outgoing tide, secchi = 0.6 m, water green brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	1,891,002 28,000 0
HABW210105-053 FDEP EBV005 1/4/2021	**Pelican Bay Nature Park Pier (Estero Bay)**	Lee	26.3584 -81.8375	07:16	0.5	22.20	28.16	4.09	7.74		
Analyzed by: Henschen, K. on 1/6/2021 **Comments:** Wind N @ 4 - 7 mph, partly cloudy, air 18.9 C, outgoing tide, secchi = 0.7 m, water yellow green										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	8,667 19,333 0
HABW210105-054 FDEP EBV006 1/4/2021	**Coon Key; N of (Estero Bay)**	Lee	26.4287 -81.8832	07:06	0.5	21.50	29.60	5.84	7.44		
Analyzed by: Henschen, K. on 1/6/2021 **Comments:** Wind NE @ 4 - 7 mph, overcast, air 19.2 C, tide outgoing, secchi = 1.2 m, water green brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	61,667 5,667 0

NOTE: Blank field = not measured

HAB ID Original ID Sample Date	Location	County	Lat/Lon (DD.dddd)	Time	Depth (m)	Temp (C)	Sal (ppt)	DO (mg/L)	pH	Species	cells/liter
HABW210105-055 FDEP EBV007 1/4/2021	**Mound House Dock (Estero Bay)**	Lee	26.4462 -81.9272	06:48	0.5	21.50	28.87	8.10	7.81		
Analyzed by: Henschen, K. on 1/6/2021 **Comments:** Wind N @ 8 - 12 mph, partly cloudy, air 22.8 C, outgoing tide, secchi = 1.7 m, red brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	717,333 53,667 0
HABW210105-056 FDEP EBERS2 1/4/2021	**Estero River; upstream**	Lee	26.4386 -81.8400	07:30	0.5	23.00	17.49	3.94	7.65		
Analyzed by: Henschen, K. on 1/6/2021 **Comments:** Wind NW @ 2- 3 mph, overcast, air 19.3 C, tide outgoing, secchi = 1.5 m, water green/brown										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 0 0

HAB MONITORING REPORT

From: 1/4/2021 To: 1/4/2021

Fish and Wildlife Research Institute

Collected by: Kowitch, L.
Collecting agency: PC
Sample condition: Preserved

HAB ID / Original ID / Sample Date	Location	County	Lat/Lon (DD.dddd)	Time	Depth (m)	Temp (C)	Sal (ppt)	DO (mg/L)	pH	Species	cells/liter
HABW210105-064 1/4/2021	**Big Carlos Pass**	Lee	26.4056 -81.8833	08:41	1.3	16.00					
Analyzed by: Henschen, K. on 1/6/2021 **Comments:** Dead fish about 1 m apart, putrid smell										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	894,000 11,667 0
HABW210105-065 1/4/2021	**Hogue Channel**	Lee	26.3579 -81.8563	09:00	1.0	16.00					
Analyzed by: Henschen, K. on 1/6/2021 **Comments:**										*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	390,667 27,333 0

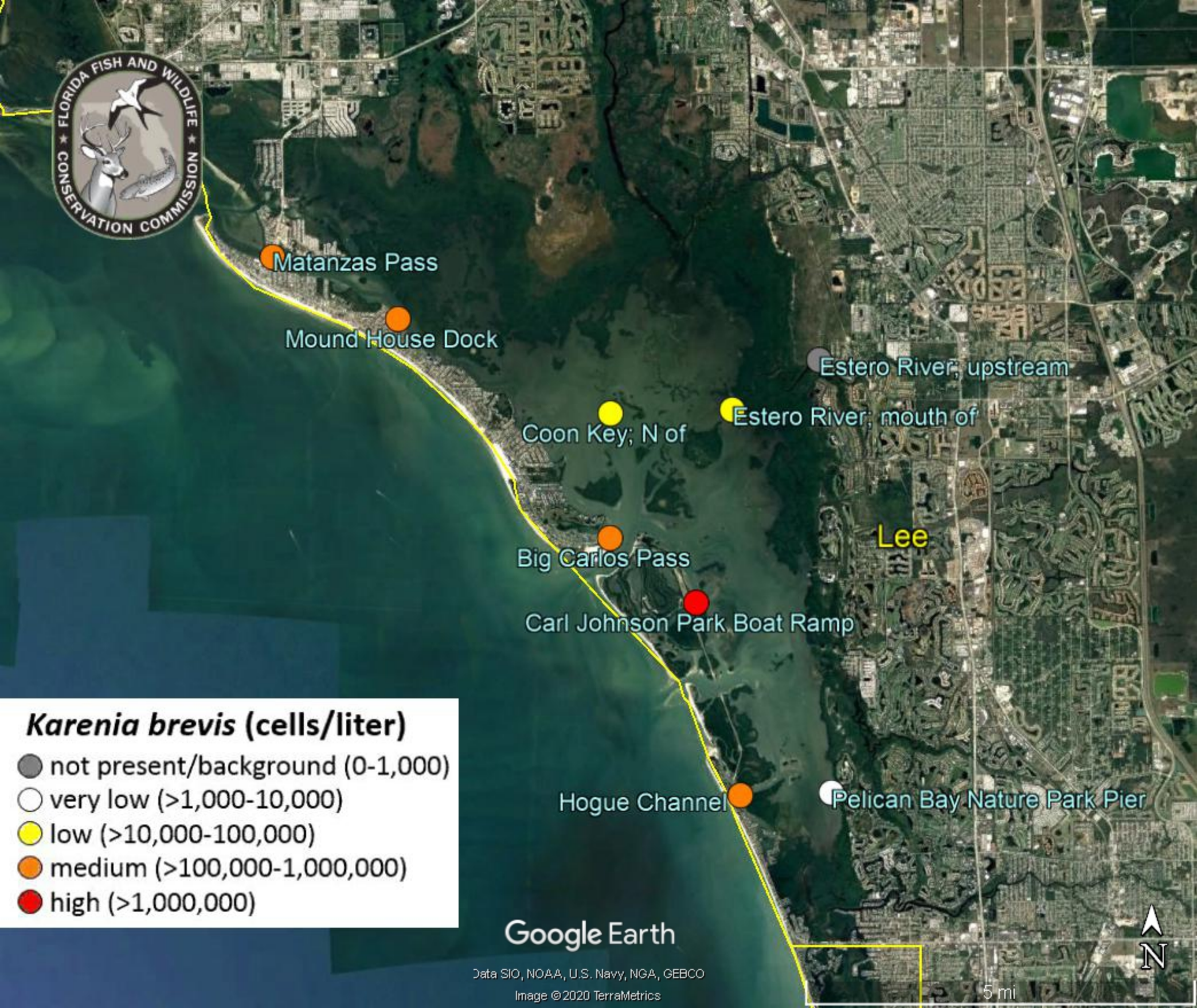
NOTE: Blank field = not measured

Description	*Karenia brevis* abundance	Possible effects (*Karenia brevis* only)
NOT PRESENT - BACKGROUND	0 - 1,000 cells/L	no effects anticipated
VERY LOW	> 1,000 - 10,000 cells/L	possible respiratory irritation; shellfish harvesting closures ≥ 5,000 cells/L
LOW	> 10,000 - 100,000 cells/L	respiratory irritation; possible fish kills; probable detection of surface chlorophyll by satellites at upper range of cell abundance
MEDIUM	> 100,000 - 1,000,000 cells/L	respiratory irritation; probable fish kills; detection of surface chlorophyll by satellites
HIGH	> 1,000,000 cells/L	as above, plus water discoloration

The above report is distributed by the Harmful Algal Bloom (HAB) Group at the Fish and Wildlife Research Institute of the Florida Fish and Wildlife Conservation Commission. The report is intended to (1) provide timely information on HABs in Florida waters to partner agencies and (2) facilitate communication among individuals who direct response activities to address public health concerns. We report on the abundance of *Karenia brevis*, *Pyrodinium bahamense* and *Pseudo-nitzschia* species. *Karenia brevis*, the Florida red tide organism, produces neurotoxins called brevetoxins that can kill fish and other marine life. Brevetoxins may cause respiratory irritation in beachgoers and Neurotoxic Shellfish Poisoning in humans that consume contaminated shellfish. *Pyrodinium bahamense* produces saxitoxins that can cause Paralytic Shellfish Poisoning or Saxitoxin Puffer Fish Poisoning in humans if contaminated shellfish or puffer fish are consumed. Some, but not all, species of *Pseudo-nitzschia* produce domoic acid, which can cause Amnesic Shellfish Poisoning in humans if contaminated shellfish are consumed. Blooms of *Pseudo-nitzschia* spp. (≥ 1,000,000 cells/L) frequently occur in Florida's marine and estuarine waters. For information on red tide related human health issues, please refer to the Department of Health Aquatic Toxins Program.

State-wide status reports of *Karenia brevis* abundance including interactive Google Maps are provided weekly by our group. Shellfish harvesting area status maps are provided by the Division of Aquaculture. Gulf Coast beach conditions can be found at Mote Marine Laboratory's Beach Conditions Report. A full list of red tide related hotlines and information sources can be found here. Data for other species can be requested at any time by sending an inquiry to HABData@MyFWC.com. To learn more about HAB monitoring and research in Florida, please visit MyFWC.com/Research/redtide and Facebook.com/FLHABs.

DISCLAIMER: While every practical step has been taken to provide accurate information in these reports, the need for rapid distribution precludes extensive review. Further, reports are generated with limited interpretation and do not necessarily reflect all scientific observations.


Matanzas Pass
Mound House Dock
Estero River, upstream
Estero River, mouth of
Coon Key, N of
Lee
Big Carlos Pass
Carl Johnson Park Boat Ramp
Hogue Channel
Pelican Bay Nature Park Pier
Karenia brevis (cells/liter)
not present/background (0-1,000)
very low (>1,000-10,000)
low (>10,000-100,000)
medium (>100,000-1,000,000)
high (>1,000,000)
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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