



AGENCY ON BAY MANAGEMENT

4000 Gateway Centre Boulevard #100 · Pinellas Park,
FL 33782

727.570.5151 Ext. 40

<http://www.tbrpc.org/abm>

MEETING AGENDA

December 6, 2018

9:00 AM

Full Agency

Mayor Woody Brown, Chair

1. **CALL TO ORDER / WELCOME**
2. **PUBLIC COMMENT/ ANNOUNCEMENTS**
3. **APPROVAL OF Oct 11, 2018 FULL AGENCY MEETING SUMMARY**
4. **Port Tampa Berth Expansion Hydrologic Study- *Dr. William Miller, Taylor Engineering***

Taylor Engineering conducted a hydrographic study for a proposed expansion of the East Port Cargo Area in Port Tampa Bay in Hillsborough County, Florida. The permitting process of the Florida Department of Environmental Protection (FDEP) requires verification that the hydraulic conditions characteristic of the proposed docking facility will maintain adequate water quality and not degrade adjacent water bodies through secondary impacts. The study was performed with particular attention to any possible effects of the expansion on East Bay and also McKay Bay, an impaired water body adjacent to East Port waters.

5. **HABscope- *Bob Currier, Gulf of Mexico Coastal Ocean Observing System***

HABscope was designed to be usable by a volunteer with minimal training and to provide real-time *Karenia brevis* cell counts from the sampling location. The HABscope field kit consists of an Omax microscope, Apple iPod Touch, 3D printed adapter, power supply and case. An app is loaded on the iPod Touch and provides sentinels with the ability to record a thirty second video and upload the video to a cloud server. **full description on back*

6. **ABM Strategic Planning**
 - a. History of ABM
 - i. Past mission
 - b. How did we evolve, define how we move forward
 - i. Our structure over time
 - ii. Our Role
 - iii. What should our composition be?

7. **OTHER ITEMS**

- a. Bay Soundings Article Ideas

8. **ADJOURN**

If you are a person with a disability who needs any accommodation in order to participate in this meeting, you are entitled, at no cost to you, to the provision of certain assistance. Please contact the Tampa Bay Regional Planning Council at (727) 570-5151 Ext. 10 within three working days of the meeting.

HABSCOPE

Cell counts for *Karenia brevis* samples are typically completed manually by a technician using a laboratory microscope. The counts can take up to one week to complete and at the height of the bloom season are unlikely to be valid when published.

HABscope was designed to be usable by a volunteer with minimal training and to provide real-time cell counts from the sampling location. The HABscope field kit consists of an Omax microscope, Apple iPod Touch, 3D printed adapter, power supply and case. An app is loaded on the iPod Touch and provides sentinels with the ability to record a thirty second video and upload the video to a cloud server.

When a video is uploaded to the server, it is first rotated for proper orientation and then run through the detection algorithm. The algorithm uses visual characteristics in the first pass to discriminate between particles of interest and detritus. Based on morphological characteristics, regions of interest (ROI) are identified. Each ROI is clipped from a frame and fed to a Google TensorFlow model.

Using image recognition techniques each ROI is classified as '*Karenia*' or '*Not Karenia*'. *Karenia* cells are marked with a green target indicator. Other moving objects are marked with a red target indicator. The maximum number of visible cells is used to calculate cells/Liter. The scale used in the calculation is self-generated by the algorithm. Testing against known cell quantities has shown that HABscope consistently provides cell counts within 20% of manual counts.