CURRICULUM VITAE

Lora A. Harris

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I. Education

1998	B.A.	Smith College
2006	Ph.D.	University of Rhode Island

II. Professional Background

2005-2007	Postdoctoral Scientist, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA
2007-2015	Assistant Professor, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD
2015-	Associate Professor, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD
2021-2022	Fulbright "Seeking Global Solutions" Scholar (Finland)
2021-2022	USM Wilson H. Elkins Endowed Professor
2022-	American Geophysical Union LANDInG Community Ambassador
2022-	Professor, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science, Solomons, MD

III. Research

A. Areas of Professional Expertise

Coastal ecology, systems ecology, ecosystems modeling, biogeochemistry, community engagement, restoration, wetlands, Justice|Equity|Diversity|Inclusion interventions and research

B. Peer-Reviewed Publications (*=Graduate student)

1. Papers in Refereed Journals

Greenstein, B.J., L.A. Harris, and H.A. Curran. 1998. Comparison of recent coral life and death assemblages to Pleistocene reef communities: implications for rapid faunal replacement on recent reefs. Carbonates and Evaporites. 13:23-31.

Harris, L.A., B.A. Buckley, S.W. Nixon, and B.A. Allen. 2004. Experimental studies of predation by bluefish *Pomatomus saltatrix* in varying densities of seagrass and macroalgae. Marine Ecology Progress Series. 281:233-239.

Harris, L.A., C.M. Duarte, and S.W. Nixon. 2006. Allometric laws and prediction in estuarine and coastal ecology. Estuaries and Coasts. 29: 340-344.

Drake, D.C., B.J. Peterson, L.A Deegan, L.A. Harris, E.E. Miller, and R.S. Warren. 2008. Plant nitrogen dynamics in fertilized and natural New England salt marshes: a paired ^{15}N tracer study. Marine Ecology Progress Series. 354:35-46. [UMCES Contribution No. 4300-CBL].

Nixon, S.W., B.A. Buckley, S.L. Granger, L.A. Harris, A.J. Oczkowski, R.W. Fulweiler, and L.W. Cole. 2008. Nitrogen and phosphorus inputs to Narragansett Bay: past, present, and future. pp. 101-175. *In*: A. Desbonnet and B.A. Costa-Pierce [eds.], Science of Ecosystem-based Management: Narragansett Bay in the 21st Century. Springer. New York. [UMCES Contribution No. 4277-CBL].

Brush, M.J. and L.A. Harris. 2010. Introduction to the special issue of *Ecological Modelling*: "advances in modeling estuarine and coastal ecosystems: approaches, validation, and applications". Ecological Modelling. 221: 965-968. [UMCES Contribution No. 4391-CBL].

Harris, L.A. and M.J. Brush. 2012. Bridging the gap between empirical and mechanistic models of aquatic primary production with the metabolic theory of ecology: an example from estuarine ecosystems. Ecological Modelling. 233:83-89. [UMCES Contribution No. 4642-CBL].

Passeport, E., P. Vidon, K. J. Forshay, L. Harris, S.S. Kaushal, D. Q. Kellogg, J. Lazar, P. Mayer, and E. K. Stander. 2013. Ecological engineering practices for the reduction of excess nitrogen in human-influenced landscapes: a guide for watershed managers. Environmental Management. 51:392-413. [UMCES Contribution No. 4804-CBL].

*Pincin, J., M.J. Wilberg, L. Harris, and A. Willey. 2014. Trends in abundance indices of fishes in Maryland's Coastal Bays during 1972-2009. Estuaries and Coasts. 37:791-800. [UMCES Contribution No. 4829-CBL].

*Ehrich (née Forsyth), M.K. and L.A. Harris. 2015. A review of existing eastern oyster filtration rate models. Ecological Modelling. 297:201-212. [UMCES Contribution No. 4977-CBL].

Harris, L.A., C.L.S. Hodgkins, *M.C. Day, D. Austin, J.M. Testa, W. Boynton, L. Van Der Tak, and N.W Chen. 2015. Optimizing recovery of eutrophic estuaries: Impact of destratification and re-aeration on nutrient and dissolved oxygen dynamics. Ecological Engineering. 75:470-483. [UMCES Contribution No. 4976-CBL].

*Neeley, A.R., S.W. Freeman, and L.A. Harris. 2015. Multi-method approach to quantify uncertainties in the measurements of light absorption by particles. Optics Express. 23.24: 31043-31058. [UMCES Contribution No. 5098-CBL].

Brush, M.J and L.A. Harris. 2015. Ecological Modeling, pp. 214-223 *In*: M. J. Kennish [ed.], Encyclopedia of Estuaries. Springer, New York. [UMCES Contribution No. 4980-CBL].

Cornwell, J.C., M.S. Owens, W.R. Boynton, and L.A. Harris. 2016. Sediment-Water Nitrogen Exchange along the Potomac River Estuarine Salinity Gradient. Journal of Coastal Research. 32:776-787. [UMCES Contribution No. 5092-CBL].

Ganju, N.K., M.J. Brush, B. Rashleigh, A.L. Aretxabaleta, P. del Barrio, J.S. Grear, LA. Harris, S.J. Lake, G. McCardeell, J. O'Donnell, D.K. Ralston, R.P. Signell, J.M. Testa, and J.M.P. Vaudrey. 2016. Progress and Challenges in Coupled Hydrodynamic-Ecological Estuarine Modeling. Estuaries and Coasts: 39:311-332. [UMCES Contribution No. 5047-CBL].

National Academies of Sciences, Engineering, and Medicine. 2016. Evaluation of the Predictive Ecological Model for the Edwards Aquifer Habitat Conservation Plan: An Interim Report as Part of Phase 2. Washington, DC: The National Academies Press. doi: 10.17226.23577.

*Pennino, M.J., S.S. Kaushal, S.N. Murthy, J.D. Blomquist, J.C. Cornwell, and L.A. Harris. 2016. Sources and transformations of anthropogenic nitrogen along an urban river-estuarine continuum. Biogeosciences. 13: 6211-6228. [UMCES Contribution No. 5277-CBL].

Testa, J.M., W.M. Kemp, L.A. Harris, R.J. Woodland, and W. R. Boynton. 2017. Challenges and Directions for the advancement of estuarine ecosystem science. Ecosystems. 20:14-22. [UMCES Contribution No. 5190-CBL].

National Academies of Sciences Engineering Medicine. 2017. Review of the Edwards Aquifer Habitat Conservation Plan: Report 2. Washington, DC: The National Academies Press. doi: 10.17226/23685.

*Neeley, A. R., L.A. Harris, and K.E. Frey. 2018. Unraveling phytoplankton community dynamics in the northern Chukchi Sea under sea-ice-covered and sea-ice-free conditions. Geophysical Research Letters, 45:7663–7671. [UMCES Contribution No. 5510-CBL].

National Academies of Sciences, Engineering, and Medicine. 2018. *Review of the Edwards Aquifer Habitat Conservation Plan: Report 3*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25200. Ref No. [UMCES] CBL 2021-043.

Liang, D., L. Harris, J. Testa, V. Lyubchich, and S. Filoso. 2019. Detection of the effects of stormwater control measure in streams using a Bayesian BACI power analysis. Science of The Total Environment. 661:386-392. https://doi.org/10.1016/j.scitotenv.2019.01.125. [UMCES Contribution No. 5555-CBL].

Najjar, R.G., M. Herrmann, S.M. Cintrón Del Valle, J.R. Friedman, M.A. Friedrichs, L.A. Harris, E.H. Shadwick, E.G. Stets, and R.J. Woodland. 2020. Alkalinity in Tidal Tributaries of the Chesapeake Bay. Journal of Geophysical Research: Oceans. 125:1-13. [UMCES Contribution No. 5723].

Brush, M.J., P. Mozetič, J. Francé, F. Bernardi Aubry, T. Djakovac, J. Faganeli, L. Harris, and *M. Niesen. 2021. Chapter 4: Phytoplankton Dynamics in a Changing Environment. In: T. C. Malone, A. Malej, and J. Faganeli [eds.], Coastal Ecosystems in Transition: A Comparative Analysis of the Northern Adriatic and Chesapeake Bay, Geophysical Monograph 256, American Geophysical Union. John Wiley & Sons, Inc. [UMCES contribution no. 5874].

Kennedy, V., L. Bolognini, J. Dulcic, R.J. Woodland, M.J. Wilberg, and L. Harris. 2021. Chapter 10: Status of Fish and Shellfish Stocks. In: T. C. Malone, A. Malej, and J. Faganeli [eds.], Coastal Ecosystems in Transition: A Comparative Analysis of the Northern Adriatic and Chesapeake Bay, Geophysical Monograph 256, American Geophysical Union. John Wiley & Sons, Inc. [UMCES Contribution No. 5964 CBL 2021-061].

Harris, L.A. & C. Garza, M. Hatch, J. Parrish, J. Posselt, *J. Alvarez, E. Davidson, G. Eckert, K. Grimes, J. Garcia, R. Haacker, M.C. Horner-Devine, A. Johnson, J. Lemus, A. Prakash, L. Thompson, P. Vitousek, M.P. Martin, and K. Reyes. (2021). Equitable Exchange: A framework for diversity and inclusion in the geosciences. AGU Advances. 2(2). e2020AV000359. [UMCES Contribution No. 5999].

Harris, L., T. Grayson, H.A. Neckles, C.T. Emrich, K.A. Lewis, K. Wilson Grimes, S. Williamson, C. Garza, C.R. Whitcraft, D.M. Talley, B. Fertig, C.M. Palinkas, J. Pollack, S. Park, J. M.P. Vaudrey, A. Fitzgerald, an *J. Quispe. 2021. A socio-ecological imperative for broadening participation in coastal and estuarine research and management. Estuaries and Coasts. 45:38-48. [UMCES Contribution No. 6019].

Hood, R.R., G. Shenk, R.L. Dixon, S. Smith, W. Ball, J.O. Bash, R. Batuik, K. Boomer, D.C. Brady, C. Cerco, P. Claggett, K. de Mutsert, Z.M. Easton, A.J. Elmore, M.A.M. Friedrichs, L. Harris, T.F. Ihde, I. Lacher, L. Li, L. Linker, A. Miller, J. Moriarty, G. Noe, G. Onyullo, K. Rose, K. Skalak, R. Tian, T.L. Veith, L. Wainger, D. Weller, and Y. Joseph Zhang. 2021. The Chesapeake Bay Program Modelling System: Overview and Recommendations for Future Development. 456. Ecological Modelling [UMCES Contribution No. 6018].

Rose, J.M., J.S. Gosnell, S. Bricker, M.J. Brush, A. Colden, L. Harris, E. Karplus, A. Laferriere, N.H. Merrill, T.B. Murphy, J. Reitsma, J. Shockley, K. Stephenson, S. Theuerkauf, D. Ward, and R.W. Fulweiler. 2021. Opportunities and challenges of including oyster-mediated denitrification in nitrogen management plans. Estuaries and Coasts. 44:2041-2055 [UMCES Contribution No. 5992].

Woodland, R. J., L. Harris, E, Reilly, *A. Fireman, E. Schott, and A. Heyes. 2022. Food web restructuring across an urban estuarine gradient. Ambio, 51:888-900 [UMCES Contribution No. 6036].

Palinkas, C., P. Orton, M. Hummel, W. Nardin, A. Sutton-Grier, L. Harris, M. Gray, M. Li, D. Ball, K. Burks-Copes, M. Davlasheridze, M. de Schipper, D.A. George, D. Halsing, C. Maglio, J. Marrone, S. Kyle McKay, H. Nutters, K. Orff, M. Taal, A. van Oudenhoven, W. Veatch, and T. Williams. 2022. Innovations in coastline management with natural and nature-based features (NNBF): lessons learned from three case studies. Frontiers in the Built Environment 2022:62

Lapham, L., E.A. Hobbs, J.M. Testa, A. Heyes, M.K. Forsyth, C. Hodgkins, C. Szewczyk, L.A. Harris. *2022* The effects of engineered aeration approaches on atmospheric methane flux from a Chesapeake Bay tidal tributary. Frontiers in Environmental Science. Vol. 10. https://doi.org/10.3389/fenvs.2022.866152

Liang, D., Testa, J. M., Harris, L. A., & Boynton, W. R. (2023). A hydrodynamic model–based approach to assess sampling approaches for dissolved oxygen criteria in the Chesapeake Bay. Environmental Monitoring and Assessment, 195(1), 163.

Southern, D. E., Posselt, J. R., Harris, L., Garza, C., & Parrish, J. K. (2022). Boundary spanning leadership in community-centered geoscience research. Journal of Geoscience Education, 1-13.

1.1 Communicated Articles

Harris, L. and M. Kemp. 2012. Obituary: Scott W. Nixon, 1943-2012. Limnology and Oceanography Bulletin. 21:88-89. [UMCES Contribution No. 4805-CBL].

1.2 Submitted and In Press Articles

2. Technical Reports and Conference Proceedings

Harris, L.A., S.W. Nixon, S. Granger, M. Traber, and B. Buckley. 2003. Contribution of sexual reproduction to the growth and development of a New England eelgrass (*Zostera marina* L.) bed. Gulf of Mexico Science. 21: 127.

Nixon S.W., B.A. Buckley, S. Granger, L.A. Harris, A. Oczkowski, L. Cole, and R.W. Fulweiler. 2005. Anthropogenic nutrient inputs to Narragansett Bay, a twenty-five year perspective. A Report to the Narragansett Bay Commission and RI Sea Grant. Narragansett, RI.

Rhode Island Coastal Resources Management Council (Harris, L.A. co-author). 2005. Greenwich Bay Special Area Management Plan. Adopted by RICRMC and RI Secretary of State, State Guide Plan 5/2005.

Harris, L., S. Granger, and S. Nixon. 2007. Evaluation of the health of eelgrass (*Zostera marina* L.) beds within the Maryland Coastal Bays. Technical Report NPS/NER/NRR-2007/014. National Park Service, Northeast Region, Boston, MA. 35p.

Kang, H., L. Gonzalez, L. Harris, and S. Nixon. 2010. Prediction of spatio-temporal processes: a case study. *Proceedings of the 2007 International Statistical Institute Conference*. Lisbon, Portugal.

Harris, L., C. Sperling, and M. Day. 2010. Hall Creek watershed supplement for EPA A-I criteria: Calvert County lower Patuxent River watershed restoration action strategy. Final report to Calvert County. Ref No. [UMCES] CBL 2011-005. [UMCES Technical Report Series No. TS-611-11].

Day, M. and L. Harris. April 2011. Monitoring in Support of the Cove Point Marsh Restoration. Ref No. [UMCES] CBL 2011-006.

Harris, L., W. Boynton, M. Brush, and I. Anderson. 2011. Forecasting the response of Delmarva lagoons to changing landuse and climate: alternative stable states and recovery trajectories. Maryland Sea Grant.

Day, M. and L. Harris. July 2012. Monitoring in Support of the Cove Point Marsh Restoration: Year 1. Ref No. [UMCES] CBL 2012-019.

Day, M. and L. Harris. July 2013. Monitoring in Support of the Cove Point Marsh Restoration: Year 2. Ref No. [UMCES] CBL 2013-043.

Harris, L., M. Day, and C. Hodgkins. 2013. Rock Creek water quality monitoring results and aeration recommendations. CH2M Hill and Anne Arundel County. Ref No. [UMCES] CBL 2021-040 [UMCES Technical Report Series No. TS-766-20].

Day, M. and L. Harris. June 2014. Monitoring in Support of the Cove Point Marsh Restoration: Year 3. Ref No. [UMCES] CBL 2014-028.

Harris, L**.,** D. Secor, H. Bi, and L. Wainger. 2014. An integrated ecosystem assessment of the Potomac River estuary. Maryland Sea Grant. Ref No. [UMCES] CBL 2014-013 [UMCES Technical Report Series No. TS-661-14].

Day, M. and L. Harris. 2015. Monitoring in Support of the Cove Point Marsh Restoration: Year 4. Ref No. [UMCES] CBL 2015-007.

Hodgkins, C.L.S., M.C. Day, J.L. Humphrey, L.A. Harris, J.M. Testa, and W.R. Boynton. 2015. 2014 Water Quality Monitoring Program for Tidal Creeks in Calvert County, Maryland. Calvert County Board of County Commissioners. Ref No. [UMCES] CBL 2015-015 [UMCES Technical Report Series No. TS-668-15].

Harris, L. and W. Boynton. 2015. Forecasting watershed loading and lagoon response along the Delmarva Peninsula due to changing landuse and climate. Maryland Sea Grant. [UMCES Technical Report Series No. TS-673-15].

Harris, L. 2015. Forecasting Change in the Delmarva Coastal Lagoons: A series of workshops with the management community. Program Development report submitted Maryland Sea Grant. [UMCES Technical Report Series No. TS-672-15].

Testa, J.M., L.A. Harris, W.R. Boynton, C.L.S. Hodgkins, J.L. Humphrey, and M.C. Day. 2015. Maryland Chesapeake Bay Water Quality Monitoring Program Ecosystems Processes Component FY2015. [UMCES Technical Report Series No. TS-674-15].

Day, M. and L. Harris. June 2016. Monitoring in Support of the Cove Point Marsh Restoration: Year 5. Ref No. [UMCES] CBL 2016-009 [UMCES Technical Report Series No. TS-684-16].

Harris, L.A., M. Day, and C. Hodgkins. 2016. Rock Creek 2015 Water Quality Monitoring Results. Prepared for Anne Arundel County Department of Public Works. Ref No. [UMCES] CBL 2016-007 [UMCES Technical Report Series No TS-683-16].

Hodgkins, C.L.S., M.C. Day, J.L. Humphrey, S. Shahrestani, L.A. Harris, J.M. Testa, and W.R. Boynton. 2016. 2015 Water Quality Monitoring Program for Tidal Creeks in Calvert County, Maryland. Prepared for the Calvert County BOCC. Ref No. [UMCES] CBL 2016-008 [UMCES Technical Report Series No. TS-685-16].

Testa, J.M., L.A. Harris, W.R. Boynton, C.L.S. Hodgkins, J.L. Humphrey, M.C. Day, and D. Liang. 2016. Ecosystem Processes Component (EPC). Maryland

Chesapeake Bay Water Quality Monitoring Program, Level 1 report No. 33. Jul. 1984 – Dec. 2015. Ref. No. [UMCES] CBL 2016-079 [UMCES Technical Series No. TS-701-16].

Harris, L.A., T. Fisher, J. Hagy, D. Liang, and M. Sutula. 2016. Scientific and Technical Advisory Committee Peer Review for the James River Chlorophyll-a Criteria Re-evaluation. STAC Publication Number 16-007, Edgewater, MD. 41 pp. [UMCES Technical Report Series No. TS-697-16].

Forsyth, M., C.L.S. Hodgkins, L.A. Harris, J. M. Testa, W.R. Boynton, and A. Rodriguez. 2017. 2016 Water Quality Monitoring Program for Tidal Creeks in Calvert County, Maryland. Prepared for the Calvert County BOCC. [UMCES Technical Report Series No. TS-695-17].

Harris, L.A., T. Fisher, J. Hagy, D. Liang, and M. Sutula. 2017. Scientific and Technical Advisory Committee Peer Review of Revised Proposal for James River Chlorophyll-a Criteria. STAC Publication Number 17-006, Edgewater, MD. 19 pp. [UMCES Technical Report Series No. TS-697-16].

Reilly, E., L. Harris, and M. Day. June 2017. Monitoring in Support of the Cove Point Marsh Restoration: Year 6. 83 pp. [UMCES Technical Report Series No. TS-700-17].

Forsyth, M.K., L.A. Harris, J.M. Testa, C.L.S. Hodgkins, and W.R. Boynton. 2018. 2017 Water Quality Monitoring Program for Tidal Creeks in Calvert County, MD. Prepared for the Calvert County Board of County Commissioners. Ref No. [UMCES] CBL 2018-011 [UMCES Technical Report Series No. TS-711-18].

Testa, J.M., L.A. Harris, D. Liang, W.R. Boynton, C.L.S. Hodgkins, and E.M. Reilly. 2018. Ecosystem Processes Component (EPC). Maryland Chesapeake Bay Water Quality Monitoring Program, Level 1 report No. 34. July 1984 - June 2018. Ref. No. [UMCES] CBL 2018-024 [UMCES Technical Report Series No. TS-713-18].

Harris, L.A., M.K. Forsyth, Z. Gotthardt., J. Alvarez-Rosario, and A. Moore. 2018. 2017 Quarterly Reports: Jamaica Bay Primary Production Measurements. Ref No. [UMCES] CBL 2018-051 [UMCES Technical Report Series No. TS-719-18].

Harris, L.A., M.K. Forsyth, Z. Gotthardt., J. Alvarez-Rosario, and A. Moore. 2018. 2018 Quarterly Reports: Jamaica Bay Primary Production Measurements. Ref No. [UMCES] CBL 2018-050 [UMCES Technical Report Series No. TS-718-18].

Testa, J.M., J. Blomquist, W.R. Boynton, P. Bukaveckas, K. Eshleman, L. Harris, R. Karrh, J. Keisman, M. Lane, V. Lyubchich, and R. Murphy. 2018. Progress toward the Restoration of Chesapeake Bay in Time and Space. A white paper report to the USEPA Chesapeake Bay Program. [UMCES Technical Report Series No. TS-716-18].

Reilly, E. and Harris, L. June 2018. Monitoring in Support of the Cove Point Marsh Restoration: Year 7. 78 pp. [UMCES Technical Report Series No TS 712-18].

Harris, L., J. Testa, L. Sanford, and E. North. 2019. Natural Engineers in Ecosystem Restoration: Modeling Oyster Reef Impacts on Particle Removal and Nutrient Cycling. Final Project Progress Report. Ref No. [UMCES] CBL 2019-016 [UMCES Technical Report Series No. TS-727-19].

Forsyth, M.K., L.A. Harris, J.M. Testa., C.L.S. Hodgkins, and W.R. Boynton. 2019. 2018 Water Quality Monitoring Program for Tidal Creeks in Calvert County, MD. Prepared for the Calvert County Board of County Commissioners. Ref No. [UMCES] CBL 2019-018 [UMCES Technical Report Series No. TS-729-19].

Reilly, E. and L. Harris. June 2019. Monitoring in Support of the Cove Point Marsh Restoration: Year 8. UMCES Report CBL. [UMCES Technical Report Series No TS-739-19].

Harris, L. and Testa, J. 2019. Quantifying changes to nutrient cycling and nitrogen removal in an estuary as a consequence of aeration. Final Report Prepared for MD Sea Grant. Ref No. [UMCES] CBL 2020-014 [UMCES Technical Report Series No. TS-742-19].

Harris, L., M.K. Forsyth, Z. Gotthardt., and A. Moore. 2019. 2019 Quarterly Reports: Jamaica Bay Primary Production Measurements. Ref No. [UMCES] CBL 2020-016 [UMCES Technical Report Series No. TS-743-19].

Reilly, E. and Harris, L. May 2020. Monitoring in Support of the Cove Point Marsh Restoration: Year 9. [UMCES] CBL 2021-038 [UMCES Technical Report Series No. TS-764-20].

Forsyth, M.K., L.A. Harris, J.M. Testa, C.L.S. Hodgkins, and W.R. Boynton. 2020. 2019 Water Quality Monitoring Program for Tidal Creeks in Calvert County, MD. Prepared for the Calvert County Board of County Commissioners CBL 2020-124 [UMCES Technical Report Series No. TS-752-20].

Teutonico, R., J. Blalock, S. Boss, S. Burch, B. Glazer, J. Goodall, S. Golapakrishnan, M. Grubbs, J. Haines, L. Harris, S. Perry, and B. Raubenheimer, 2020. Coastlines and People (CoPe) Synthesis Report. Prepared By: University Corporation for Atmospheric Research (UCAR) Cooperative Programs for the Advancement of Earth System Science (CPAESS) Sponsored By: National Science Foundation. CBL 2021-039 [UMCES Technical Report Series No. TS-765-20].

Harris, L. and M.K. Forsyth. 2020. Jamaica Bay Primary Production Measurements Final Report. Ref No. [UMCES] CBL 2021-059 [UMCES Technical Report Series No. TS-769-20].

Bruce, D.G., J.C. Cornwell, L. Harris, T.F. Ihde, M. Lisa Kellogg, S. Knoche, R.N. Lipicus, D.N. McCulloch-Prosser, S.P. McIninch, M.B. Ogburn, R.D. Seitz, J. Testa, S.R. Westby, B. Vogt. 2021. A Synopsis of Research on the Ecosystem Services Provided by large-Scale Oyster Restoration in the Chesapeake Bay. NOAA Technical Memorandum NMFS-OHC-8. 52 p. CBL 2021-064. [UMCES Technical Report Series No. TS-771-21].

Flester, J. L. Harris, and E. Reilly. 2021. Monitoring in support of the Cove Point Marsh Restoration (Year 10). Dominion.

Forsyth, M.K., L.A. Harris, J.M. Testa, J. Flester. 2021. Non-tidal water quality monitoring analysis. Prepared for the Calvert County Board of County Commissioners. CBL 2021-060. [UMCES Technical Report Series No. TS-770-21].

Forsyth, M.K., L.A. Harris, J.M. Testa, C.L.S. Hodgkins, and W.R. Boynton. 2021. 2020 Water Quality Monitoring Program for Tidal Creeks in Calvert County, MD. Prepared for the Calvert County Board of County Commissioners CBL 2020-124 [UMCES Technical Report Series No. TS-752-20].

Johnson, J. J. Flester, & L. Harris. 2022. Monitoring in support of the Cove Point Marsh Restoration (Year 11). Dominion. CBL 2022-064. [UMCES Technical Report Series No. TS-782-22]

Ross et al. 2022. 2021 Water Quality Monitoring Program for Tidal Creeks in Calvert County, Prepared for the Calvert County Board of County Commissioners. CBL. 2023-030. [UMCES Technical Report Series No. TS-792-22]

Ross, C., A. Gibbs*, M. Gonsior, C. Hodgkins, J. Testa, L. Harris. Anne Arundel County Pilot Wastewater Tracer Study. Prepared for Anne Arundel Public Works. CBL 2022-061. [Technical Report Series No. TS-781-22].

C. Contracts and Grants

1. Awarded

Harris, L.A. and W.R. Boynton. Forecasting the response of Delmarva lagoons to changing land use and climate: alternative stable states and recovery trajectories. Maryland Sea Grant (*Regional RFP*), 2009-2010, $40,356. (Lead PI, 16.7% Time).

Harris, L.A. and S. Kaushal. Evaluation of nitrogen cycling adjacent to the Blue Plains Wastewater Treatment Plant in support of interns Michael Pennino and

Katherine Ziombra. District of Columbia Water and Sewer Authority, 2009, $4942. (Lead PI, no salary).

Harris, L.A. Hall Creek Watershed Supplement for EPA A-1 Criteria: Calvert County Lower Patuxent River Watershed Restoration Action Strategy. Calvert County, 2009-2010, $25,993. (Lead PI, 4% Time).

Harris, L.A., S. Kaushal, and W.R. Boynton. Analytical & Boat Support for tracking & evaluation of nitrogen discharge from Blue Plains Wastewater Treatment Plant. District of Columbia Water and Sewer Authority, 2010, $70,232. (Lead PI, 5.5% Time).

Harris, L.A., W.R. Boynton, and J.C. Cornwell. A proposed field campaign to improve water quality model parameterization in the Potomac River, District of Columbia Water and Sewer Authority, 2010-2011, $84,002. (Lead PI, 4.2% Time).

Harris, L.A. New graduate student support for studies of primary production and respiration in the Potomac. District of Columbia Water and Sewer Authority, 2010, $16,604 (Lead PI, no salary).

Cooper, L.W., L.A. Harris, H.R. Harvey, S. Kaushal, and D.H. Secor. Acquisition of stable isotope mass spectrometry instrumentation for high latitude and marine applications at UMCES. National Science Foundation, 2010-2013, $518,842. (Co-PI no salary).

Palmer, M., D. Secor, E. Houde, and L.A. Harris. Sustaining coastal experimentation and observing systems in support of marine ecosystem and climate science. National Science Foundation, 2010-2013, $1,702,622, (Co-PI, no salary).

Harris, L.A. and C. Stevenson. Ecosystem restoration of Cove Point freshwater marsh. Dominion Cove Point LNG, 2010-2015, $346,670, (Lead PI, 8.3% Time).

Liu, J., R. Harvey, A. Place, J. Schijf, R. Hill, and L. Harris. Acquisition of a high resolution hybrid mass spectrometry system for the next generation of multidisciplinary environmental research, Graduate Education and Student Training. National Science Foundation, 2010-2013, $580,000, (Co-PI, no salary).

Palmer, M., C. Welty, S. Filoso, L. Harris, M. McGuire, and M. Williams. Integrating climate change into the restoration of the Chesapeake Bay watershed. NOAA Climate Program, 2010-2013, $2,924,000 (*$1,303,191 UMCES*). (Co-PI, 8.3% Time).

Harris, L.A., W.R. Boynton, and J. Cornwell. Support for estuarine process measurements in the Potomac Estuary. District of Columbia Water and Sewer Authority, 2011, $74,997. (Lead PI, 2% Time).

Secor, D., L. Harris, H. Bi, and L. Wainger. Integrated ecosystem assessment of the Potomac River estuary. Maryland Sea Grant, 2011-2012, $83,000 (Lead PI for more than half of the project, 8.3% Time).

Harris, L. and W.R. Boynton. Rock Creek Water Quality Monitoring. CH2M Hill, 2011-2012, $76,651, (Lead PI, 6.2% Time).

Harris, L. and W. R. Boynton. Forecasting the response of Delmarva lagoons to changing land use and climate: alternative stable states and recovery trajectories. Maryland Sea Grant (*Regional RFP*), 2012-2014, $142,843 (Lead PI, 3.3% Time).

Harris, L.A., W.R. Boynton, J. Cornwell, and C. Palinkas. Measurement of sedimentation rates and nutrient burial in the Potomac estuary and continued support of monthly monitoring. District of Columbia Water and Sewer Authority, 2012, $76,348 (Lead PI, % Time).

Bryan, J. and L. Harris. Evaluating the potential impact of sea level rise and changed inundation on wild rice, *Zizania aquatic*, in the Maryland Chesapeake Bay. NOAA – National Estuarine Research Reserve: *FELLOWSHIP FOR STUDENT Jennifer Bryan*. 2012-2014. $40,000 (Lead PI as advisor of student Jennifer Bryan, no salary).

Harris, L. Forecasting watershed loading and lagoon response – participatory modeling workshops. 2014-2015. MD Sea Grant. $2,000 (Lead PI, 0% Time).

Harris, L., J. Testa, L. Sanford, and E. North. Natural engineers in ecosystem restoration: modeling oyster reef impacts on particle removal and nutrient cycling. 2014-2017. NCBO. $428,142 (Lead PI, 14% Time).

Testa, J., L. Harris, and W. Boynton. Maryland Chesapeake Bay Water Quality Monitoring Program – Ecosystems Processes Component. Maryland Department of Natural Resources, 2014-2015, $125,000. (Co-PI, 8.3% Time).

Harris, L., J. Testa, and W. Boynton. 2014 Water Quality Monitoring Program for Tidal Creeks in Calvert County. Calvert County, 2014-2015. $27,850. (Lead PI, 0% Time).

Harris, L. Rock Creek Water Quality Monitoring, Public Outreach, and Analysis of Nutrient Limitation. Anne Arundel County, 2015-2016. $34,875. (Lead PI, 1% Time).

Moser, F., M. Allen, J. Pierson, and L. Harris. Collaborative Research: Getting It Right: A Strategic Planning Workshop to Develop a Sustainable Pathway for Educating Underrepresented and Underserved Puerto Rican Students in Geosciences. NSF, $1000 (Co-PI, 1% Time).

Harris, L., J. Testa, and W. Boynton. 2015 Water Quality Monitoring Program for Tidal Creeks in Calvert County. Calvert County, 2015-2016. $30,515. (Lead PI, 1% Time).

Testa, J. and L. Harris. Campbell Foundation Phosphorus Loading in Coastal Plain. Keith Campbell Foundation, 2015-2016. $15,000 (Co-PI, 0% Time).

Testa, J., L. Harris, and W.R. Boynton. Maryland Chesapeake Bay Water Quality Monitoring Program Ecosystem Processes Component. MD DNR, 2015-2016. $125,000 (Co-PI, 6% Time).

Harris, L., R. Woodland, L. Lapham, M. Gonsior, L. Cooper, J. Testa, and J. Pierson. Rapid Response Sampling of Chesapeake Bay for 2015 Nor'easter and Hurricane Joaquin Event. NOAA, 2015-2016, $28,210 (Lead PI, 0% Time).

Harris, L. Technical Analysis and Programmatic Evaluation Support for Chesapeake Bay Program: Potomac ITAT Synthesis. EPA, $4,410 (Lead PI, 0% Time).
Harris, L. and J. Testa. Quantifying changes to nutrient cycling and nitrogen removal in an estuary as a consequence of aeration. NOAA. 2016-2018. $147,002 (Lead PI, 13% Time).

Gonsior, M., A. Heyes, and L. Harris. Tracking Septic System Performance by using Innovative Mass Spectrometric Approaches and Traditional Nutrient Measurements. NOAA. 2016-2018. $139,978 (Co-PI, 4% Time).

Harris, L. Ecosystem Restoration of Cove Point Freshwater Marsh. Dominion LNG. 2015-2020. $599,954 (Lead PI, 8% Time).

Harris, L., J. Testa, and J. Frank. Support of Stormwater Sampling in St. Mary's County, MD. St. Mary's County. 2016. $4,678 (Lead PI, 0% Time).

Harris, L., J. Testa, and W. Boynton. 2015 Water Quality Monitoring Program for the Mill Creek Estuary and Calvert Creeks. Calvert County. 2016-2017. $30,515 (Lead PI, 1.5% Time).

Moser, F., L. Harris, and J. Pierson. GP-IMPACT: Pathways TO RENEW: Tropical Oceanography Research Experiences for the Next-Generation Workforce. NSF. 2016-2019. $36,410 (Co-PI, 8% Time).

Testa, J., L. Harris, and T. Miller. Enhancing the capabilities and integration of a long-term marine biological monitoring program. NSF. 2016-2017. $132,831 (Co-PI, 0% Time).

Harris, L. Collaborative Research: Active Societal Participation in Research and Education: ASPIRE. NSF. 2016-2019. $22,412 (PI, 4% Time).

Lyubchich, S., D. Liang, J. Testa, and L. Harris. Optimizing Sampling Frequency and Monitoring Design for BMPs on Water Restoration. CB Trust. 2016-2017. $61,129 (Co-PI, 2% Time).

Harris, L., J. Testa, and W. Boynton. Tidal Creeks Water Quality Study. Calvert BOCC. 2017-2020. $90,654 (PI, 4% Time).

Harris, L. and J. Frank. Primary Productivity Measurements in Support of Jamaica Bay Monitoring. HDR. 2017-2020. $890,451.

Harris, L. and J. Testa. Action Plan for Monitoring the Effect of Storms on Nutrients in the Upper Chesapeake. US EPA. 2017-. $10,000 Prize!

Testa, J., L. Harris, and W. Boynton. Maryland Chesapeake Bay Water Quality Monitoring Program Ecosystems Processed Component. MD DNR. 2017-2018. $99,999.

Harris, L., A. Heyes, L. Lapham, and J. Testa. Impacts of Engineered De-stratification on Estuarine Biogeochemistry. NSF. 2017-2020. $340,723.

Schott, E., R. Woodland, and L. Harris. Of Animals and Microbes: A Baltimore Harbor Investigation. France Merrick Foundation. 2018-2020. $250,000.

Liang, D. and L. Harris. Review and Development of MDE's biological monitoring permit language: Phase I Separate Storm Sewer System Jurisdiction. MDE. 2018. $10,000.

Harris, L. and J. Testa. 2019. Experimental investigations into potential floating wetland nutrient removal in estuarine waters. Koolhoff Earth Foundation. 2019-2021. $56,550.

Harris, L., M. Allen, F. Moser, and J. Pierson. 2019. Supporting Emerging Aquatic Scientists (SEAS) Islands Alliance. National Science Foundation. 2019-2024. $2,500,000.

Harris, L. and J. Testa. 2020. Non-tidal stream monitoring synthesis for Calvert County, Maryland. Calvert County Board of County Commisioners. 2020. $5,000.

Harris, L. and J. Testa. 2020. 2020-2021 Tidal Creek Water Quality Study. 2020-2021. $33,275.

Testa, J., L. Harris, and L. Sanford. 2020. Quantifying nitrogen removal potential in oyster reefs versus aquaculture in response to hydrodynamic setting and water quality. Maryland Sea Grant. 2020-2022. $139,675.

Harris, L. GOLD-EN Supplement: Active Societal Participation in Research and Education. National Science Foundation. 2020-2021. $59,665.

Harris., L., J. Testa, L. Lapham, and A. Heyes. Supplement to Impacts of Engineered De-stratification on Estuarine Biogeochemistry. National Science Foundation. 2019-2021. $23,977.

Harris, L., J. Testa, M. Gonsior. Proof of Concept and Design Study to Evaluate Use of Wastewater Tracers in Anne Arundel County Tidal Waters. Anne Arundel County. 2021. $59,746

Harris, L. and J. Testa. 2021. 2021-2022 Tidal Creek Water Quality Study. $33,755.

Harris, L. Monitoring Ecosystem Restoration of Cove Point Freshwater Marsh. Dominion. 2021-2025. $495,427

Testa, J. and L. Harris. Floating Solar Powered Aeration System for Aquaculture. DOE Subcontract. 2021-2022. $39,597

Harris, L. and J. Testa. 2022. 2022-2023 Tidal Creek Water Quality Study. $34,319.

Woodland, R. and L. Harris. Collaborative Research: How are estuarine carbon and alkalinity dynamics influenced by macrobiota. National Science Foundation. 2022-2025. $476,407

Liang D., S. Filoso, L. Harris. 2022. A Power Analysis Tool in R to Enhance Monitoring Studies. Chesapeake Bay Trust. 2022-2024. $75,221

II. Submitted in 2022

Harris, L., C. Davis, M. Hatch, R. Pandya, S. Menezes, M. Martin, J. Donatuto, L. Campbell, J. Parrish, C. Garza, 2022. Collaborative: Implementation track: Active Societal Participation in Research and Education. National Science Foundation "Cultural Transformation of Geoscience Communities". UMCES budget $5,534,770
declined

Harris, L., J. Testa, R. Woodland. Synergistic Innovation and Transformation of Climate and Coastal Eutrophication Mitigation in the Chesapeake Bay Region. To Jacobs Engineering as Subaward to NOAA. UMCES budget $4,020,575
pending

Liang D., S. Filoso, L. Harris. 2022. A Power Analysis Tool in R to Enhance Monitoring Studies. Chesapeake Bay Trust. 2022-2024. $75,221
Awarded as above

D. Invited Seminars (†) and Presentations since 2008 (CBL/REU students = *)

†Harris, L.A. 2008. Applying fundamental laws to estuarine ecosystems. Horn Point Laboratory, Cambridge, MD. and Appalachian Laboratory, Frostburg, MD.

†Harris, L.A. 2008. Ramet Rules. IAN Seminar, Chesapeake Bay Program Office, Annapolis, MD.

†Harris, L.A. 2008. Optimizing *Zostera marina* transplanting protocols using insights from the Virtual Eelgrass Meadow. International Seagrass Biology Workshop 8, Bamfield, Vancouver, BC Canada.

†Harris, L.A. 2008. Applying the Virtual Eelgrass Meadow to improve restoration in Chesapeake Bay, Chesapeake Bay SAV workgroup meeting, HPL, Cambridge, MD.

†*Cummings, K. and L.A. Harris. 2008. Impact of vegetation type on sedimentation rates in a freshwater tidal wetland, Jug Bay, MD. Presentation for the staff of Jug Bay Wetland Sanctuary and REU Seminar.

†Harris, L.A. 2008. Modeling Ecosystems. UMCES Faculty Science Forum, Solomons, MD.

Delgado, P., C. Swarth, E. Friebele, L. Harris, and J. Campbell. 2009. Understanding the fate of the Jug Bay freshwater tidal wetlands in light of sea level rise: a conceptual model (*Poster*). AERS Spring 2009 Meeting, Ocean City, MD.

†Harris, L.A. 2009. Applying fundamental laws to estuarine ecosystems. Old Dominion University, Norfolk, VA.

Harris, L.A. 2009. Biophysical constraints on wetland ecosystem engineers in response to nutrient enrichment and sea level rise. Estuarine Research Federation, Portland, OR.

*Almodovar Acevedo, L., and L. Harris. 2009. Sediment dynamics at the Jug Bay wetland sanctuary, Maryland, USA. Estuarine Research Federation, Portland, OR.

*Ziombra, K., and L. Harris. 2009. Primary productivity, respiration, and nutrient cycling in the Potomac River Estuary (*Poster*). Estuarine Research Federation, Portland, OR.

*Cummings, K. and L. Harris. 2009. Investigation of the impact of vegetation on sedimentation rates in a freshwater tidal wetland, Jug Bay, Maryland, USA (*Poster)*. Estuarine Research Federation, Portland, OR. **Awarded Best Undergraduate Poster at Conference*.

†Harris, L.A., M.J. Brush, I. Anderson, J. Giordano, and W. Boynton. 2009. Improving models of nitrogen loading and water quality impacts to coastal

lagoons. International Conference on Aquatic Resources, Egypt's National Institute of Oceanography and Fisheries, Alexandria, Egypt.

†*Ziombra, K. and L.A. Harris. 2009. Primary productivity, respiration, and nutrient cycling in the Potomac River Estuary (*Poster*). International Conference on Aquatic Resources, Egypt's National Institute of Oceanography and Fisheries, Alexandria, Egypt.

†Harris, L.A. 2010. Proposed Application of Contaminant Loading Models to Optimize Water Quality Restoration Using Permeable Reactive Barriers. Maryland DNR, Annapolis, MD.

†Harris, L.A. 2010. The Virtual Eelgrass Meadow as a Case Study of Individual Based Modeling with Process-based dynamics. ASLO, Santa Fe, NM, 2010.

*Forsyth, M. and L.A. Harris. 2011. An exploration of restoration strategies using a hybrid ecosystem-individual-based oyster model. ASLO, Puerto Rico, 2011.

*Rooker, K. and L.A. Harris. 2011. The modeling and evaluation of wild rice *Zizania aquatica* particle capture at Jug Bay, Maryland. ASLO, Puerto Rico, 2011.

*Niesen, M. and L.A. Harris. 2011. Dissolved organic nitrogen tracer development in support of a campaign to improve water quality predictions for the Potomac estuary, USA. ASLO, Puerto Rico, 2011.

*Forsyth, M. and L.A. Harris. 2011. An exploration of restoration strategies using a hybrid ecosystem-individual-based oyster model. AERS, Solomons, 2011.

*Niesen, M. and L.A. Harris. 2011. An Exploration of Phytoplankton Biodiversity in the Potomac River Estuary with Microscope, HPLC and DNA Identifications. AERS, Solomons, 2011.

Sperling, C., L.A. Harris, M. Day, D. Hanks, S. Kullen, and D. Brownlee. 2011. Monitoring of the Hall Creek Watershed, Calvert County, Maryland to inform a Watershed Implementation Plan in support of the Chesapeake Bay Total Maximum Daily Load. AERS, Solomons, 2011.

Day, M., L.A. Harris, C. Sperling, and *M. Forsyth. 2011. A salinity study of a former freshwater marsh undergoing restoration: Cove Point marsh in Lusby, MD. AERS, Solomons, 2011.

Harris, L.A. and *K. Davis-Ziombra. 2011. Using long-term datasets in the Chesapeake Bay to explore application of the metabolic theory of ecology to climate change predictions. AERS, Solomons, 2011.

Harris, L.A., C. Sperling, W. Boynton, M. Niesen, and K. Davis-Ziombra. An exploration of metabolism in the Chesapeake Bay using the metabolic theory of ecology. CERF, Daytona Beach, 2011.

*Forsyth, M. and L.A. Harris. 2011. Investigations of the effects of oyster morphology on particle capture using a hybrid ecosystem individual-based model. CERF, Daytona Beach, 2011.

*Niesen, M. and L.A. Harris. 2011. Documenting phytoplankton biodiversity in the Potomac River Estuary. CERF, Daytona Beach, 2011.

Owens, M.S., J. Cornwell, W.R. Boynton, L.A. Harris, and E.M. Bailey. 2011. Denitrification in the tidal Potomac River: Control by redox, salinity and riverine nitrate inputs. CERF, Daytona Beach, 2011.

†Harris, L.A. 2012. Watershed Science in Parkers Creek, American Chestnut Land Trust Annual Membership Meeting, Prince Frederick, 2012.

†Harris, L.A. and W.B. Boynton. 2012. A missing modeled habitat: The role of wetlands at the land-water interface of the Chesapeake Bay and some suggestions for modeling approaches. Chesapeake Modeling Symposium, Annapolis, 2012.

*Niesen, M. and L.A. Harris. 2012. *Microcystis* bloom in the upper Potomac river estuary 2011. AERS, Chincoteague, 2012.

*Forsyth, M.K. and L.A. Harris. 2012. Investigations of the effects of oyster morphology on filtration rate and particle capture using a hybrid ecosystem individual-based model. AERS, Chincoteague, 2012.

†*Niesen, M. and L.A. Harris. 2012. *Microcystis* bloom in the upper Potomac river estuary 2011. Chesapeake Bay Harmful Algal Bloom Workgroup, Annapolis, MD. 2012.

†Harris, L.A., M.C. Day, and C.S. Sperling-Hodgkins. 2012. Results of Rock Creek Water Quality Monitoring. Rock Creek Watershed Community Meeting, Pasadena, MD 2012.

Day, M.C., L.A. Harris, C.L.S. Hodgkins, and *E. Gravens. 2012. Suspended sediment export from Parkers Creek watershed; a heavily forested area with a tidally influenced creek. Maryland Water Monitoring Council Annual Conference, Linthicum, 2012.

*Bryan, J. and L.A. Harris. 2012. Evaluating the potential impact of sea level rise and changed inundation on wild rice, *Zizania aquatica*, in Jug Bay wetlands Sanctuary, Maryland. AGU Chapman Conference on Hydrogeomorphic Feedbacks and Sea Level Rise in Tidal Freshwater River Ecosystems. Reston, 2012.

Cornwell, J.C., M. Owens, C. Stevenson, L. Harris, and W. Boynton. 2012. Nitrogen retention in mid-Atlantic freshwater tidal ecosystems: the role of bottom sediments and tidal wetlands. AGU Chapman Conference on Hydrogeomorphic

Feedbacks and Sea Level Rise in Tidal Freshwater River Ecosystems. Reston, 2012.

*Figueroa, Y., J. Bryan, and L. Harris. 2012. The effects of plant density on the morphological and biomechanical properties of a tidal wetland macrophyte, *Zizania aquatica.* SACNAS Annual Meeting, Seattle, 2012. **Awarded Best Undergraduate Poster.*

†*Niesen, M. and L. Harris. 2012. Review of the Algae Encouragement Index. Maryland Harmful Algal Bloom Taskforce Meeting. Annapolis, MD.

Montoya-Ospina, R., P. Maldonado, D. Gomez, L. Fuentes, G. Infante, L. Harris, J. Cornwell, J. Pierson, and F. Moser. 2013. Connecting undergraduate science disciplines through marine science research at bioluminescent bays in Puerto Rico, a pilot REU. ASLO, New Orleans.

*Niesen, M. and L. Harris. 2013. Phytoplankton community composition in the Potomac River Estuary. ASLO, New Orleans.

Harris, L. and *J. Bryan 2013. The role of autoecology in tidal wetland models. ASLO, New Orleans.

*Tirado, A., *Z. Perez, *L. Laboy, *L. Fuente, and L. Harris. 2013. Primary productivity at bioluminescent lagoons in Puerto Rico. ASLO, New Orleans.

*Forsyth, M.K. and L.A. Harris. 2013. Investigations of the effects of oyster morphology on filtration rate and particle capture using a hybrid ecosystem individual-based model. ASLO, New Orleans.

†Harris, L. and *J. Foley. 2013. Botanical influences in the work of Scott W. Nixon. First annual "Science Worth Noticing" (SWN) Symposium, Narragansett.

†Day, M. and L. Harris. 2013. Update on stream sampling in southern Maryland. Maryland Water Monitoring Meeting. USGS.

†Harris, L. 2013. Biomechanical plasticity and constraints in wetland emergent vegetation. Linking hydrodynamic and ecological models in estuaries: a workshop to discuss recent advances and approaches. USGS Woods Hole.

†*Forsyth, M. and L. Harris. 2013. Investigations of the effects of oyster morphology on filtration rate and particle capture using a hybrid ecosystem individual-based model. Linking hydrodynamic and ecological models in estuaries: a workshop to discuss recent advances and approaches. USGS Woods Hole.

Harris, L., C. Hodgkins, W. Boynton, N. Chen, and M. Day. 2013. Optimizing Estuaries. CERF, San Diego.

*Bryan, J., L. Harris, and N. Weston. 2013. Morphological changes and sediment capture potential of *Zizania aquatica* under experimental inundation treatments. CERF, San Diego.

*Foley, J. and L. Harris. The effects of local environmental conditions on the specific growth rates of eelgrass seedlings and seed germination. CERF, San Diego.

*Foley, J. and L. Harris. 2014. Modeling *Zostera marina* in the Delmarva Coastal Lagoons. AERS, Ocean City.

†Harris, L., J. Cornwell, M. Owens, W. Boynton, and M. Pennino. 2014. Changing nutrient budgets in an urban estuary. 1st International Workshop on Urbanization in Watersheds: Ecological and Environmental Responses, Xiamen, China.

†Harris, L. 2014. The role of autecology in ecosystems science. VIMS Seminar Series. Gloucester Point, VA.

Harris, L., J. Testa, W. Boynton, C. Hodgkins, and M. Day. 2015. Solomons Harbor and Tidal Creeks 2015 Monitoring. Calvert County Board of County Commissioners, Prince Frederick.

†Harris, L. 2015. Monitoring the Tidal Patuxent. PAXCON, Jug Bay Wetland Sanctuary.

Hodgkins, C., L. Harris, W. Boynton, J. Testa, and M. Day. 2015. A small estuarine system "on the edge": watershed development vs water quality conditions. CERF, Portland.

Moser, F., R. Montoya, P. Maldonado, L. Harris, J. Pierson, and J. Alvarez. 2015. Can research experiences for early stage Hispanic undergraduates increase their success in marine science? CERF, Portland.

Harris, L., W. Boynton, J. Cornwell, M. Pennino, C. Hodgkins, C. Palinkas, M. Day, M. Owens, and J. Testa. 2015. Changing nutrient budgets for an urban estuary. CERF, Portland.

*Foley, J. and L. Harris. 2015. Evaluating the effects of climate change on the reproductive phenology of Eelgrass (Zostera marina L.). CERF, Portland.

*Neeley, A. and L. Harris. 2015. Evaluation of two bio-optical models for discriminating phytoplankton functional types in the Chukchi Sea. CERF, Portland.

*Alvarez, J., L. Harris, and J. Pierson. 2015. Leveraging available data to decipher the drivers of bioluminescent lagoons in Puerto Rico. CERF, Portland.

*Day, M., A. Moore, J. Kames, E. Long, L. Harris, and C. Hodgkins. 2015. SMILE on Parkers Creek: Seasonal box model of low-impacted western shore Chesapeake Bay sub-estuary. CERF, Portland.

Moser, F., M. Allen, R. Montoya, P. Maldonado, M. Barbarena, C. Olivos, L. Harris, J. Pierson, and J. Alvarez. 2015. Mentoring undergraduate students in estuarine research experiences: different strokes for different folks. AGU, San Francisco.

†Harris, L., M. Day, and C. Hodgkins. 2015. Rock Creek Monitoring Update. Restore Rock Creek, Pasadena, MD.

Harris, L., R. Woodland, L. Lapham, M. Gonsior, L. Cooper, J. Testa, and J. Pierson. 2016. Rapid response storm sampling for the October 2015 Nor'easter and Hurricane Joaquin. AERS. Norfolk, VA.

Harris, L., M. J. Brush, and J. York. 2016. Management Informed Development of the Delmarva Modeling Suite. ISEM. Baltimore, MD.

†Harris, L. Estuarine Ecological Discovery in the Anthropocene. 2016. Improving Basic Science through opportunities in Applied Research. NEERS. Block Island, RI.

†Harris, L. and *K. Kahover. Oysters and Water Quality. 2016. St. Mary's River Watershed Association. St. Mary's City, MD.

*Kahover, K., J. Testa, L. Harris, L. Sanford, and E. North. 2016. A model of oyster reef nitrogen cycling. Chesapeake Modeling Symposium. Williamsburg, VA

Liang, D., J. Testa, L. Harris, and W. Boynton. 2016. Leveraging a water quality model and monitoring data set to test sampling schemes that support evaluation of water quality criteria in Chesapeake Bay. Chesapeake Modeling Symposium. Williamsburg, VA

Forsyth, M., L. Harris, J. Testa, and R. Murphy. 2017. Water quality trends in small tidal creeks interpreted in the context of larger adjoining systems. CERF 24th Biennial Conference, Providence, RI. Oral Presentation.

Reilly, E., A. Moore, and L. Harris. Using map math to track sedimentation, vegetation establishment and marsh migration at a marsh intervention site. Coastal and Estuary Research Federation 24th Biennial Conference, Nov 5-9, 2017, Providence, RI. Oral Presentation.

*Gotthardt, Z., L. Harris, and J. Testa. Quantifying the Ecosystem Metabolism of a Eutrophic Estuary as a Consequence of Aeration. AERS. Spring 2017. Poster Presentation.

†Harris, L. Case Studies from a Coastal Ecologist working at the County Scale. Chesapeake Bay Program. June 2017. Annapolis, MD.

Reilly, E.* and L. Harris. Long term monitoring after a marsh restoration is crucial for recognizing success, fixing problems and monitoring continuing threats. Maryland Chapter of the American Planning Association. April 27, 2018. Oral and Poster Presentation.

†Harris, L. Clams, Climate, and the Potomac Estuary. Tidal Potomac River Ecosystem, Health and Recovery Research Symposium. January 2018. Fairfax, VA.

†Harris, L. Modeling Issues of "Scale": Counties and Municipalities. Chesapeake Bay Program Modeling in 2025 and Beyond: A Proactive Visioning Workshop. January 2018. Shepherdstown, WV

†Harris, L. The trouble with triblets. Revisiting Coastal Land-Water Interactions: The Triblet Connection. May 2018. Frederick, MD.

Lyubchich†, V., D. Liang, L. Harris, J. Testa, and S. Filoso. Optimizing sampling frequency and monitoring design to assess the effects of stormwater best management practices on water restoration.

Liang†, D., L. Harris, J. Testa, S. Filoso, and V. Lyubchich. Detection of the effects of storm water best management practices, Bayesian BACI Power analysis. Pooled Monitoring Forum: Restoration research to make science and regulatory connections. June 2018. Baltimore, MD.

†Harris, L. A passion for dirty water: septic detectives, wastewater treatment plants, and a story of human impact and ingenuity in coastal ecosystems. Science on the Sound Seminar Series. NC Coastal Studies Institute. November 2018. Wanchese, NC.

†Harris, L. Tales from a coastal ecologist working at the county scale. St. Mary's College of Maryland Science Colloquium. November 2018. St. Mary's, MD.

Martin, K.*, M. Harir, J. Bostic, D. Nelson, L. Harris, A. Heyes, P. Schmitt-Kopplin, and M. Gonsior. Molecular characterization of dissolved organic matter in septic-impacted streams. December 2018. AGU. Washington, DC.

Harris, L., J. Testa, L. Lapham, and A. Heyes. A unique whole ecosystem manipulation of estuarine dissolved oxygen and biogeochemistry. AGU. December 2018. Washington, DC.

Garza, C., J. Parrish, L. Harris, and J. Posselt. Pathways to diversity and inclusion in the geosciences: ASPIRE (Active Societal Participation in Research). AGU. December 2018. Washington, DC.

Testa, J.M., L.A. Harris, C.L.S. Hodgkins, M.K. Forsyth, and Z. Gotthardt. 2018. Experimental de-stratification as a tool to quantify short-term biogeochemical responses to hypoxia and anoxia. ASLO, Portland, OR. Poster Presentation.

Gotthardt*, Z., L. Harris, and J.M. Testa. 2018. Quantifying the Ecosystem Metabolism of a Eutrophic Estuary as a Consequence of Aeration. Atlantic Estuarine Research Society (AERS) Conference, Rehoboth Beach, DE

Reilly, E. and L. Harris. Long-term monitoring of restoration projects; identifying and fixing problems and tracking continuing threats. Marsh Resilience Summit. Feb 5-6, 2019. Williamsburg, VA. Poster Presentation.

Testa, J., L. Harris, A. Moore, and M. Trice. Real-Time Nitrate and Phosphate Sensors for Chesapeake Bay Research and Monitoring. ITAT Quarterly Meeting. February 2019.

Testa, J., L. Harris, A. Moore, and M. Trice. Real-Time Nitrate and Phosphate Sensors for Chesapeake Bay Research and Monitoring. Chesapeake Bay Quarterly Meeting. February 2019.

Harris, L., C. Dahlenberg, E. Schott, and R. Woodland. Jump-starting Scientific Co-Production in Baltimore: Results of the "Harbor Science" Workshop. ASLO. Puerto Rico, February 2019.

Harris, L. Diversifying the Geosciences. Science for Citizens Seminar. UMCES-CBL. March 2019

Harris, L., J. Testa, W. Boynton, M.K. Forsyth, and C. Hodgkins. 2019. Water Quality Monitoring Program for Tidal Creeks in Calvert County, Maryland 2017 & 2018. Calvert County Board of County Commissioners, Prince Frederick, MD.

Harris, L., J. Testa, L. Sanford, *K. Kahover, and J. Foley. Making space matter for individual-based models of sessile organisms. International Society for Ecological Modeling. Salzburg, Austria. September 2019

Woodland, R.J., L.A. Harris, E. Schott, A. Fireman*, and E.M. Reilly. 2019. Structural and functional patterns of demersal fish assemblages in an urbanized coastal landscape. CERF. Mobile, AL.

Testa, J.M., L. Harris, L. Lapham, and A. Heyes. Oxygen Impacts on Nutrient Cycling and Potential Revenge Effects of Engineered Aeration. National Association of Environmental Professionals Annual Meeting, Baltimore, MD May 21, 2019.

Neeley, A. and L. Harris. 2019. Modeling the Light Field of the Chuki Sea: an Optical Closure Experiment. CERF. Mobile, AL.

Najjar, R., M. Herrmann, S. Cintrón Del Valle, J. Friedman, M. Friedrichs, S. Goldberger, L. Harris, E. Shadwick, E. Stets, and R. Woodland. 2019. Alkalinity in Chesapeake Bay tributaries. CERF. Mobile, AL.

Gurbisz, C., J. Testa, and L. Harris. 2019 Continuous Monitoring Time series data indicate changes in estuarine ecosystem trophic status and nutrient flows. CERF. Mobile, AL. Poster Presentation.

Hobbs, E.*, J. Testa, L. Lapham, and L. Harris. 2019. Controls on Nitrous oxide distribution and air-water flux in estuarine waters. CERF. Mobile, AL. Poster Presentation.

Sanchez-Viruet*, I., L. Harris, A. Straughan, and J. Testa. 2019. Nitrogen removal potential of Floating Wetlands; Preliminary results from a mesocosm study. CERF. Mobile, AL. Poster Presentation.

Lopez, O.*, L. Harris, I. Sanchez-Viruet, and J. Testa. 2019. Phosphorus Uptake in Floating Wetlands: a Mass Balance Approach. CERF. Mobile, AL. Poster Presentation.

Forsyth, M., E. Reilly, and L. Harris. 2019. Science in Parkers Creek. American Chestnut Land Trust Science and Technical Advisory Committee.

Liang, D., L.A. Harris, J.M. Testa, V. Lyubchich, and S. Filoso. Optimizing Sampling To Determine Pollutant Loads. Stream Restoration Monitoring Protocols Meeting. Annapolis, MD. May 2019.

Posselt, J., D. Southern, C. Garza, J. Parrish, and L. Harris. Leadership to Span Science; Community Boundaries: A Comparative Case Study of Community-centered Geoscience Projects. AERA. 2020.

Harris, L., J. Testa, W. Boynton, M.K. Forsyth, and C. Hodgkins. 2020. Water Quality Monitoring Program 2019 for Tidal Creeks in Calvert County. Calvert County Board of County Commissioners, Prince Frederick, MD.

Forsyth, M., J. Flester, and L. Harris. 2020. Science in Parkers Creek. American Chestnut Land Trust Science and Technical Advisory Committee.

Sanchez Viruet, I.*, L. Harris, J. Testa. 2021. Floating wetlands and their potential for nitrogen removal in estuarine waters: a mesocosm study. 2nd International Aquatic Mesocosm Research Symposium. Virtual Venue.

†Harris, L. 2021. A Decade of Whole Estuarine Ecosystem Manipulation of Dissolved Oxygen via Engineered Aeration. Virginia Institute of Marine Science Interdisciplinary Marine Science Seminar.

Harris, L. 2021 *Contributed Plenary Talk:* Leveraging a whole ecosystem manipulation of dissolved oxygen via engineered de-stratification to quantify the impact and cost of hypoxia on nitrogen cycling. Baltic Sea Congress. Aarhus, Denmark.

*Neeley, A., L. Harris, K. Frey. 2021. A signal of climate change: relating ocean color to ecosystem status in the Chukchi Sea. CERF Virtual Venue. Oral Presentation

Liang, D., J. Testa, L. Harris, W. Boynton. 2021. Assessing dissolved oxygen criteria in the Chesapeake Bay using new monitoring technologies. CERF Virtual Venue. Oral Presentation

*Sanchez-Viruet, I.C., L. Harris, J. Testa, A. Straughan, and *E.T. 2021. Kostelecky.Floating wetlands and their potential to remove nitrogen from estuarine waters. CERF Virtual Venue. Oral Presentation

Lapham, L., *E.A. Hobbs, J.M. Testa, A. Heyes, M.K. Forsyth, C. Hodgkins, and L. Harris, PhD[1], 2021. How changing oxygen conditions in an estuary affects methane flux. CERF Virtual Venue. Oral Presentation

*Shenoy, S., J. Testa, L. Harris, L. Sanford, *K. Kahover. 2021. Quantifying nitrogen removal in cultured oyster communities under different hydrodynamic conditions

Testa, J., W. Boynton, L. Harris. Revisiting our conceptual models of estuarine ecosystems: what have we learned from nutrient reduction efforts?

Wilson Grimes, K., M.F. Barberena-Arias, M.E. Brandt, E. Demeulenaere, L. Harris, R. Hopson, R. Iglesias-Prieto, P. Maldonado-Rivera, M. Medina, S. Nelson-Barber, K. Peterman, and C. Sangueza. 2021. SEAS Islands Alliance: strengthening connections that broaden participation in the geosciences in U.S. territories. CERF Virtual Venue. Oral Presentation.

Harris., L. Z. Gotthardt, A. Heyes, E.A. Hobbs, C. Hodgkins, L. Lapham, J. Testa. Understanding Estuarine Engineered Aeration and De-stratification: A Decade of Measurements from Rock Creek Estuary, Maryland. Poster

Harris, L., J. Testa, M.K. Forsyth, and J. Flester. 2021. Nontidal Stream Monitoring Synthesis. Calvert County Board of County Commissioners, Prince Frederick, MD.

†Harris, L. 2022. Measuring, Modeling, and Motivating Change in Coastal Ecosystems and Communities. Tvärminne Zoological Station Seminar Hour. Tvärminne, Finland

†Harris, L. 2022. Hybrid systems and individual based modesl of marine ecosystems. FINNMARI. Hanko, Finland.

†Harris, L. 2022. Restoration Trajectories in the Baltic and Chesapeake Bay. Fulbright Environmental Science Symposium. Helsinki, Finland.

*Torres Oliveras, A., *M. Rodríguez Pabón, L. Harris. 2022. Light/Dark Bottle Methodology for Primary Production. SACNAS NDiSTEM. San Juan, Puerto Rico.

†Harris, L. 2022. Stream Ecology in Maryland. ACLT. Prince Frederick, MD

†Harris, L. 2022. Measuring and Motivating Change in Coastal Communities. St. Mary's College Marine Symposium. St. Mary's, MD.

E. Symposia Organized/Chaired for Professional Meetings {2008-2021}

Co-Chair "Ecosystem Engineers in the Coastal and Estuarine Environment" special session. 2009 Estuarine Research Federation. Portland, OR.

Discussion Leader "Ecosystem Modeling in the Nile Delta". 2009 Material Budgets Along the Egyptian Coastline Workshop at ICAR 2009, Alexandria, Egypt.

Co-Chair "Ecosystem Modeling from the Center to the Edges: Classic and Novel Approaches for Addressing Increasingly Complex Problems". 2010, ASLO, Santa Fe.

Co-Chair "Ecology of Coasts and Estuaries: Nutrients and Phytoplankton". 2013. CERF, San Diego.

Co-Chair "Short and long-term impacts of urbanization in watersheds". 2014. 1st International Workshop on Urbanization in Watersheds: Ecological and Environmental Responses, Xiamen, China.

Chair "Tidal Monitoring". 2015. PAXCON, Jug Bay Wetlands Sanctuary.

Co-Chair "Ecological Modelling and Environmental Management" ISEM. Baltimore, MD.

Steering Committee Member "Chesapeake Bay Program Modeling Beyond 2018: A Proactive Visioning Workshop" STAC.

M., Li. "Fighting surging seas in a changing climate: Defending coastlines at all costs or strategic retreat to high ground?" University of Maryland Virtual Seminar Series: Assessing Coastal Risks and Enhancing Resilience.
Co-Chair "Novel Coastal Ecosystems" Coastal and Estuarine Research Federation 2021. Virtual Venue.

Conference Co-Chair Coastal and Estuarine Research Federation 2021 Conference.

Coastal and Estuarine Research Federation 2021 Rising Tides Mentoring Workshop featuring Dr. Beronda Montgomery.

F. Active Memberships in Professional Societies

American Society of Limnology and Oceanography
Coastal & Estuarine Research Federation (*Student Judging at CERF 2015, Current Member of Broadening Participation Council, 2021 Conference Co-Chair*)
CERF Affiliate Society: Atlantic Estuarine Research Society (past *Member-At-Large*)
Association for Women in Science
International Society for Ecological Modelling (*Co-organizer 2015 Conference*)
American Geophysical Union (*AGU LANDInG Ambassador)*
Society for Advancement of Chicanos/Hispanics and Native Americans in Science

IV. Teaching and Training

A. University System of Maryland Courses Taught

Course #	Title	Semester	Enrollment	# Credits	Co-Instructors	# Lectures
MEES 608C	Ecosystems Complexity	Fall 2008	11	33		13
MEES 698I/498I	Chesapeake Bay Health	Fall 2009		3	Lead Instructor: Mitchelmore	1
MEES 607	Quantitative Methods	Fall 2010	11	33	Sanford	15
MEES 607	Quantitative Methods	Fall 2011	13	39	North	15
MEES 608F	Ecosystems Complexity	Spring 2012	12	12	Wilberg	13
MEES607	Quantitative Methods	Fall 2012	10	30	Sanford	15
MEES 698I	Chesapeake Bay Health	Fall 2013	10	30	Lead Instructor: Mitchelmore	1
MEES 610	Land Margins Interactions	Fall 2013	13	39	Fisher, Castro, Boynton	
MEES 607	Quantitative Methods	Fall 2013	16	48	Sanford, Miller	2
MEES 610	Land Margins Interactions	Fall 2014	6	18	Fisher, Castro	6
MEES 608J	Oyster Science and Management	Spring 2015	10	2	Lead Instructor: North	1

MEES 698I	Chesapeake Bay Health	Fall 2016	10	30	Lead Instructor: Mitchelmore	1
MEES 660	Ecological Foundations	Fall 2016	10	30	Lead Instructor: Woodland/Hildebrand	1
MEES 660	Ecological Foundations	Fall 2017	14	56	Lead Instructor: Harris/Hildebrand	14
MEES 718a	Issue Study Group on the Patuxent	Spring 2023	6	18	Co-teaching	All

B. Graduate Students Supervised as Major Advisor

1. Degrees Completed

Katherine Davis	2012	M.S.	MEES
Meghann Niesen	2013	M.S.	MEES
Melinda Forsyth	2014	M.S.	MEES
Jennifer Bryan	2014	M.S.	MEES
*Virginia Clark	2014	M.S.	MEES
Jessica Foley	2017	M.S.	MEES
Zachary Gotthardt	2019	M.S.	MEES
Aimee Neeley	2020	Ph.D.	MEES
Kevin Kahover**	2021	M.S.	MEES
Stefenie Shenoy**	2022	M.S.	MEES

*(*co-advised w/ D. Breitburg at the Smithsonian Environmental Research Center)*

*(**co-advised w/ J. Testa at UMCES-CBL)*

2. Students Currently Supervised

3. Current Graduate Student Committee Memberships

Lisa Ziegler	Ph.D.	MEES	UMCES
Isabel Sanchez Viruet	Ph.D.	MEES	UMCES

4. Past Graduate Student Committee Memberships

Michael O'Brien	M.S.	MEES	UMCES
Jennifer Barkman (Pincin)	M.S.	MEES	UMCES
William Connelly	Ph.D.	MEES	UMCES
Jake Hosen	Ph.D.	BEES	UMCP

Andrea Sylvia	M.S.	MEES	UMCES
Brittany West Marsden	Ph.D.	MEES	UMCP
Nikki Mehaffie	Incomplete	MEES	UMCES
Nicole Millette	Ph.D.	MEES	UMCES
Cassie Gurbisz	Ph.D.	MEES	UMCES
Katie Martin	M.S.	MEES	UMCES
Andrew Hobbs	M.S.	MEES	UMCES

5. Research Internships Supervised

Maryland Sea Grant REU Internship Program

Cummings, Keala, 2008, Sediment-Plant Interactions

Daubon, Michelle, 2009, MD Sea Grant Teaching Fellow

Almodovar, Laura, 2009, Sediment-Plant Interactions

Rooker, Kelly, 2010, Modeling Tidal Plant Sediment Capture

Staver, Hillary, 2011, Picoplankton biomass and productivity in the Potomac

Gravens, Emily, 2011, Nitrogen Loading Model of Parkers Creek

Figueroa, Yasiel, 2012, Biomechanics of Wild Rice

Bowin, Jade, 2013, Biophysical properties of *Spartina alterniflora*

Peter Han, 2015, Marsh Metabolism

Alexia Rodriguez, 2016, Subestuary Nutrient Budget

Brooke Iacone, 2017, Flow Cytometry applied to Patuxent Microbial Community

Olivia Lopez, 2019, MD Sea Grant Fellow, Phosphorus Uptake in Floating Wetlands: A Mass Balance Approach

Hector Arbuckle, 2021, MD Sea Grant, CAST Modeling of coastal watersheds

Puerto Rico Pilot REU Internship Program

Perez, Zoraida, 2012, Primary productivity in two bioluminescent lagoons

Tirado, Andrea, 2012, Primary productivity in two bioluminescent lagoons

Laboy, Luriel, 2012, Primary productivity in two bioluminescent lagoons

Faval, Barbara, 2013, Primary productivity in two bioluminescent lagoons

Santiago, Iliansherry, 2013, Primary productivity in two bioluminescent lagoons

Monteagudo, Natalia. 2013, Primary productivity in two bioluminescent lagoons.

Parapar, Javier. 2013. Modeling a bioluminescent lagoon food web

Miranda, Ramon. 2013. Modeling a bioluminescent lagoon food web

Perez, Eduardo, 2014, Accurate counts of *Pyrodinium bahamense*

Rivera, Alberto, 2014, Accurate counts of *Pyrodinium bahamense*

Desire Rivera, 2015, Bioassays of *Pyrodinium bahamense*

Edwin Gonzalez, 2015, Bioassays of *Pyrodinium bahamense*

There were many other participants (22 students total) who we worked with in these pilot programs, but the students listed here had projects with Dr. Harris.

Puerto Rico Centro TORTUGA project (59 students 2016-2019)

Yuitza Agrinzoni Gonzalez	Kathyarelis Flores-Cruz
Richard Aguiar Milanes	Danilys Fontanez
Kiomarys Alicea Rodriguez	Yuyza Irizarry Del Valle
Luis Alvarez-Rodriguez	Norberto Latorre
Ahixia Aquino Pereira	Vanelarie Lopez Pastrana
Ninoshka Betancourt	Natalie Maymi Villarroel
Katrina Cordova	Arnaldo Jose Moreno Barrios
Yarelis Cornier Rivera	Andrea Ocasio
Carolina Del Valle Faria	Ian Perez Cruz
Tiffany Del Valle Gonzalez	Christopher Rivera Cotto
Mariana Delphin	Joseph Rodriguez
Randy Dior Reyes	Angely Torres-Rivera
Dilan Esparra Rodriguez	Neysha Figueroa
Ricardo Rivera	Karina Berberena Rodriguez
Genesis Lopez Santana	Fabiola Colon Cotto
Keyla Diaz Anaya	Kelvin Vicente Ramos
Yanaris Rivera	Jesus Colon
Jolenid Torres Soto	Sahily V. Cardona de la Rosa
Carina L. Collazo Pinero	Jesliann Diaz Lopez
Jamirilys Jurado Passapera	Hector A. Morales Melendez
Ashley N. Munoz Garcia	Miladys Ramirez Casul
Keanna N. Velez Mendez	Orlando Negron Castrodad
Noel Santiago Berdecia	Karelys Torres Gonzalez
Shakira Gomez Arias	Patricia N. Vidal Geraldino
Yaidelisse A. Rivas Rivera	Angeli S. Torres Figueroa
Ana E. Rios Morales	Ambar P. Mercado
Olanna Martinez Diaz	Kevin Nieves Aquino
Brian Perez Ramos	Damian Santiago Muñoz
Jean Franco Zayas	Ethan Rosado Reyes
Rikelmy Ortiz del Villar	

SEAS Islands Alliance 2020-2021 (TORTUGA & Workforce Fellows)

Ian Perez Cruz	workforce fellow
Soely Luyando Flusa	workforce fellow
Patricia N. Vidal Geraldino	workforce fellow
Ninoshka M. Betancourt Gomez	workforce fellow
Aleza M. Torres Oliveras	TORTUGA
Joeshlian Huertas Cruz	TORTUGA
Monica V. Rodriguez Pabon	TORTUGA
Wilxander A. Taveras Gomez	TORTUGA
Wilnelia M. Barea Carrion	TORTUGA
Alondra Ortiz	TORTUGA
Katherine Delgado	TORTUGA
Millie Lopez	TORTUGA

6. Faculty Research Assistants Supervised

Deanna McQuarrie-Hanks (2008-2009)
Melissa Day (2010-present)
Casey Hodgkins (2012-2015)
Jennifer Humphrey (intermittently 2012 – 2015)
Melinda Forsyth (2016-2021)
Erin Reilly (2016-2020)
Jessica Flester (2020-2021)
Shelby Johnson (2021-present)
Cindy Ross (2021-present)

7. Hourly Research Technicians Supervised

Amanda Moore
Emma Dodsworth
Michael Babcock
Maureen Strauss
C.J. Szewczyk
Evan Kostolecky
Janet Barnes
Meredith Dance

V. Outreach and Service

A. Editorships

2010	Co-editor of Special Issue "Advances in Modeling Estuarine and Coastal Ecosystems: Approaches, Validation, and Applications". Volume 221, Issue 7.
2016	Guest Editor, Special Issue Ecological Modelling for ISEM
2016-2018	Associate Editor, Estuarine, Coastal and Shelf Science. Elsevier.

B. Public Service

2008	Science Fair Judge, Patuxent High School
2012-	Science Advisory Committee, American Chestnut Land Trust
2013-	Environmental Curriculum Advisor, The Tidewater School
2014	Discussion Leader, Calvert Public Library "Pushing the Limits" STEM book group on topic of technology and climate change
2016-	Science Committee, American Chestnut Land Trust
2012-	Lecturer for Master Naturalist Program
2018	Participant in Focus Groups for Middle Branch Development
2021-2022	Member of Science Advisory Group for Middle Branch Development
2022-	C-Stream Advisory Board Member

C. Federal/State/Local Government (Recent Years Only)

Member Chesapeake Bay Program Integrated Trends Analysis Team
Chair, James River Chlorophyll Criteria Review II, STAC
SET Inventory Chesapeake Bay Working Group Member, Sentinel Site Cooperative
Steering Committee Member STAC Future of CBay Modelling Workshop
Periodic presentations for Chesapeake Bay working groups (Modeling, Goal Implementation Teams, Integrated Trends and Assessment Team, Tributaries Team)

Participant MARACOOS Harris Creek Synthesis Group
Participant CBP SAV STAC Climate Workgroup
Participant Baltimore Healthy Harbors Science Communication Working Group
Participant National Science Foundation Coastlines and People (CoPe), Chicago
Host Maryland Department of the Environment Stream Survey Design workshop
Invited member of National Science Foundation CoPe Synthesis Team
Member Chesapeake Bay Program Diversity Working Group

F. UMCES and CBL

2007	CBL Visitor Center host for Solomons Christmas Walk
2007	Presentation at annual CBL docent appreciation lunch

2007-2008	Faculty Search Committee
2008-2014	New Truitt Building Committee
2008-2009	Faculty Search Committee
2009	Fall Distinguished Scholar Seminar Co-organizer
2010	Spring Brown Bag Seminar Co-Supervisor
2011	Faculty Search Committee Member
2011-present	CBL Sustainability Committee (Chair)
2011	Fall Distinguished Scholar Seminar Organizer
2013	Docent Seminar
2013	Provided lecture for CBL Outreach summer camp
2013	Faculty Search Committee
2013	Student Melinda Forsyth provided briefed Board of Regents on her work
2014	Provided lecture for CBL Outreach summer camp
2014	Accreditation Self-Study Working Group 3 Member
2014-2019	Faculty Senator
2016-2019	Faculty Senate Secretary
2018	Co-Author Strategic Plan: Healthy Waterfronts
2018	Lead Author Strategic Plan: Inclusion and Diversity
2018	Representative UMCES-UMBC Diversity and Inclusion Retreat
2018	Panel Organizer UMCES Environmental Summit Diversity
2020-2023	UMCES Diversity Equity Inclusion Collaborative
2023	Promotion Committee
2023	UMCES Comprehensive Review Committee

G. Other Professional Service

Member, National Academies of Science Committee on the Edwards Aquifer Habitat Conservation Plan
Atlantic Estuarine Research Society member-at-large
Member Coastal and Estuarine Research Federation's Broadening Participation Council and Workgroup to Launch "Rising TIDES" program
Advisory service to government of Finland related to engineered de-stratification

I regularly review proposals for a variety of funding programs that have included the National Science Foundation, Environmental Protection Agency, NASA, North Carolina, Florida & Massachusetts Sea Grant, National Estuarine Research Reserve Fellowship Program, Hudson River Foundation, Long Island Sound Study, and the USAID panel for joint Israeli-Arab Research

I endeavor to accept review requests for 8 manuscripts per year for journals that include the Journal of Plankton Research, Ocean & Coastal Management, Journal of Sea Research, Journal of Restoration Ecology, Estuarine, Coastal, & Shelf Science, Marine Ecology Progress Series, Ecological Modelling, Oecologia, Environmental Management, Estuaries & Coasts, and the Journal of Geosciences Education.

I have served as an external examiner for a Ph.D. student (Caitlin McNaughton) at Monash University.

In 2018 I was a visiting professor at North Carolina's Coastal Institute in Wanchese, NC where I worked with student and faculty in their capstone projects related to septic systems.

I have also participated as an Invited Site Reviewer for the Chesapeake Bay National Estuarine Research Reserve (2010) and for the National Science Foundation's LTER program. I am a member of the Edwards Aquifer Committee for the National Academy of Sciences.

Conference Co-Chair for Coastal and Estuarine Research Federation 2021 Meeting, virtual venue. Pre-Conference Rising Tides Program Committee with focus on orientation and mentoring workshop featuring Dr. Beronda Montgomery. Current leader of new award to CERF from Access+ to fund a workshop focused on revising policies and processes for nominations and awards for the society.

I have twice served as an external reviewer for the University of Maryland College Park Gemstones Program.