



# AGENCY ON BAY MANAGEMENT

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

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## MEETING AGENDA

October 11, 2018  
9:00 AM

Full Agency  
Mayor Woody Brown, Chair

1. **CALL TO ORDER / WELCOME**
2. **PUBLIC COMMENT/ ANNOUNCEMENTS**
3. **APPROVAL OF June 14, 2018 FULL AGENCY MEETING SUMMARY**
4. **Albert Whitted Airport Master Plan update- Richard Lesniak, Albert Whitted Airport**

The Master Plan for Albert Whitted Airport process will begin later this year, which will determine the long-term development plans for the airport.

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 printer 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*

HABscope talk postponed due to  
Hurricane Michael

6. **ABM- December meeting focus**
  - a. List of official members (who is missing)
  - b. December meeting focus
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.