Integrated Trends Analysis Team (ITAT)
Meeting

Wednesday, July 27, 2022
10:00 AM – 12:00 PM

Join by Webinar
Meeting Number: 2621 196 2756
Password: AJxhSTrd286
https://umces.webex.com/umces/j.php?MTID=mecd2aa5e90e60cdfa4de060ae4093997
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Conference Line: +1-408-418-9388 Access code: 2621 196 2756

Meeting Materials: Link

This meeting will be recorded for internal use to assure the accuracy of meeting notes.

AGENDA

10:00 – 10:15 **Welcome – Vanessa Van Note** (EPA) and **Breck Sullivan** (USGS)

Announcements –

- Conferences of potential interest:
  - Environmental measurement Conference – August 1-5, 2022, Arlington, VA.
  - World Seagrass Conference & International Seagrass Biology Workshop – August 7-12, 2022, Annapolis, MD.
  - 11th U.S. Symposium on Harmful Algae – October 23-28, 2022, Albany, NY. Abstracts/posters due July 15 and registration closes September 16.
  - Chesapeake Watershed Forum – November 4-6, 2022, Shepherdstown, WV. Request for Proposals were due June 3, 2022.
  - A Community on Ecosystem Services – December 12-15, 2022, Washington, DC. Abstracts due July 15, 2022.
  - National Water Quality Monitoring Council's 13th National Monitoring Conference – April 24-28, 2023. Location TBD. Session proposals due June 24, 2022.
- Rappahannock Tributary Summary Updates
  - If you were part of the first round of reviewers, please review the appropriate sections of the report. See the email from Alex Gunnerson on July 7th for more details and the different versions of the report.
- DC data in the tidal trends this year.
  - Breck, Vanessa, and Rebecca Murphy have been working with DC DOEE (Efeturi Oghenekaro, Blessing Edje, George Onyullo) and MWCOG (Mukhtar Ibrahim, Karl Berger) on incorporating DC data into the tidal trends results for the Potomac and Anacostia Rivers.
- Scheduling the November and December ITAT meetings.

    - ITAT members are asked to come prepared with knowledge of their November and December availability as the typical 4th Wednesday of the month meeting time occurs when many members are typically unavailable.
- Availability for the August Meeting.
    - Some members will be on vacation during the time the ITAT meeting will be taking place in August. Members should come prepared to let Breck, Vanessa, and Alex know if they will be in attendance, cannot make it, or would prefer a different time.

10:15 – 11:15 **Marine Heatwaves in the Chesapeake Bay – Piero Mazzini** (VIMS), **Cassia Pianca** (VIMS), and **Nathan Shunk** (VIMS)

10:15 – 10:35 **Marine Heatwaves in the Chesapeake Bay – Piero Mazzini** (VIMS) and **Cassia Pianca** (VIMS)

The frequency, duration, and intensity of marine heatwaves (MWHs) have been observed to increase in global oceans, but little is known about their potential variability in estuarine systems. Piero Mazzini and Cassia Pianca of VIMS conducted a study to investigate the intensity, duration and frequency of MWHs in the Chesapeake Bay using over three decades of continuous temperature records. Observed trends suggest that the Chesapeake Bay will reach a semi-permanent MHW state, when extreme temperatures will be present over half the year. Given the detrimental impacts of MWHs on ecosystems, improving our basic understanding of MHWs is important to guiding management decisions.

10:35 – 10:55 **Impact of Marine Heatwaves on Subsurface Hydrography and Dissolved Oxygen in the Chesapeake Bay – Nathan Shunk** (VIMS)

This presentation intends to characterize subsurface anomalies in temperature, salinity, and dissolved oxygen, along the CB main stem during MHW events. A MHW is defined as a period of five consecutive days or more with anomalies that are above the 90th percentile threshold, thus requiring a time series sampled daily with a minimum duration of twenty years. There are limited, if any, subsurface timeseries that have such temporal resolution and record length. To compensate for this data gap, daily data from the Multi-Sensor Ultra-High Resolution (MUR) sea surface temperature field from NASA's Jet Propulsion Lab will be used to identify MHW events at the surface and then in-situ profiles from the Chesapeake Bay Program sampled during MHW events will be used to examine the subsurface anomalies during these events. We will explore the spatial and seasonal variability in subsurface temperature, salinity, and dissolved oxygen anomalies across the CB main stem's salinity gradient during MHWs events.

10:55 – 11:15 **Discussion**

11:15 – 12:00 **Overview of 3D Segment Explorer and 4D Visualization of living conditions for striped bass and blue crab– Angie Wei** (UMCES)

Angie Wei will discuss work done with the modeling team to visualize the living conditions of blue crab and striped bass in interpolator grids, and her work on a 3D Segment Explorer showing both the 2D and 3D view of individual segments and their basic statistics, monitoring stations, and TMDLs. There will be time for questions after the presentation.

12:00 Adjourn

Next Meeting: Wednesday, August 24, 2022