HAB MONITORING REPORT

From: 12/7/2015 To: 12/7/2015

Fish and Wildlife Research Institute

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
HABW151208-034 FDEP EBV001 12/7/2015	**Matanzas Pass (Estero Bay)**	Lee	26.4577 -81.9532	07:28	0.5	22.80	31.62	5.34	7.82		
	Collected by: Volunteer(s) of EBAP; Preserved **Analyzed by:** Henschen, K. on 12/8/2015 **Comments:** Winds NE 4-7 mph, overcast, 19.5 °C air temp, incoming tide, 1 m Secchi depth, water color yellow brown									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 1,667 0
HABW151208-035 FDEP EBERS2 12/7/2015	**Estero River; upstream**	Lee	26.4386 -81.8400	07:28	0.5	23.90	16.68	3.89	7.52		
	Collected by: Fretwell of EBAP; Preserved **Analyzed by:** Markley, L. on 12/8/2015 **Comments:** winds NE 4-7 mph, overcast, 0.2" rain, 19.5°C air temp, Outgoing tide, 1.4 m Secchi depth, green/brown water color									*Karenia brevis* *Pseudo-nitzschia sp.* *Pyrodinium bahamense*	0 1,333 0
HABW151208-036 FDEP EBV003 12/7/2015	**Estero River; mouth of (Estero Bay)**	Lee	26.4294 -81.8580	07:08	0.5	22.30					
	Collected by: Volunteer(s) of EBAP; Preserved **Analyzed by:** KellerAbbe, S. on 12/8/2015 **Comments:** Winds NE 8-12 mph, overcast, 21.6°C air temp, outgoing tide, water yellow brown color									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 2,667 0
HABW151208-037 FDEP EBV004 12/7/2015	**Carl Johnson Park Boat Ramp (Estero Bay)**	Lee	26.3936 -81.8655	07:15	0.5	22.20	32.71	4.90	7.75		
	Collected by: Volunteer(s) of EBAP; Preserved **Analyzed by:** KellerAbbe, S. on 12/8/2015 **Comments:** Winds east 4-7 mph, overcast, 0 precip, 22 °C air, high slack tide, 1.05 m Secchi depth, green water color									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	333 36,000 0

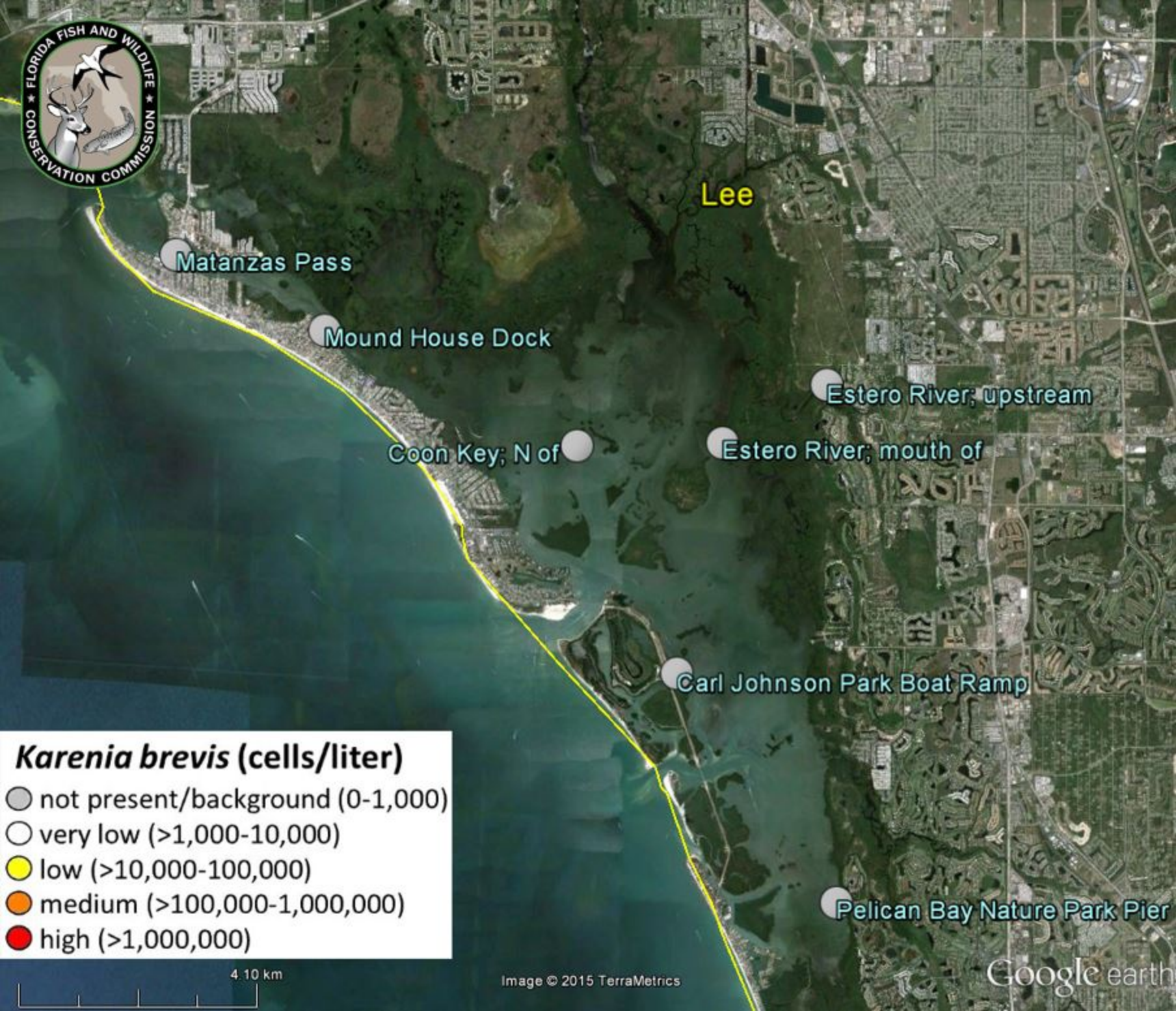
NOTE: Blank field = not measured

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
HABW151208-038 FDEP EBV005 12/7/2015	**Pelican Bay Nature Park Pier (Estero Bay)**	Lee	26.3584 -81.8375	07:02	0.5	22.90	29.57	4.54	8.20		
	Collected by: Sims, C. of EBAP; Preserved **Analyzed by:** Henschen, K. on 12/8/2015 **Comments:** Winds NE 8-12 mph, overcast, 0.14 " precip, 20.8°C air, incoming tide, 3.87 m Secchi depth, yellow green water									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 40,667 0
HABW151208-039 FDEP EBV006 12/7/2015	**Coon Key; N of (Estero Bay)**	Lee	26.4287 -81.8832	07:10	0.5	22.80	31.10	6.00	7.83		
	Collected by: Franklin, N. of EBAP; Preserved **Analyzed by:** Henschen, K. on 12/8/2015 **Comments:** Winds N 8-12 mph, overcast, 0 precip, 21.7 °C air, incoming tide, 0.85 m Secchi depth, water color green brown									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 22,333 0
HABW151208-040 FDEP EBV007 12/7/2015	**Mound House Dock (Estero Bay)**	Lee	26.4462 -81.9272	07:30	0.5	22.90	29.88	5.34	7.64		
	Collected by: Cain, T. of EBAP; Preserved **Analyzed by:** Markley, L. on 12/8/2015 **Comments:** winds W 4-7 mph, overcast, 0 precip, 19.5 °C air, incoming tide, 0.95 m Secchi depth, green brown water									*Karenia brevis* *Pseudo-nitzschia spp.* *Pyrodinium bahamense*	0 13,000 0

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/RedTide and Facebook.com/FLHABs.


FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION
Lee
Matanzas Pass
Mound House Dock
Estero River; upstream
Coon Key; N of
Estero River; mouth of
Carl Johnson Park Boat Ramp
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)
4 10 km
Image © 2015 TerraMetrics
Google earth