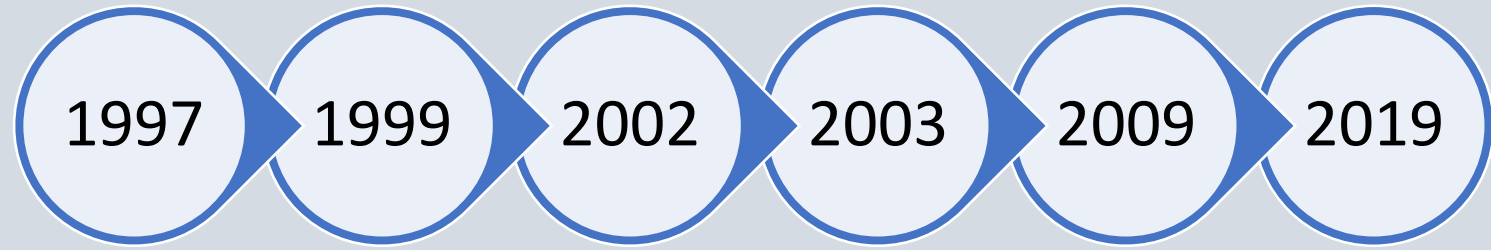


Florida Harmful Algal Bloom Task Force

Leanne Flewelling, Ph.D.
Florida Fish and Wildlife Conservation Commission
Fish and Wildlife Research Institute

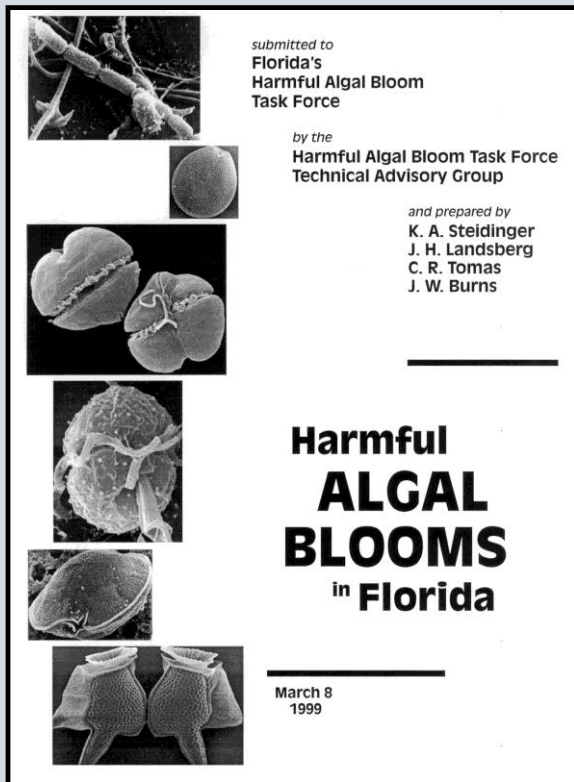


Timeline



- 1997: FDEP and FDOH establish the *ad hoc* Florida Harmful Algal Bloom Task Force (HABTF) and Technical Advisory Group (TAG) in response to mass RT manatee mortalities and eastern seaboard fish kill events





- 1999: HABTF TAG publishes and submits to legislature consensus-based research priority “White Paper” with *Background, Resource Impacts, Public Health Impacts, Economic Impacts, and Recommendations for Action* for priority HABs:

- Red tide
- *Pfiesteria*-like species
- Ciguatera
- Toxic cyanobacteria
- Tumor-promoting harmful algae
- Macroalgae



2018 F.S. 379.2271

Harmful-Algal-Bloom Task Force

(1) There is established a Harmful-Algal-Bloom Task Force for the purpose of determining research, monitoring, control, and mitigation strategies for red tide and other harmful algal blooms in Florida waters. The Fish and Wildlife Research Institute shall appoint to the task force scientists, engineers, economists, members of citizen groups, and members of government. The task force shall determine research and monitoring priorities and control and mitigation strategies and make recommendations to the Fish and Wildlife Research Institute for using funds as provided in this act.

The screenshot shows the Florida Legislature's Online Sunshine website. The page title is "The 2018 Florida Statutes". The search results show "Title XXVIII NATURAL RESOURCES; CONSERVATION, RECLAMATION, AND USE" and "Chapter 379 FISH AND WILDLIFE CONSERVATION". The specific statute, 379.2271, is titled "Harmful-Algal-Bloom Task Force.--". The text of the statute is as follows:

(1) There is established a Harmful-Algal-Bloom Task Force for the purpose of determining research, monitoring, control, and mitigation strategies for red tide and other harmful algal blooms in Florida waters. The Fish and Wildlife Research Institute shall appoint to the task force scientists, engineers, economists, members of citizen groups, and members of government. The task force shall determine research and monitoring priorities and control and mitigation strategies and make recommendations to the Fish and Wildlife Research Institute for using funds as provided in this act.

(2) The Harmful-Algal-Bloom Task Force shall:

- (a) Review the status and adequacy of information for monitoring physical, chemical, biological, economic, and public health factors affecting harmful algal blooms in Florida;
- (b) Develop research and monitoring priorities for harmful algal blooms in Florida, including detection, prediction, mitigation, and control;
- (c) Develop recommendations that can be implemented by state and local governments to develop a response plan and to predict, mitigate, and control the effects of harmful algal blooms; and
- (d) Make recommendations to the Fish and Wildlife Research Institute for research, detection, monitoring, prediction, mitigation, and control of harmful algal blooms in Florida.

History.--s. 1, ch. 99-185; s. 5, ch. 2004-264; s. 44, ch. 2008-247.
Note.--Former s. 370.0692.



F.S. 379.2271

(2) The Harmful Algal Bloom Task Force shall:

(a) Review the status and adequacy of information for monitoring physical, chemical, biological, economic, and public health factors affecting harmful algal blooms in Florida;

(b) Develop research and monitoring priorities for harmful algal blooms in Florida, including detection, prediction, mitigation, and control;

(c) Develop recommendations that can be implemented by state and local governments to develop a response plan and to predict, mitigate, and control the effects of harmful algal blooms; and

(d) Make recommendations to the Fish and Wildlife Research Institute for research, detection, monitoring, prediction, mitigation, and control of harmful algal blooms in Florida.

History.—s. 1, ch. 99-185; s. 5, ch. 2004-264; s. 44, ch. 2008-247.

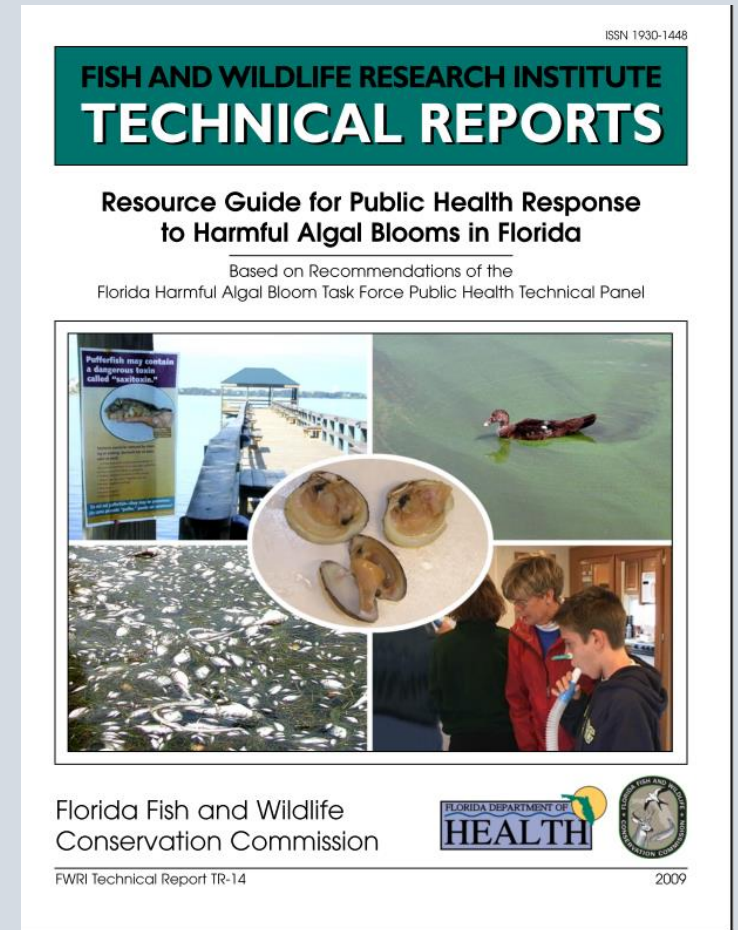
Note.—Former s. 370.06092.



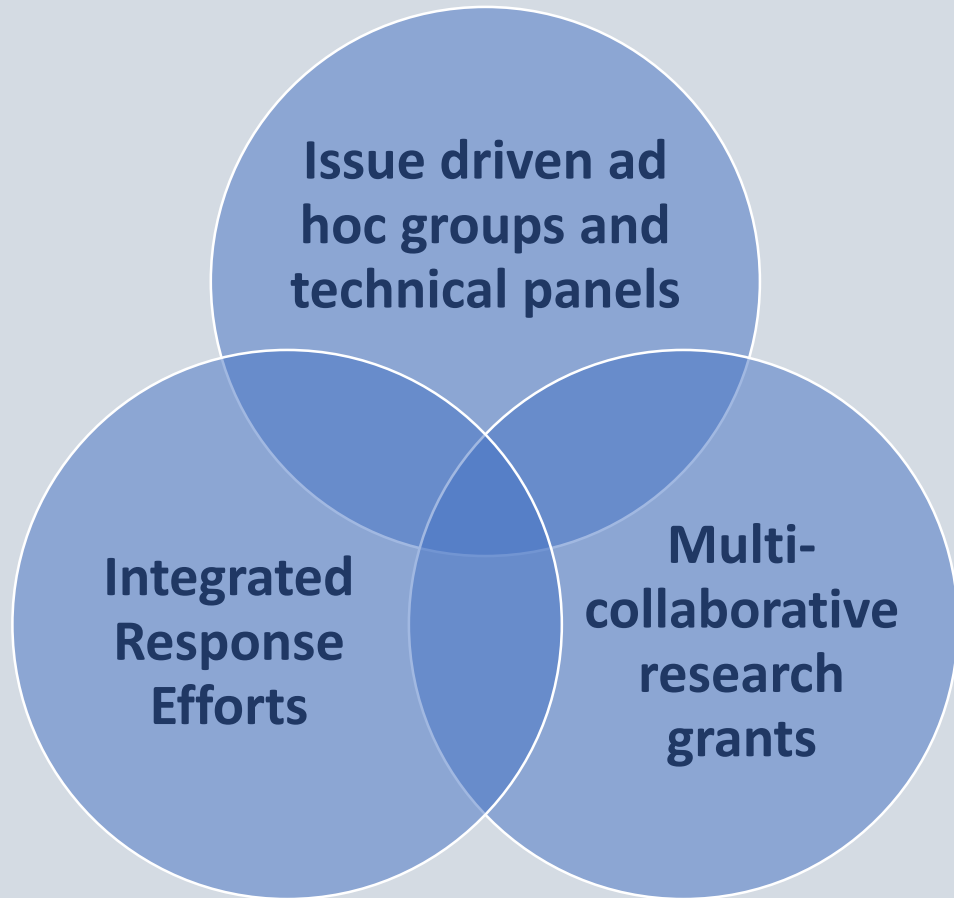
- 1998-2001: State funds \$3M for Task Force (\$1M/year)
 - ~\$1.5M Red Tide projects, \$683K Cyanobacteria, \$817K other priority HABs
 - 16 funded projects
 - Red Tide: control [clay], economic and human health impacts, rapid toxin detection in shellfish, dead fish removal, ECOHAB support
 - Cyanobacteria: toxic spp. identification, survey, and detection; fish pathology; public health education; automated instrumentation
 - Pfiesteria-like organisms: molecular probes, toxicity
 - Macroalgae: east coast blooms



- 2002: last official meeting of the HABTF and specific appropriation of funds
- 2003: FWC-FWRI created the Florida HABTF Public Health Technical Panel with funding from FDOH/CDC
- 2009: FWC/FDOH technical report resource guide



Other Outcomes and Products



- FDOH conference: Health Effects of Exposure to Cyanobacteria Toxins: State of the Science (2002)
- Cyanobacteria workshop: Cyanotoxin Detection and Quantification and Instrumentation (2001)
- FLHABTF Public Health Technical Health Panel (2003-2006)
- FLHABTF recreational harvesting group
- Interagency CyanoHAB response coordination network (FDOH centralized database/reporting)
- IRL Biotoxin and Aquatic Animal Health WG
- RT Control and Mitigation Grant Program (2007-2009)



2019: Reconvened Task Force

Funding appropriated for FY 2019-2020 (non-recurring)

Maximize synergy of new initiatives:

- BGATF: freshwater systems, reduction of nutrient loads in freshwater and coastal systems
- HABTF: coastal and marine HABs
 - Species that produce toxins that can negatively impact human and animal health
 - Non-toxic species that can negatively impact ecosystems
- Mote Marine Laboratory: research on bloom control and mitigation strategies



Proposed Focal Areas for the HABTF

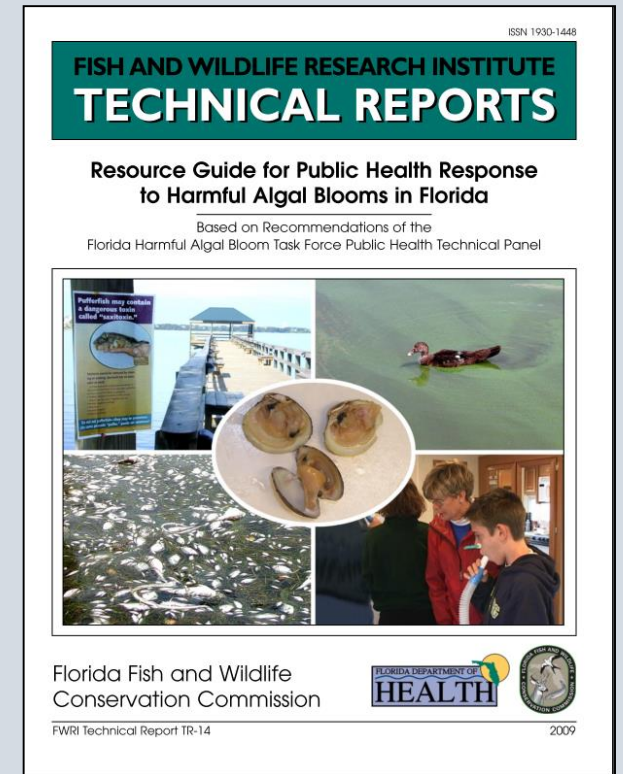
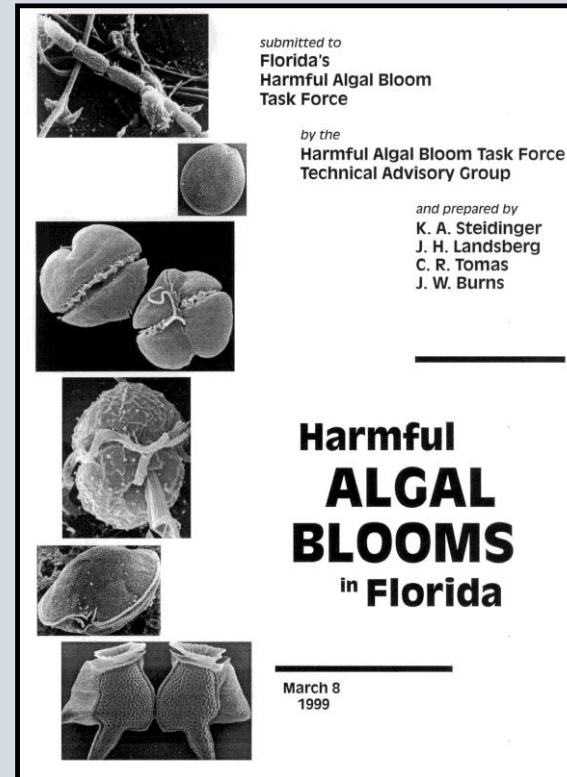
- Work with BGATF to identify and prioritize actions that will reduce nutrient loading to our freshwater and coastal systems;
- Evaluate current policies and procedures in place to ensure the safety of Florida's seafood from both wild-caught and aquaculture sources;
- Evaluate and make prioritized recommendations for applied research into HAB biology, fate of toxins, impacts on human and environmental health; and detection, tracking, modeling and prediction of blooms; and
- Evaluate current cooperative response efforts involving state, federal, and local government and make recommendations for improved coordination and communication regarding HABs and their effects.



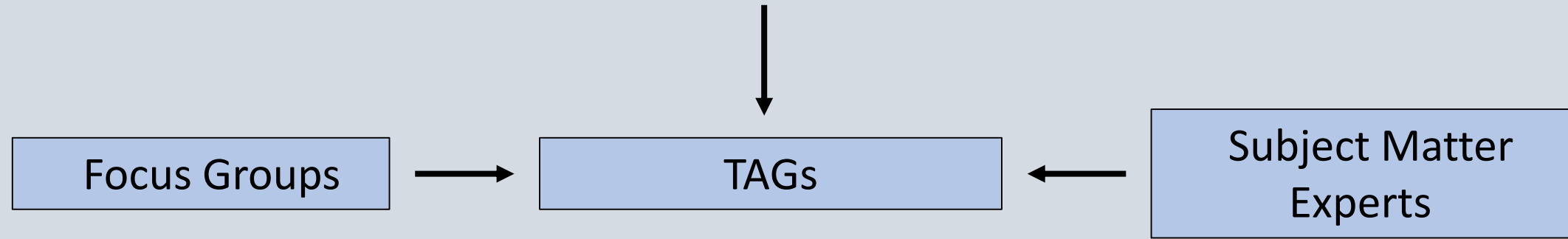
2019: Reconvened HAB Task Force

Goal

To develop recommendations that will address statewide HAB issues and challenges



HAB Task Force



Science & Management

- Applied science
- Technology
- Red Tide monitoring
- Red Tide event response
- Other priority HABs
- Forecasting/prediction
- Preparedness/contingency planning
- Human and Environmental Health
- Emerging HABs and HAB toxins
- Policy & law

Communications

- Surveys & focus groups
- Messaging
- Risk communication
- Audience
- Education
- Information and data repository
- Centralized multi-media products
- Historical review (overview/status/
living document)
- Networking/coordination
- Planning



HAB Task Force Members

Gil McRae, Director FWC-FWRI	
Leanne Flewelling	FWC-FWRI
David Whiting	FDEP
Andrew Reich	FDOH
Jill Fleiger	FDACS
Charles Jacoby	SJRWMD
Barbara Kirkpatrick	GCOOS (Gulf of Mexico Coastal Ocean Observing System)
Quay Dortch	NOAA
Rhonda Watkins	Collier County
Sherry Larkin	University of Florida
Donald Anderson	Woods Hole Oceanographic Institution
Duane De Freese	IRLNEP

