

FLORIDA BLUE-GREEN ALGAE STATE OF THE SCIENCE *Symposium II*

Sheraton Orlando North Hotel
600 N Lake Destiny Rd., Maitland, FL

May 15-16, 2023

Hosted by Florida Sea Grant

PHOTO BY: FORREST LEFLER

The Symposium is hosted by Florida Sea Grant and the University of Florida IFAS with funding from the Florida Department of Environmental Protection.

Executive Committee

Sara Davis, Florida Department of Environmental Protection

Joy Hazell, *Symposium Facilitator*, University of Florida IFAS Extension

Lisa Krimsky, *Symposium Chair*, University of Florida IFAS Extension / Florida Sea Grant

Mark Rains, Florida Department of Environmental Protection

Elizabeth Staugler, *Symposium Co-Chair*, Florida Sea Grant / University of Florida

Janelle Strong, Florida Department of Environmental Protection

Steering Committee

Emily Cooley, Florida Department of Health

Leanne Flewelling, FWC Fish and Wildlife Research Institute

Lawrence Glenn, South Florida Water Management District

H. Dail Laughinghouse IV, University of Florida IFAS

Mandy Michalsen, U.S. Army Corps of Engineers Engineer Research and Development Center

Richard Stumpf, NOAA National Centers for Coastal Ocean Science

David Whiting, Florida Department of Environmental Protection

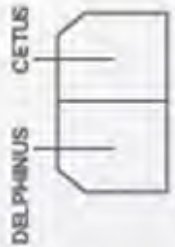
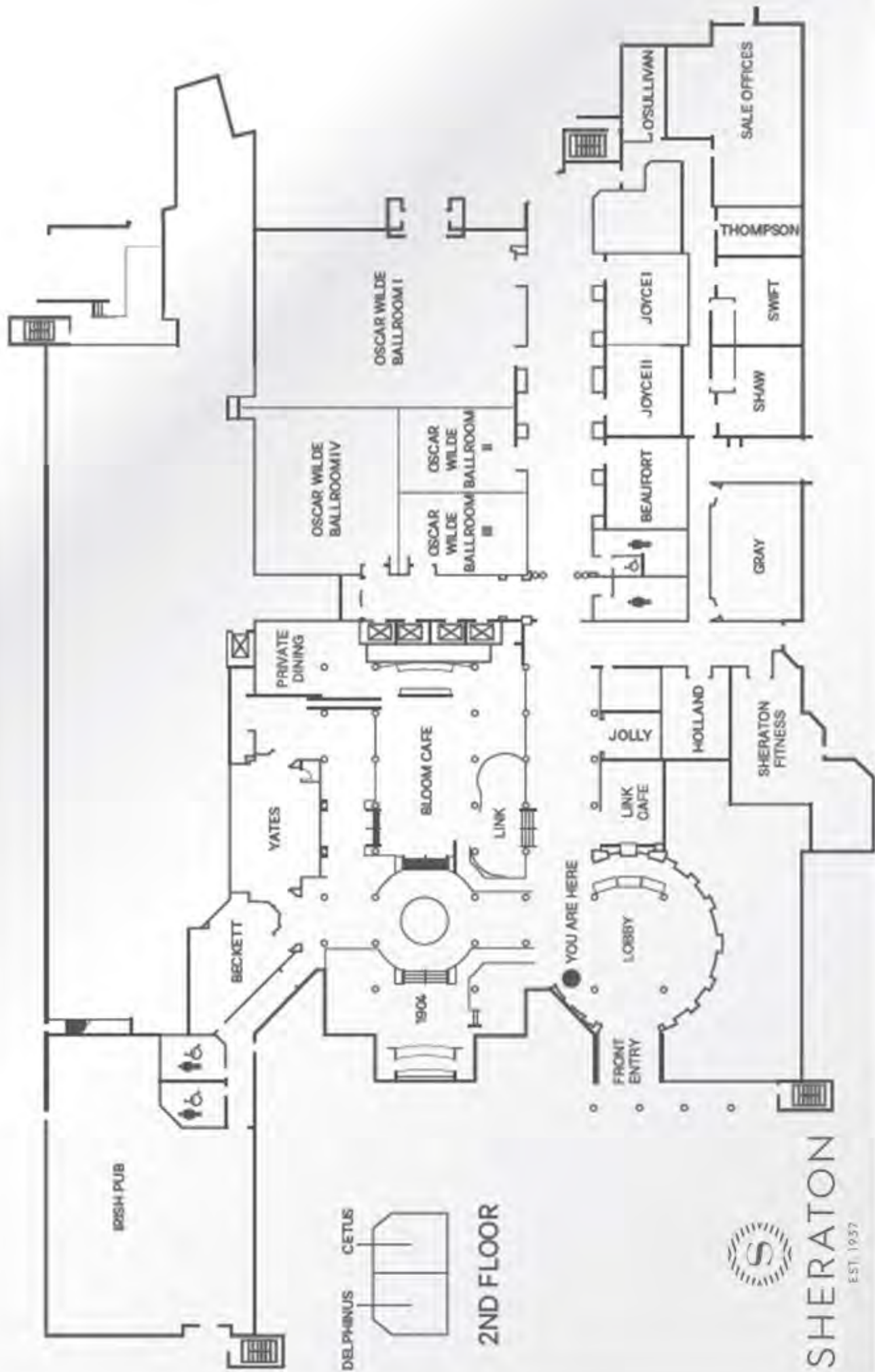
Symposium Goals

1. Identify what progress has been made since the inaugural Symposium in 2019, what knowledge gaps still exist, and prioritize new research needs to inform and improve cyanoHAB management in Florida.
2. Efficiently share updates on new findings and ongoing efforts to ensure that the most current best practices are being employed statewide and that ongoing efforts are not being duplicated.

Objectives

- Promote information exchange among harmful algal bloom scientists and managers
- Develop consensus statements on the state of the science with regard to:
 - Drivers of blooms
 - Detection and monitoring
 - Prediction and modeling
 - Management and mitigation
 - Public health
- Assess current state of the research for Florida's cyanoHABs
- Identify and rank research priorities for cyanoHABs in Florida





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AGENDA

MONDAY, MAY 15

7:30a.m. BREAKFAST (provided) | Oscar Wilde 4

8:30a.m. Welcome and Introductions | Oscar Wilde 2 & 3

Plenary Presentation – Florida Blue-Green Algal Bloom Task Force
Mark Rains, *Chief Science Officer*

Plenary Talk – South Florida Harmful Algal Bloom and Hypoxia Assessment & Action Plan
David Kidwell, *NOAA National Centers for Coastal Ocean Science*

Plenary Presentation – Review of 2019 Florida Harmful Algal Bloom State of the Science Symposium
Lisa Krinsky, *University of Florida IFAS Extension / Florida Sea Grant*

Plenary Panel Discussion

Session 1: Drivers of Bloom Initiation and Termination

Review of HABSOS 2019 – Elizabeth Staugler, *Florida Sea Grant / UF*
Lightning Presentation 1 – Jordon Beckler, *FAU Harbor Branch Oceanographic Institute*
Lightning Presentation 2 – Forrest Lefler, *UF IFAS*
Lightning Presentation 3 – Viviana Mazzei, *USGS Caribbean-Florida Water Science Center*
Lightning Presentation 4 – Malcolm McFarland, *FAU Harbor Branch Oceanographic Institute*
Facilitated Discussion

Session 2: Bloom Prediction & Modeling

Review of HABSOS 2019 – Lisa Krinsky, *UF IFAS Extension / Florida Sea Grant*
Lightning Presentation 1 – Mauricio Arias, *USF*
Lightning Presentation 2 – Mingshun Jiang, *FAU Harbor Branch Oceanographic Institute*
Lightning Presentation 3 – Sean Sculley, *SFWMD*
Lightning Presentation 4 – Richard Stumpf, *NOAA National Centers for Coastal Ocean Science*
Facilitated Discussion

LUNCH (provided) | Oscar Wilde 4

Session 3: Bloom Detection & Monitoring

Review of HABSOS 2019 – Elizabeth Staugler, *Florida Sea Grant / UF*
Lightning Presentation 1 – Cassandra Armstrong, *SFWMD*
Lightning Presentation 2 – Joshua Papacek, *SJRWMD*
Lightning Presentation 3 – David Whiting, *FDEP*
Lightning Presentation 4 – Carl Legleiter, *USGS Observing Systems Division*
Facilitated Discussion

Session 4: Bloom Management & Mitigation

Review of HABSOS 2019 – Lisa Krinsky, *UF IFAS Extension / Florida Sea Grant*
Lightning Presentation 1 – Dail Laughinghouse, *UF IFAS*
Lightning Presentation 2 – Hidetoshi Urakawa, *FGCU*
Lightning Presentation 3 – Erich Marzolf, *SJRWMD*
Lightning Presentation 4 – Edward Smith, *FDEP*
Facilitated Discussion

Session 5: Public Health

Review of HABSOS 2019 – Elizabeth Staugler, *Florida Sea Grant / UF*
Lightning Presentation 1 – Alberto Caban-Martinez, *UM*
Lightning Presentation 2 – Shirley Gordon, *FAU*
Lightning Presentation 3 – Adam Schaefer, *ABT Associates*
Lightning Presentation 4 – Sherri Kasper, *FDOH*
Facilitated Discussion

Session 6: Other CyanoHABs – Pico- and nanocyanos in the Indian River Lagoon

Presentation – Charles Jacoby, *SJRWMD*
Panel Discussion –

- Katherine Hubbard, *FWC-FWRI*
- Charles Jacoby, *SJRWMD*
- Malcolm McFarland, *FAU Harbor Branch Oceanographic Institute*

Facilitated Discussion

5:00p.m. ADJOURN

5:30p.m. Evening Social (light snacks will be provided) | 1904 Bar & Lounge

7:30a.m. BREAKFAST (provided) | Oscar Wilde 4

8:30a.m. Welcome Back | Oscar Wilde 2 & 3

Session 7: Other CyanoHABs of Concern – Benthic Cyanos

Presentation – David Berthold, *UF IFAS*

Panel Discussion –

- Chris Anastasiou, *SWFWMD*
- David Berthold, *UF IFAS*
- Dail Laughinghouse, *UF IFAS*
- Ed Sherwood, *TBEP*
- Dave Tomasko, *SBEP*
- David Whiting, *FDEP*

Facilitated Discussion

Development of Consensus Statements & Research Needs

Facilitated discussion to develop the consensus statements for each session identifying how knowledge has progressed since 2019 and what new data gaps exist.

LUNCH (provided) | Oscar Wilde 4

Development of Best Practices for CyanoHAB Research & Management

Small group discussions to identify best practices and to reduce redundancies across research topics and projects.

Breakout Session Rooms:

- Drivers of Bloom Development | Beaufort
- Bloom Prediction & Modeling | Joyce 1
- Bloom Detection & Monitoring | Joyce 2
- Bloom Management & Mitigation | Shaw
- Public Health | Swift

CyanoHAB Research Needs Prioritization | Oscar Wilde 2 & 3

Identify, review and rank research needs for each session.

5:00p.m. Symposium Concludes