



2021 Intern Symposium

Thank you for joining us as we celebrate the work and contributions of students participating in the CRC and NOAA Chesapeake Bay internship program and the CRC C-StREAM internship program.

Meeting Link: meet.google.com/ofo-ragc-tzr

10:30 Welcoming Remarks

- Denice Wardrop - Director, Chesapeake Research Consortium
- Sean Corson - Director, NOAA Chesapeake Bay Office
- Randy Rowel - C-StREAM Program Coordinator

10:45 NCBO/NART Interns

- 10:45 Rachel Lazzaro
 - Title: Applying Satellite-Derived Data to Coastal Resource Management: Development and Validation of Geospatial Products
 - Abstract: The Committee for Earth Observation Satellites' COAST pilot program is focused on providing satellite-derived data products to coastal environments in order to help regional stakeholders in decision making. The Chesapeake Bay's Middle Peninsula (encompassed by the Rappahannock and York rivers) has been the focus of data curation; the development of useful data products requires thoughtful engagement with stakeholders, translation and refinement into feasible products, and a data pipeline flowing from exploration to visualization to validation with in situ data.
- 11:00 Joshua Ramirez
 - Title: The Chesapeake Bay Invasive Catfish Mapping Application
 - Abstract: To assist the Invasive Catfish Workgroup with their outcome goals, a web mapping application was developed, acting as a data portal for different types of priority data/information in one place, promoting synthesis and accessibility to work group members and external users (other federal/state agencies, NGOs, and the general public).
- 11:15 Dlynzee Damas
 - Title: Chesapeake Bay CMECS Benthic Habitat: An Important Update

- Abstract: Digital representation of the distribution of seabed habitats were created throughout the Chesapeake Bay to coordinate and facilitate improved management of blue crab and recovery of oysters, while also promoting fish habitat and scrounge for key species like menhaden, striped bass and alosines. With newer survey data replacing older ones with different and better data quality, sourcing and resolution, information throughout the bay is no longer uniform. This project consists of updating the existing substrate component database with new data streams of the bay and creating new biotic and geofom component databases for the Chesapeake Bay using the Coastal Marine Ecological Classification Standard (CMECS).
- 11:30 Travis Gopaul
 - Title: Understanding the Bay: Visualization of CBIBS Data
 - Abstract: In an effort to aid NOAA's Education team, the functionality of the Chesapeake Exploration graphing application was updated and enhanced. The goal is for educators to use the application as a tool to display the data gathered by the Chesapeake Bay Interpretive Buoy System (CBIBS) in formats that can assist them when teaching secondary students about the changes the Bay undergoes over time, as well as make connections between the Bay and the species that inhabit it.
- 11:45 Olivia Fey
 - Title: Applying Satellite-Derived Data to Coastal Resource Management: Development and Validation of Geospatial Products
 - Abstract: The Committee for Earth Observation Satellites' COAST pilot program is focused on providing satellite-derived data products to coastal environments in order to help regional stakeholders in decision making. The Chesapeake Bay's Middle Peninsula (encompassed by the Rappahannock and York rivers) has been the focus of data curation; the development of useful data products requires thoughtful engagement with stakeholders, translation and refinement into feasible products, and a data pipeline flowing from exploration to visualization to validation with in situ data.
- 12:00 Anissa Foster
 - Title: Ecological Considerations When Developing Climate Change Indicators
 - Abstract: My internship project focused on compiling potential uses for a Bay Water Temperature Change Indicator related to fish impacts in Chesapeake Bay. Concepts from the literature were reviewed to develop ideas for ecological impact indicators that connect water temperature change to fish habitat suitability. Existing data were used to begin testing how to structure a heat wave indicator related to striped bass habitat needs.
- 12:15 Hannah Chamberlain
 - Title: Virtual Environmental Education (Kumospace Link - <https://www.kumospace.com/chamberlain>)
 - Abstract: Environmental education in a virtual setting presents a new set of challenges when considering how to create meaningful and authentic

interactions. Events, materials, and personal connections must be developed thoughtfully and intentionally for environmental literacy efforts to continue progressing in a time of online learning.

Break

12: 40 EPA Interns

- 12:40 Bailey Bosley
 - Title: Exploring the Use of Game Engines for GIS Data
 - Abstract: ESRI is producing a new application, ArcGIS Maps SDK for game engines, which allows you to stream GIS data where it may be manipulated by the capabilities of game engines. This combination can increase the analysis of GIS data and environmental issues through the use of simulations, animations, and other imagery effects.
- 12:55 Abril Hunter
 - Title: Latino Inclusion in Green Careers: Workforce Development Programs in Collaboration with EcoLatinos
 - Abstract: EcoLatinos is an organization that functions at the intersection of environmental science and the Latino community. Founder and CEO Ruby Stemmler aims to create a workforce development program within EcoLatinos that encompasses nationally recognized certifications. In order to continue the organization's progression in environmental justice, it is vital to evaluate current workforce development and certificate programs to help develop comprehensive background research for EcoLatinos' future endeavors.
- 1:10 Crystal Zhao
 - Title: Community-Level Partnerships Within the Bay Program
 - Abstract: As diversity, equity, inclusion, and justice (DEIJ) are integrated into restoration initiatives, the Chesapeake Bay Program must acknowledge the work that organizations and individual change-makers have been doing to effect positive change in their local communities and environments. This summer I developed a StoryMap highlighting the impact of community-level organizations in order to emphasize the importance of cultivating meaningful, supportive, and mutually beneficial relationships between these underrepresented stakeholders and the Bay Program going forward.

1:25 REU Interns

- 1:25 Adriana Murphy
 - Title: Coastal Blue Carbon: Application for the Chesapeake Bay
 - Abstract: Coastal Blue Carbon is a hot topic and it is getting attention as a potential way to mitigate climate change and finance wetland and SAV restoration projects. Different methodologies have been developed to include

coastal habitats into the carbon market, however, evaluation of existing data in the Chesapeake Bay is still needed to apply these protocols..

- 1:40 Sunnidae Gallien
 - Title: The Impact of Macroparasites on Fish & Crab Biodiversity in Oyster Reefs
 - Abstract: To understand macroparasites' role in oyster reefs, I used R Studio to analyze prerecorded Polydora species worms and Cliona species sponges' presence data, and fish and crab biodiversity data that I had collected from GoPro footage of oyster reefs within the Chesapeake Bay. A hand-made children's pamphlet that I designed for a minority youth audience explains the importance of macroparasites, methods of oyster reef conservation that can be done from home, and a brief history of Black Watermen on the Chesapeake Bay followed by an introduction to the Minorities in Aquaculture organization.
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- 1:55 Katie Delph
 - Title: Assessing hunter opinion and economic impact associated with Sika deer hunting and management on Maryland's Eastern Shore.
 - Abstract: Determine the management preferences, hunting participation rates, economic impacts, and general support for sika deer hunting by sika deer hunters on Maryland's Eastern Shore. Oversee execution of a professionally conducted and statistically sound online survey using questions generated in conjunction with the DNR..

2:10 Closing Remarks

*Student is a participant in the CRC-NOAA Chesapeake Bay internship program.

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