

CURRICULUM VITAE

JUDITH M. O'NEIL
Horn Point Laboratory
University of Maryland Center for Environmental Science

Certification

I have reviewed this Curriculum Vitae and here certify
that it is a current and accurate statement of my
professional record for this calendar year.



Signed:

Date: 31 October 2024

CURRICULUM VITAE

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I. Education

- 1983 B.S., Boston College, Chestnut Hill, MA. Biology.
- 1982 Sea Education Association, Woods Hole, MA; SEA Semester Student
R/V Westward
- 1987 M.S., State University of New York at Stony Brook, NY. Marine
Environmental Science.
- 1995 Ph.D., University of Maryland, College Park, MD. Marine
Environmental and Estuarine Science Program (Biological
Oceanography).

II. Professional Background

- 1995-1999 Research Officer, School of Marine Science/Zoology Department University of
Queensland, Brisbane, Australia.
- 1999-2001 Australian Research Council Fellow (APDI), Botany Department and Lecturer,
Centre for Marine Studies, University of Queensland, Brisbane, Australia
- 2002-2004 Lecturer (Assistant Professor), Centre for Marine Studies, University of
Queensland, Brisbane, Australia (50%)
- 2002-2013 Assistant Research Professor, Horn Point Laboratory, University of Maryland
Center for Environmental Science, Cambridge, MD
- 2011 Visiting Scientist, Global Change Institute, University of Queensland,
Brisbane, Australia Jan-July '11- Host: Professor Ove Hoegh-Guldberg.
- 2013- Associate Research Professor, Horn Point Laboratory, University of
Maryland Center for Environmental Science, Cambridge, MD

III. Awards/ Recognitions

Reviewer Award for "Exceptional Contribution to the journal *Harmful Algae*": Elsevier
Publishing Co., Amsterdam, The Netherlands

IV. Research

Areas of professional expertise:

Biological oceanography, cyanobacterial ecophysiology, plankton trophodynamics, harmful algal bloom ecology, nutrient dynamics, marine botany, (sub) tropical coastal marine ecology, coral reef biology.

A. Peer Reviewed Publications:

Total citations (from Google Scholar): 6,392; H index: 35 i-10-index: 51

Submitted (* indicates student first author paper)

O'Neil, J.M., Ross, M.O., Wolny, J., Wazniak, J., Swanson, S., Saliger, O., Kelsey H., Sturgis, B., Hulslander, B. (In revision) Assessing Threats to Marine Water Quality Conditions Along Assateague Island National Seashore. *National Park Service, Natural Resource Report Series*.

*Meyer, K.A., Crump, B.C., **O'Neil, J.M.** (in revision) Microbiome composition and production associated with cultured isolates of *Karenia brevis* and related dinoflagellate species. *Applied Microbial Ecology*.

In Preparation

*Ross, M., O., Wolny, J., Wazniak, C, **O'Neil, J.M.** (in prep) Nutrients, chlorophyll and emergent harmful algal bloom species of concern in the Atlantic Ocean coastal zone of Maryland. *For submission to: Estuarine, Coastal and Shelf Science*.

*Keller, S., Cram, J. and **O'Neil, J.M.** (2024) Investigating Complex Microbial Communities Associated with Nitrogen Fixing Cyanobacteria Mats on the Susquehanna Flats, Chesapeake Bay. *For submission Applied and Environmental Microbiology*.

Peer Reviewed Publications

McLellan, S.L. Chariton, A., Codello, A., McClary-Gutierrez, J.S., Schussman, M.K., Marzinelli, E.M., O'Neil, J.M., Schott, E., Bowen, J.L, Vineis, J.H., Maignien L., Lemonnier C., Perennou, M., Gibb, K.S., Zhou G.J., Leung, K.M.L, Kirs, M., Griffith, J.F., Steele, J.A., Swearer, S.E., O'Brien, A.L., , Song, D. , Liang, S., Li, J., Airoidi, L., Mancuso, F.P, Salomon, P.S., Silva-Lima, A.W., Pereira, R.C., Boehm, A.B., Lim, E.W.X., Wuertz, S., Fernández, E., Teira, E., Liao, M.L., Dong, Y.W. and Steinberg, P.D. (2024) Universal microbial indicators provide surveillance of sewage contamination in harbours worldwide. *Nature Water* <https://doi.org/10.1038/s44221-024-00315-5>

- O'Neil, J.M.**, Heil, C.A., Glibert, P.M., Solomon, C.M., Greenwood, J., Greenwood, J.G. (2024) Plankton Community Changes and Nutrient Dynamics Associated with Blooms of the Pelagic Cyanobacterium *Trichodesmium* in the Gulf of Mexico and the Great Barrier Reef. *Water*. 16, 1663. <https://doi.org/10.3390/w16121663>
- Wolny, J.L., Whereat, E.B., Egerton, T.A., Gibala-Smith, L.A., McKay, J.R., **O'Neil, J.M.**, Wazniak, C.E. and Mulholland, M.R. (2024) The occurrence of *Karenia* species in mid-Atlantic coastal waters: Data from the Delmarva Peninsula, USA. *Harmful Algae*. doi: <https://doi.org/10.1016/j.hal.2024.102579>
- Tanner, E., Steinberg, P., Soares Gomes, A., **O'Neil, J.M.** and Leung, K., (Eds.) (2020) World Harbour Project — Global harbours and ports: different locations, similar problems? Part II. <https://www.sciencedirect.com/journal/regional-studies-in-marine-science/special-issue/10F0QS1CTRL>.
- O'Neil, J.M.**, Newton, R.J., Bone, E., Birney, L., Green, A., Merrick, B., Goodwin-Segal, T., Moore, G., Fraioli, A. (2020) Using urban harbors for experiential, environmental literacy: Case studies of New York and Chesapeake Bay. *Regional Studies in Marine Science*. <https://doi.org/10.1016/j.rsma.2019.100886>
- *Taillie, D.M., **O'Neil, J.M.** Dennison, W.C. (2020) Water Quality Gradients and Trends in New York Harbor. *Regional Studies in Marine Science*. <https://doi.org/10.1016/j.rsma.2019.100922>
- Burkholder, J.M., Gobler, C.J., **O'Neil, J.M.** (2018) Cyanobacteria. In: Sandra E. Shumway, JoAnn M. Burkholder, Steven L. Morton (Eds). *Harmful Algae: Biology, Ecology and Public Health*. Wiley-Blackwell. 704 pp.
- O'Neil, J.M.**, Taillie, D., Walsh, B., Dennison, W.C., Bone, E.K., Reid, D.J., Newton, R., Strayer, D.L., Boicourt, K., Birney, L. Janis, S. (2016). New York Harbor: Resilience in the face of four centuries of development. World Harbour Project Special Issue: Elsevier *Regional Studies in Marine Science*, 8: 274-286.
- O'Neil, J.M.** and Dennison, W.C. (2016) Discerning the causes of toxic cyanobacteria (*Lyngbya majuscula*) blooms in Moreton Bay, Australia. In: Glibert, P.M. and Kana T. (Eds). *Ecological Studies Series-Aquatic Microbial Ecology and Biogeochemistry: A Dual Perspective*. Springer International Publishing, Switzerland. PP. 261-272. DOI 10.1007/978-3-319-30259-1_21
- *Gao, Y., **O'Neil, J.M.**, and Stoecker, D.R., Cornwell, J. (2014) Photosynthesis and nitrogen fixation during cyanobacterial blooms in an oligohaline / tidal fresh estuary. *Aquatic Microbial Ecology* doi:10.3354/ame01692
- O'Neil, J.M.** and Heil, C.A. (Editors) (2014) “Nutrient dynamics of *Karenia brevis* red tide blooms in the Eastern Gulf of Mexico”; Special Issue of *Harmful Algae*. Volume 38: pp 1-140.

- O'Neil, J.M.** and Heil, C.A. (2014) Preface and dedication: Nutrient dynamics of *Karenia brevis* red tide blooms in the Eastern Gulf of Mexico. Special Issue of *Harmful Algae*, 38: 1-2.
- *Meyer, K.A., **O'Neil, J.M.**, Hitchcock, G.L., and Heil, C.A. (2014) Microbial production along the West Florida shelf: Responses of bacteria and viruses to the presence and phase of *Karenia brevis* blooms. *Harmful Algae* 38:110-118.
- *Walsh, B.M., **O'Neil, J.M.** (2014) Zooplankton Community Composition and Copepod Grazing on the West Florida Shelf in Relation to Blooms of *Karenia brevis*. *Harmful Algae*, 38: 63-72.
- Heil CA, Bronk, DA, Mulholland, MR, **O'Neil, J.M.**, Bernhardt, P. Murasko S., Havens, J.A., and Vargo, G.A. (2014) Influence of surface aggregation behavior on nutrient cycling during a *Karenia brevis* (Davis) G. Hansen & Moestrup bloom: Migration to the surface as a nutrient acquisition strategy. *Harmful Algae*, 38: 86-94.
- *Killberg-Thoreson, L., Mulholland, M.R., Heil, C.A., Sanderson, M.P. **O'Neil, J.M.**, Bronk, D.A. (2014) Nitrogen uptake kinetics in field populations and cultured strains of *Karenia brevis*. *Harmful Algae*, 38: 50-62.
- Heil, CA, Dixon, LK, Hall, E. Garrett, M., Lenes, J.M., **O'Neil, J.M.**, Walsh, B.M., Bronk, D.A., Killberg-Thoreson L., Hitchcock, G.L., Meyer, K.A., Mulholland, M.R., Procise, L. Kirkpatrick G., Walsh, JJ, Weisberg, R,W. (2014). *Karenia brevis* (Davis) G. Hansen & Moestrup blooms in the eastern Gulf of Mexico: Nutrient Sources and Management Strategies based on a 5-year regional study. *Harmful Algae*, 38: 127-140.
- Heil, C.A., Bronk, D.A. Dixon, LK, Hitchcock GL, Kirkpatrick G., Mulholland MR, **O'Neil J.M.**, Walsh, J, Weisberg R, Garrett, M. (2014). The Gulf of Mexico ECOHAB: *Karenia* Program 2006-2012. *Harmful Algae*, 38: 3-7.
- Bronk, D. A., Killberg-Thoreson, L. Mulholland, M. R. Sipler, R. E., Roberts, Q. N., Bernhardt, P. W., Garrett, M., **O'Neil, J. M.**, C. A. Heil. (2014). Nitrogen uptake and regeneration (ammonium regeneration, nitrification and photo-production) in waters of the West Florida Shelf prone to blooms of *Karenia brevis*. *Harmful Algae*, 38:50-62.
- Mulholland, M. R, P. W. Bernhardt, I. Ozmon, L. A. Procise, **O'Neil, J.M.**, Heil, C.A., Bronk,D.A. (2014) Contributions of diazotrophy to nitrogen inputs supporting *Karenia brevis* blooms in the Gulf of Mexico. *Harmful Algae*, 38: 20-29.
- *Fertig, B., **O'Neil, J.M.**, Beckert, K., Cain, C.J., Needham, D.M., Carruthers, T.R., Dennison, W.C. (2013) Cryptic nutrient sources in a coastal lagoon and catchment streams, Chincoteague Bay, Maryland, USA. *Estuarine, Coastal Shelf Science*, 116: 1-10 doi.org/10.1016/j.bbr.2011.03.031
- O'Neil, J.M.**, Davis, T.W., Burford, M.A., Gobler, C.J. (2012) The Rise of Harmful Cyanobacteria Blooms: Potential Role of Eutrophication and Climate Change. *Harmful Algae* 14: 313-334.

- *Beckert, K.A., Fisher, T.R., **O'Neil, J.M.**, Jesien, R.V. (2011) Characterization and comparison of stream nutrients, land use, and loading patterns in Maryland Coastal Bay watersheds. *Water, Air and Soil Pollution*, 221: 255-273.
- Arthur, K.E., Paul, V.J., Paerl, H.W., **O'Neil, J.M.**, Joyner, J., Meickle, T. (2009) Nutrient enrichment of the cyanobacterium *Lyngbya* sp.: Effect on growth, secondary metabolite concentration and feeding by the specialist grazer *Stylocheilus striatus*. *Mar. Ecol. Prog. Ser.* 394:101-110.
- Glibert, P.M., Heil, C.A. Alexander, J., Murasko, S., **O'Neil, J.M.** (2009) Comparative nutrient and phytoplankton dynamics in two subtropical estuaries: Florida Bay, USA and Moreton Bay, Australia. *Contributions in Marine Science*. 38: 73-89.
- *Wicks, E.C., Koch, E.W., **O'Neil, J.M.**, Elliston, K. (2009) Old marsh peat as seagrass habitat substrate: Does sediment organic content have an effect on seagrass growth? *Marine Ecology Progress Series* 378: 71-80.
- O'Neil, J. M.**, Capone, D.G. (2008) Nitrogen Cycling on Coral Reefs. Chapter 21, In: Capone D.G., Bronk D.A., Mulholland M.R., and Carpenter, E.J. (Eds.) *Nitrogen in the Marine Environment* (2nd Edition). Elsevier Press. pp. 949-989.
<http://dx.doi.org/10.1016/B978-0-12-372522-6.00021-9>
- Paerl, H.W., Joyner, J.J., Joyner, A., Arthur, K.E., Paul, V.J., **O'Neil, J.M.**, Heil, C.A. (2008) Co-occurrence of dinoflagellate and cyanobacterial harmful algal blooms in Florida coastal waters: A case for dual nutrient (N and P) input controls. *Marine Ecology Progress Series* 371:143-153.
- Glibert, P.M., Azanza, R., Burford, M., Furuya, K., Abal, E., Al-Azri, A., Al-Yamani, F., Anderson, P., Anderson, D.M., Beardall, J., Berg, G.M., Brand, L., Bronk, D., Brookes, J., Burkholder, J.M., Cembella, A., Cochlan, W.P., Collier, J.L., Collos, Y., Diaz, R., Doblin, M., Drennen, T., Dyhrman, S., Fukuyo, Y., Furnas, M., Galloway, J., Graneli, E., Ha, D.V., Hallegraeff, G., Harrison, J., Harrison, P.J., Heil, C.A., Heimann, K., Howarth, R., Jauzein, C., Kana, A.A., Kana, T.M., Kim, H., Kudela, R., Legrand, C., Mallin, M., Mulholland, M., Murray, S., **O'Neil, J.**, Pitcher, G., Qi, Y., Rabalais, N., Raine, R., Seitzinger, S., Salomon, P.S., Solomon, C., Stoecker, D.K., Usup, G., Wilson, J., Yin, K. Zhou, M. Zhu, M. (2008) Ocean urea fertilization for carbon credits poses high ecological risks. *Mar. Poll. Bull.* 56: 1049-1056.
- *Benson, E., **O'Neil, J.M.**, Dennison, W.C. (2008) Del-15 Nitrogen signal in the macrophyte *Vallisneria americana* from Upper Saranac Lake, NY *Hydrobiologia* 596:187-196.
- *Arthur, K.E., **O'Neil, J.M.**, Limpus, C.J. Abernathy, K., Marshall, G.J. (2007). Using animal-borne imaging to assess green turtle (*Chelonia mydas*) foraging ecology in Moreton Bay, Australia. *Marine Technology Society Journal*. 41: 5-9.
- *Ahern, K.S, **O'Neil, J.M.**, Udy, J.W., Albert, S., (2006) Effects of iron on filament growth and productivity of the cyanobacterium *Lyngbya majuscula*. *Mar. Fresh. Biol.* 57:167-

- *Capper, A, Tibbetts, IR, **O'Neil, J.M.**, Shaw, GR (2006) Feeding preference and deterrence in rabbitfish *Siganus fuscescens* for the cyanobacterium *Lyngbya majuscula* in Moreton Bay, South East Queensland, Australia, *Journal of Fish Biology* 68:1589-1609.
- *Capper, A, Tibbetts, IR, **O'Neil, J.M.**, Shaw, GR (2006) Dietary selectivity for the toxic cyanobacterium *Lyngbya majuscula* and resultant growth rates in two species of opisthobranch mollusc. *Journ. of Experimental Marine Biology and Ecology* 331:133-144.
- Glibert, P.M., Heil, C.A., **O'Neil, J.M.**, Dennison, W.C., O'Donohue, M.J. (2006) Inputs, Composition, and Rates of Uptake of Nitrogen, Phosphorus, Silica and Carbon in Moreton Bay, Queensland, Australia: Evidence for Differential Limitation of Plankton Biomass and Production. *Estuaries* 29:107-119.
- Mulholland, M.R., Bernhardt, P.W., Heil, C.A., Bronk, D.A., **O'Neil, J.M.** (2006) Nitrogen fixation and release of fixed nitrogen in the Gulf of Mexico. *Limnology and Oceanography* 51:1762-1776.
- O'Neil, J.M.**, Dennison, W.C. (2005) *Lyngbya majuscula* in Southeast Queensland waterways. Chapter 9 In: Abal, E. and Dennison, W.C. (Eds). Healthy Catchment, Health Waterways. South East Queensland Regional Water Quality Strategy, Brisbane City Council.
- *Albert, S., **O'Neil, J.M.**, Udy, J.W., Ahern, K.S., O'Sullivan, C.M., Dennison W.C. (2005) Blooms of the cyanobacterium *Lyngbya majuscula* in coastal Queensland, Australia: disparate sites, common factors. *Marine Pollution Bulletin* 51: 428-437.
- *Watkinson, A.J., **O'Neil, J.M.**, Dennison, W.C. (2005) Ecophysiology of the bloom forming cyanobacterium *Lyngbya majuscula* in Moreton Bay, Australia. *Harmful Algae* 4: 697- 715.
- *Capper, A, Tibbetts, IR, **O'Neil, J.M.**, Shaw, GR (2005) The fate of *Lyngbya majuscula* toxins in three potential consumers. *Journal of Chemical Ecology*. 31: 1595-1606.
- *Hewson, I., **O'Neil, J.M.** Fuhrman, J.A., Dennison W.C. (2001) Virus-like particle distribution and abundance in sediments and overlying waters along eutrophication gradients in two subtropical estuaries. *Limnology and Oceanography* 46:1734-1746.
- *Hewson, I., **O'Neil, J.M.**, Dennison, W.C. (2001) Virus-like particles associated with *Lyngbya majuscula* (Cyanophyta; Oscillatoriaceae) bloom decline in Moreton Bay, Australia. *Aquatic Microbial Ecology*. 25:207-213.
- *Hewson, I., **O'Neil, J.M.** Heil, C.A., Bratbak, G., Dennison W.C. (2001). Effect of concentrated viral communities on photosynthesis and community composition of co-occurring benthic microalgae and phytoplankton. *Aquatic Microbial Ecology*, 25:1-10
- *Hewson, I., **O'Neil, J.M.**, Abal, E. (2001) A novel bloom of the surf diatom *Anaulus australis*, in southeast Queensland. *J. Plankton Res.* 23:1233-1236.

- Koop, K., Booth, D., Brodie, J., Bucher, D., Capone, D., Coll, J., Dennison, W., Erdmann, M., Harrison, P., Hoegh-Guldberg, O Hutchings, P.A., Jones, G.B., Larkum, A.W.D., **O'Neil, J.M.**, Steven, A., Tentori, E., Ward, S., Williamson, J., Yellowlees, D. (2001) ENCORE: The effect of nutrient enrichment on coral reefs. Synthesis of results and conclusions. *Marine Pollution Bulletin* 42: 91-120.
- O'Neil, J.M.** (1999) Grazer interactions with nitrogen-fixing marine cyanobacteria: adaptation for N-acquisition? *Bulletin de l'Institut oceanographique*, Monaco, 19:293-317.
- Dennison, W.C., **O'Neil, J.M.** Duffy, E.J., Oliver, P.E., Shaw, G.R. (1999) Blooms of the cyanobacterium *Lyngbya majuscula* in coastal waters of Queensland, Australia. *Bulletin de l'Institut oceanographique*, Monaco, 19:501-506.
- Glibert, P.M., **O'Neil, J.M.** (1999) Dissolved organic nitrogen release and amino acid oxidase activity by *Trichodesmium* spp. *Bull. de l'Institut oceanograph.*, Monaco, 19:265- 272.
- O'Neil, J.M.** (1998) The colonial cyanobacterium *Trichodesmium* as a physical and nutritional substrate for the harpacticoid copepod *Macrosetella gracilis*. *Journal of Plankton Research* 20: 43-59.
- O'Neil, J.M.**, Metzler, P.M., Glibert, P.M. (1996) Ingestion of $^{15}\text{N}_2$ -labelled *Trichodesmium* sp. and ammonium regeneration by the harpacticoid copepod *Macrosetella gracilis*. *Marine Biology* 125: 89-96.
- O'Neil, J.M.**, Roman, M.R. (1994) Ingestion of the cyanobacterium *Trichodesmium* spp. by pelagic harpacticoid copepods *Macrosetella*, *Miracia* and *Oculosetella*. *Hydrobiologia*. 292/293 235-240.
- Carpenter, E.J., **O'Neil, J.M.**, Dawson, R., Capone, D.G., Siddiqui, P.J.A. Roennenberg, T., Bergman, B. (1993) The tropical diazotrophic phytoplankter *Trichodesmium*: biological characteristics of two common species. *Mar. Ecol. Prog. Ser.* 95: 295-304.
- O'Neil, J.M.**, Roman, M.R. (1992) Grazers and Associated Organisms of *Trichodesmium*. In: E.J. Carpenter, D.G. Capone & J. Rueter (Eds.), *Marine Pelagic Cyanobacteria: Trichodesmium and other Diazotrophs*, 61-73. Kluwer Academic Press.
- Hawser, S.P., **O'Neil, J.M.**, Roman, M.R., Codd, G.A. (1992) Toxicity of blooms of the cyanobacterium *Trichodesmium* to zooplankton. *Journ. Appl. Phycol.* 4:79-86.
- Capone, D.G., **O'Neil, J.M.**, Zehr, J., Carpenter, E.J. (1990) Basis for diel variation in nitrogenase activity in the marine planktonic cyanobacterium *Trichodesmium thiebautii*. *Mar. Ecol. Prog.* 56: 3532-3536.
- O'Neil, J.M.**, Capone, D.G. (1989) Nitrogenase activity in tropical carbonate marine sediments. *Mar. Ecol. Prog. Ser.* 56:145-156.
- Wickner, R.B., Koh, T.J., Crowley, J.C., **O'Neil, J.M.**, Kaback, D.B. (1987). Molecular Cloning of chromosome I DNA from *Saccharomyces cerevisiae*: Isolation of the *MAK 16* gene and analysis of an adjacent gene essential for growth and low temperature. *Yeast*: 3:51- 57.

B. Conference and Symposia Publications

- *Zheng, S., Taillie, D., **O'Neil, J.M.** (2021) Water Quality in New York based on levels of chlorophyll *a*. New York City Department of Education and the City University of New York, Selected Abstracts from the New York City Science and Engineering Fair; *J. Dawn. Res.* p 16.
- Arthur, K.A. and **O'Neil, J.M.** (2008) Green Turtle Foraging Behavior in Moreton Bay, Australia Using Crittercam. *In: Marshall, G.J.*, editor. Proceedings of the 2007 Animal-Borne Imaging Symposium; 2007 Oct 10-13; Washington D.C., National Geographic Society; 2008. pp. 39-44.
- Bronk, D.A., Sanderson, M.P., Mulholland, M.R., Heil, C.A. and **O'Neil, J.M.** (2004) Organic and inorganic nitrogen uptake kinetics in field populations dominated by *Karenia brevis*. *In: Steidinger, K.A., Landesberg, J.H., Tomas, C.R., and Vargo, G.A.* (Eds.) *Harmful Algae 2002*. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernment Oceanographic Commission of UNESCO, St. Petersburg FL, USA p. 80-83.
- *Capper, A. Tibbetts, I.R., **O'Neil, J.M.** and Shaw, G.R. (2004). A review of feeding preferences and deterrence in three faunal species associated with cyanobacterial blooms of *Lyngbya majuscula* in southeast Queensland, Australia *In: Steidinger, K.A., Landesberg, J.H., Tomas, C.R., and Vargo, G.A.* (Eds.) *Harmful Algae 2002*. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO, St. Petersburg FL, USA p. 461-465.
- Heil, C.A., Mulholland, M.R., Bronk, D.A., Berghardt, P. and **O'Neil, J.M.** (2004) Bacterial and size fractionated primary production within the 2001 *Karenia brevis* bloom on the West Florida shelf. *In: Steidinger, K.A., Landesberg, J.H., Tomas, C.R., and Vargo, G.A.* (Eds.) *Harmful Algae 2002*. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO, St. Petersburg, FL, USA p. 38-41.
- Mulholland, M.R., Heil, C.A., Bronk, D.A., **O'Neil, J.M.** and Bernhardt, P. (2004) Does nitrogen regeneration from the Nitrogen fixing cyanobacteria *Trichodesmium spp.* fuel *Karenia brevis* blooms in the Gulf of Mexico? *In: Steidinger, K.A., Landesberg, J.H., Tomas, C.R., and Vargo, G.A.* (Eds.) *Harmful Algae 2002*. Florida Fish and Wildlife Conservation Commission, Florida Institute of Oceanography, and Intergovernmental Oceanographic Commission of UNESCO, St. Petersburg FL, USA p. 47-50.
- McMaster, S., Lanyon, J.M., **O'Neil, J.M.**, Limpus, C. (2003) Interactions between *Lyngbya majuscula* and green turtles (*Chelonia mydas*) in Moreton Bay, Australia. *Marine Biocomplexity: Australian Marine Sciences Association; University of Queensland, Brisbane, Australia.* p.120.

Shaw, G.R., Poon, K.F., Codd, G., **O'Neil, J.M.**, Lam, P., Chong, M., Davis, B. Eaglesham, G., Moore, M. (2001). The presence of microcystin-like compounds in blooms of the marine cyanobacterium, *Trichodesmium* spp. 5th International Conference on Toxic Cyanobacterium 16-20, 2001; Noosa, Qld. Published by CSIRO.

O'Neil, J.M., Shaw, G.R., Dennison, W.C. (2000) Blooms of the toxic cyanobacteria *Lyngbya majuscula* in coastal Queensland waters. 9th International Conference on Harmful Algal Blooms University of Tasmania.

Dennison, W. C., O'Neil, J. M., Jones, A. B., Costanzo, S., Hewson, I., & Prange, J. A. (1999). Effect of Hydric Soil Disturbance on Ecological Health of Coastal Waters. In: *Proceedings of the Australian Acid Sulfate Soils Conference*, University of Queensland, Brisbane.

C. Other Products

Educational Videos:

O'Neil, J.M., Ross, M., Swanson, S., Dennison, W. and Kelsey, H. (2022) Outreach videos for the Assateague Island National Seashore. Water Quality and Emergent Harmful Algal Blooms of Concern Science focus: <https://drive.google.com/drive/u/0/shared-with-me>

O'Neil, J.M., Hulslander, B., Wazniak, C., Ross, M., Swanson, S. and Kelsey, H. (2022) Outreach videos for the Assateague Island National Seashore. Natural Resources Division, Protecting Water Quality General public focus: https://drive.google.com/file/d/1F1_W8RlfrSaeshVncfU_XZQUWSTTp1eQ/view

Book Chapters:

O'Neil, J.M and Wazniak C. (2022) Nutrient plumes detected offshore are a concern for Coastal Bays. In: *State of Maryland Coastal Bays: Building Resilience*. Dennison, W.C. et al. (Editors) IAN Press. Cambridge, MD
<https://ian.umces.edu/publications/building-resilience-in-the-maryland-coastal-bays/>
Wazniak, C. and **O'Neil, J.M.** (2022) Chronic harmful algal blooms threaten ecosystems. In: *State of Maryland Coastal Bays: Building Resilience*. Dennison, W.C. et al. (Editors) IAN Press. Cambridge, MD pp <https://ian.umces.edu/publications/building-resilience-in-the-maryland-coastal-bays/>

Recent Media Reports:

Lindner, B.G. & Konstantinidis, K.T. (2024) Faecal contamination of the world's harbours. In: News and Views, Pollution Section. *Nature Water*. <https://doi.org/10.1038/s44221-024-00333-3> Published 25 Oct 2024. (Discussing our recent World Harbour Paper, McLellan et al. 2024).

Research Highlights (2024) Unsafe Harbours: Test Finds Sewage Traces Worldwide, *Nature*, Vol 634: p. 517. Published 17 Oct. 2024, <https://www.nature.com/articles/d41586-024-03205-8> (regarding *Nature Water* <https://doi.org/nmw2>).

Conroy, Brendan (2024) Ocean City celebrates strong scores on coastal bays report card. *NBC Coast TV*, Milton, Delaware: https://www.coasttv.com/news/ocean-city-celebrates-strong-scores-on-coastal-bays-report-card/article_379896a4-925d-11ef-81a3-7bd98d0d98a9.html 24 Oct 2024.

Condon, Christine (2024) Scientists study mysterious invader in the Chesapeake Bay's largest underwater grass bed: Scientists Dive deep into study of 'mermaid's hair'. *Baltimore Sun, Environment Section*, Baltimore MD. 5 Sept 2024. pg 1& 8. <https://www.baltimoresun.com/2024/09/01/susquehanna-flats-microseira-lyngbya-invader/?clearUserState=true>

D. Contracts and Research Grants:

Current

United States Environmental Protection Agency EPA): Chesapeake Bay Nutrient Limitation Assessment. PI: Fisher, T. (UMCES) and **O'Neil, J. (CoPI)**, Gustafson, A. (CoPI). Amount \$400K; July 2023-August 2025.

United States Department of the Interior-National Park Service (NPS): Evaluate Nutrient Enrichment within Estuarine Waters of Assateague Island National Seashore; for monitoring of water quality (HPL Analytical Services). **O'Neil, J. (PI)** Amount \$102K; Sep 2022-Dec 2025.

Maryland Sea Grant: Causes of benthic cyanobacteria overgrowth in submersed aquatic vegetation (SAV) beds in Chesapeake Bay: Potential consequences for ecosystem resilience. PI **O'Neil, J. (PI)**, Co-PIs: J. Cornwell (UMCES); C. Gurbisz (St. Mary's College of Maryland); C. Wazniak and B. Landry (MD DNR). Amount \$140K; February 1, 2022 – January 31, 2025 (n.b. additional *Sea Grant Fellowship Funding* request successful, recruited graduate student Shayna Keller for this project Amount: ~\$80K).

Maryland Sea Grant: Identifying the Taxonomic Identity of an Unknown Toxic cyanobacteria *Lyngbya* species and associated microbiota in the Chesapeake Bay; PIs Jacob Cram and **O'Neil, J.M.** \$5,761 -2/1/2023 - 8/31/2024

Previous

United States Department of the Interior-National Park Service (NPS): Assessing Threats to Marine Water Quality Conditions Along Assateague Island National Seashore: **O'Neil, J.M. (PI)**, Kelsey, H. (UMCES) and C. Wazniak Maryland (DNR) Co-PIs. (\$205K). Awarded 1 October 2017-Dec 2020. No Cost extension through June 2022.

National Science Foundation (NSF): Water Sustainability and Climate (WSC)-Collaborative Impacts of Climate Change. -*Impacts of Climate Change on the Phenology of Linked Agriculture-Water Systems*: with PIs Ball, W., Harman C., (Johns Hopkins University); Easton, Z.M. (Virginia Tech); Wainger, L., Kemp, W.M., Murray, L, Testa, J., **O'Neil, J.M.** (UMCES); Ortiz- Bobeia, A. (Resources for the Future, Washington, D.C.); Brady, D.C. (Univ. of Maine). *Investigating how climate change will affect agricultural phenology and nutrient dynamics. Predictive models and incorporation of teaching modules for high-school teachers* on "Teach Ocean Science" website <http://www.teachoceanscience.net/teaching>. Award Sep 2014-Aug. 2018. \$39K. (No Cost extension through Aug 2020).

Maryland Environmental Serviced (MES): ENVIRONMENTAL RESTORATION PROJECT (ERP) TASK 50: "Microcystis Blooms and Associated Bird Mortalities Studies and Investigation of Microcystis Management Options for the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island": (~100,000) PIs: Sellner, K. (SERC), **O'Neil, J.M.**, & Schott, E. (UMCES); T. Davis (Environment Canada) 2013.

Education grants

Current

University System of Maryland (USM) Grant Program: Support for Institutional Documentation of Civic Learning, PI: Sanford, L., Griffin, A. and O'Neil, J.M. Collaboration with the Gull Institute, Woods Hole and UMCES to run workshop Oct. 2024 exploring programs on the environment and civic learning. Amount \$9600

Pending

International Education Grant: *Girls for the Climate: Science, Technologies and Innovations to Address Climate Change*, PI: Dr. Cleonice Puggian, **O'Neil J.M.** international collaborator Rio de Janeiro State University, UERJ, Department of Education; Brazilian Government, CNPq/MCTI/ MMulheres n° 31/2023, Submitted Rio de Janeiro, May, 2024

Previous

Waterfowl Chesapeake's Community in Conservation Grant Program: Enhancing the Horn Point Cove Trail Experience: Connecting Students to Nature, Research and Conservation. PI: **O'Neil, J.M.** To improve HPL Environmental Education -animal-blind facility with

conservation and improve EE bird habitat. Amount \$5000; Date Nov 2021- June 2023

Marcia Brady Tucker Foundation: Talbot County family foundation, to support a Summer Environmental Education Specialist at the University of Maryland Center for Environmental Science (UMCES), Horn Point Laboratory (HPL), to run STEM programming for K-12 student at EE- summer 2020. **O'Neil, J.M.** and Gomes, B.; Amount \$15,750 (no cost extension through 2022).

NOAA Bay Watershed Education and Training (B-WET) Grant: with Shore Rivers Conservancy: Using Sturgeon for STEM Education **O'Neil, J.M.** and Plough, L. Paid for upkeep and water quality care of sturgeon on loan from the Oxford Lab for use in STEM education for local school groups Amount: \$7K) through May. 2024.

Chesapeake Bay Trust: Meaningful Watershed Educational Experiences (MWEE) ACADEMY with Shore Rivers Conservancy: Co PIs: Sullivan, S. and **O'Neil, J.M.** Project to advance interdisciplinary environmental literacy throughout the Eastern Shore of Maryland by training a cohort of fifteen regional teachers in the framework, development, and implementation of Meaningful Watershed Educational Experiences (MWEE) indiscriminate of grade-levels and disciplines. \$9K through July 2021.

National Science Foundation (NSF): *Curriculum and Community Enterprise for New York Harbor Restoration in New York City Public Schools and Billion Oyster Partnership-STEM+C* (Science Technology, Engineering, Mathematics, plus Computing); Subcontract with Pace University, New York; Harbor School Foundation, NYC, Columbia University (\$415K) with Dennison, W.C. Costanzo, S., Jones, A, **O'Neil, J.M.**; Awarded 1 Nov. 2014-2017 (3 years w/ 1 year no cost extension to Oct 2018)

National Oceanic and Atmospheric Administration (NOAA): *Integration of Environmental and Geographic Literacy (IEGL): A model for Maryland Schools-Bay-Watershed Education and Training* (B-WET) Initiative. PI: **O'Neil, J.M. (PI)** previous PI Murray, L.; Provide summer field institutes for teachers to develop inquiry-based modules based on Chesapeake Research science. Partnership with Chesapeake Bay Foundation. Awarded Sept 2014- Jan 2018 (\$291K).

Maryland Department of Education/EPA (MDE): *Maryland Environmental Literacy Program:* PI: Murray (UMCES) and **O'Neil, J.M.**; 54K July 2015-2016 (yearly for 3 years); Teacher Workshops in Baltimore Harbor and Smith Island.

E. **Conferences, Invited Seminars, Panels and Presentations** (* student presentation):

Wazniak, C., **O'Neil, J.M.**, Boyer, G., Hamilton, A., Hall, S., McElwee, A., Ferrier, D., Gaudlip, C., and Hutchinson, B. (2024) Detection of Freshwater Saxitoxins in Epipellic Cyanobacteria Mats in Maryland. Poster presentation: *12th U.S. Symposium on Harmful Algal Blooms*, Portland, Maine, October 2024.

*Keller, S., Cram, J. and **O'Neil, J.M.** (2024) Investigating Complex Microbial Communities Associated with Nitrogen Fixing Cyanobacteria Mats on the Susquehanna Flats, Chesapeake Bay. Poster presentation: *12th U.S. Symposium on Harmful Algal Blooms*, Portland, Maine, October 2024.

O'Neil, J.M., Fries, A., Carew, A. and Kelsey, H. (2024) *Maryland Coastal Bay 2023 Ecosystem report Card Release. Maryland Coastal Bay Program's Policy Annual Report Card Release Meeting* **Invited** STAC Chair Oral Report, Ocean City, MD 24 Oct 2024.

O'Neil, J.M., (2024) *Maryland Sea Grant Site Review, Invited member for panel on: Healthy Coastal Ecosystems.*, College Park, MD 25 October 2024

O'Neil, J.M., (2024) The World Harbour Project. *UMCES Chesapeake Global Collaboratory Baltimore Harbor in Context Symposium*; **Invited** expert panelist: Panel 2, *Coastal Cities Worldwide.*, IMET, Baltimore, 10 Oct 2024.

O'Neil, J.M., Gurbisz, C., Landry, J.B., Hamilton, A., Wazniak, C., Keller, S., Owens, M., and Cornwell, J. (2024) Nutrient dynamics in aquatic grass beds in Chesapeake Bay, USA. Poster presentation at the *World Seagrass Conference & International Seagrass Biology Workshop WSC2024 & ISBW15: Seagrass in the Anthropocene*, Naples, Italy June 2024.

O'Neil, J.M. (2023) The State of the Maryland Coastal Bays. *EPA National Estuarine Program-Maryland Coastal Bay Program's Policy Committee Meeting*: **Invited** STAC Chair Report to State of Maryland Management Officials, Ocean City, MD 13 June 2024.

O'Neil, J.M. (2024) Chesapeake Research Consortium (CRC) Roundtable Discussion: "UninHABitable" HABs Across the Watershed. **Invited** expert panelist: <https://www.youtube.com/watch?v=SvjUTY7iJ88>, Annapolis, MD, June 2024

O'Neil, J.M., Keller, S., Gurbisz, C., Landry, J.B., Hamilton, A., Wazniak, C., Owens, M., Cornwell, J. (2024) Growth of the cyanobacterium *Microseira (Lyngbya) wollei* in Submerged Aquatic Vegetation beds on Susquehanna Flats. **Invited** oral presentation: *Chesapeake Community Research Symposium Chesapeake Bay Restoration: Managing Water Quality for Living Resources in a Changing Climate meeting*, Annapolis, MD, June 2024.

O'Neil, J.M. (2024) Susquehanna Flats *Microseria (Lyngbya) wollei* and Submerged Aquatic Vegetation (SAV). **Invited** Oral presentation: *MD DNR Harmful Algal Bloom Task Force Meeting*, Feb 2024, Annapolis, MD.

- O'Neil, J.M.** (2023) Using urban harbors for experiential, environmental literacy: Case studies of New York Harbor and Chesapeake Bay. (*Usando portos urbanos para alfabetização ambiental experimental: Estudos de caso do porto de Nova York e da Baía de Chesapeake*); Education for the right to sanitation in the hydrographic region of Guanabara Bay Conference (*Educação para o Direito ao Saneamento na Região Hidrográfica da baía de Guanabara Conferência*); UERJ-FEBF Auditorio (State University of Rio de Janeiro (UERJ) and Faculdade de Educação da Baixada Fluminense (FEBF) Auditorium. **Invited** talk: Remote presentation to conference in Brazil, translated simultaneously to Portuguese by collaborator Dr. Cleonice Puggian, Rio de Janeiro State University, UERJ, Department of Education, 18 December 2023.
- *Sanchez, D., Keller, S., Owens, M., Cornwell, J. Gurbisz, C., Hamilton, A., Wazniak, C., Landry, B. and **O'Neil, J.M.** (2023). Sediment Provides Nutrients for Benthic Cyanobacteria in a Submersed Aquatic Vegetation Bed Within the Chesapeake Bay - Implications for Nitrogen Fixation. *Coastal and Estuarine Research Federation (CERF) Biennial Meeting*, Portland, OR, November, 2023. Poster presentation by MDSG REU student Penn State University.
- O'Neil, J.M.** Wazniak, C., Hamilton, A., Keller, S. and Boyer, G. (2023) Paralytic Shellfish Toxin (PST) occurrence in the benthic cyanobacterium *Microseira (Lyngbya) wollei* from the Chesapeake Bay. *Coastal and Estuarine Research Federation (CERF), Biennial Meeting*, Portland, OR, November, 2023.
- O'Neil, J.M.** (2023) Stakeholder Conference and Workshop in Manila, Philippines; Participated in Belmont Forum workshop on water quality in Manila Bay and Chesapeake Bay, 26 Feb-6 March 2023, <https://sites.google.com/umces.edu/coastcard/events#h.iwvr4wcm29z3>
- O'Neil, J.M.**, Gurbisz, C., Landry, J. B., Hamilton, A., Wazniak, C., Sanchez, D. and Cornwell, J. (2022) Will overgrowth of cyanobacteria hinder submerged aquatic vegetation resurgence in Chesapeake Bay? Poster presentation at the *World Seagrass Conference & International Seagrass Biology Workshop WSC2022 & ISBW14*; Annapolis, August, 2022
- O'Neil, J.M.** (2022) *World Harbour Project: Linking Urban Ocean Initiatives Around the Globe*, UMCES CBL Science for Community Series 29 March 22. <https://www.umces.edu/cbl/science-citizens-videos>
- *Ross, M., Wolny, J., Taillie, D., Wazniak, C. and **O'Neil, J.M.** Nutrient dynamics of emergent Harmful Algal Bloom species of concern in Maryland's coastal ocean waters. ASLO Ocean Science Mtg. San Diego, Calif. February 16-21 2020.
- O'Neil, J.**; Birney, L.; Newton, R.; Fraioli, A.; Bone, E.; Moore, G.; Green, A.; Goodwin Segal, T.: Using urban harbors for experiential, environmental literacy: Case studies of New York and Chesapeake Bay. *ASLO Aquatic Science Meeting*, San Juan, Puerto Rico 23 February-2 March 2019.

- *Latorre Arzola, N.; Ross, M.; Johnson, B.; Volpitta, A.; Schott, E.; **O'Neil, J.M.** Tracking microbial contaminants in Baltimore Harbor: Are current techniques sufficient for assessing human risk? *ASLO Aquatic Sciences Meeting* February 2019, San Juan, Puerto Rico.
- O'Neil, J.M.**, Gannon, R., Schott, E., and Sellner, K. Salinity tolerance and toxin concentration in *Microcystis aeruginosa* in the Chesapeake Bay region. 3rd *Interdisciplinary Freshwater Harmful Algal Blooms Workshop, Toronto, Ontario, Canada: April 24 - 26, 2019*
- O'Neil, J.M.**, World Harbour Project: Urban Ecology and Global Linkages- Invited Speaker: *UMCES Chesapeake Biological Lab "Distinguished Scholar Seminar Series"* Solomons, MD May 8, 2019
- *Saliger, O.L., Ross, M., **O'Neil, J.M.** Changes in -phytoplankton biomass and composition in coastal Maryland due to eutrophication and temperature increase, REU Student presentation 25th *Biennial CERF Conference*, November 2019, Mobile, AL *n.b. Won CERF best undergraduate oral presentation
- O'Neil, J.M.**, Wazniak, C. Assessing Threats to Water Quality off of Assateague National Seashore. 70th *Atlantic Estuarine Research Society (AERS) Meeting*, March, 2018, Rehoboth, DE.
- O'Neil, J.M.** and Currie, J. Incorporation of Water quality into middle school science curriculum: using Conceptual Diagrams *NYC Department of Education/Billion Oyster Project STEM Workshop*, 21 June 2018, Harbor School, Governors Island, NY, NY.
- O'Neil, J.M.** Invited Workshop Participant-*The New Age of Ocean Discovery: Opportunities from Tara Oceans*, Radcliffe Institute for Advanced Study, Harvard University: October 1-2, 2018.
- *Ross, M. **O'Neil, J.M.**, Wazniak Assessing threats to marine water quality conditions along Assateague Island National Seashore. 24th *Annual Maryland Water Monitoring Council (MWMC Conference)*, December, 2018 Maritime Institute, North Linthicum, MD
- Hollady, T., Wainger, L., Bhaskaran, H., **O'Neil, J.M.** "You've Got Kale!" A Game Teaching Farm Economics & Environmental Stewardship in a Changing Climate. 10th *Community on Ecosystem Services (ACES) Conference*, December, 2018 Washington, DC.

V. *Teaching and Training*

A. Graduate Students Supervised as Major Advisor or Co-Advisor

1. Degrees Completed at University of Queensland (UQ).

Webb, Graham; Honours, Environmental Science 1998; UQ. *Assessing zooplankton grazing in Moreton Bay by measuring short-term changes in chlorophyll concentrations.*

- Hewson, Ian; Honours, Botany 2000; UQ. *Dynamics of marine viruses along eutrophication gradients in Australian subtropical estuaries.*
- Watkinson, Andrew; Honours; Botany 2000; UQ *Ecophysiology of the bloom forming cyanobacteria Lyngbya majuscula in Moreton Bay.*
- Albert, Simon; Honours; Environmental Science 2001; UQ. *The effect of soil extracts on the physiology of Lyngbya majuscula (Cyanophyta).*
- Lawn, Tanya; Honours; Botany 2002; UQ. *Dynamics and Effects of Macrofauna Associated with Lyngbya majuscula in Moreton Bay.*
- Ahern, Kathleen; Honours; Environmental Science 2003; UQ. *Effect of nutrients on the cyanobacterium Lyngbya majuscula: A bioassay technique.*
- O'Sullivan, Cherie; Honours; Environmental Science 2004; UQ. *Organic characterization and impact on Lyngbya majuscula blooms in Deception Bay, South East Queensland.*
- Capper, Angela; PhD Zoology/Centre for Marine Studies 2004; UQ. *Ecotoxicology of the Cyanobacterium Lyngbya majuscula and Four Herbivores in Moreton Bay, South East Queensland, Australia.*

2. Degrees completed at University of Maryland MEES Program

- Borgatti, Aimee Rachel; M.S. Student (Smithsonian Fellowship-SERC) 2008. *Nutrient enrichment effects on mangrove sediments from differing tree height zones in Bocas del Toro, Panama.* M.S., University of Maryland, College Park.
- Beckert, Kristen A. MS Student (Horn Point Fellowship) 2008. Watershed land use and nutrient dynamics in Maryland coastal bays, U.S.A. M.S. Thesis. University of Maryland, UMCES, Horn Point Laboratory. 159 p.
- Walsh, Brianne, MS Student (Horn Point Fellowship) *Zooplankton Population Dynamics in Relation to the Red Tide Dinoflagellate Karenia brevis on the West Florida Shelf of the Gulf of Mexico*, University of Maryland, College Park. 2012
- Meyer, Kevin A., PhD Student (Horn Point Fellowship) 2013. *Microbial interactions and ecology within blooms of the toxic dinoflagellate Karenia brevis on the West Florida Shelf.* University of Maryland, College Park ProQuest Dissertations
- Ross, Morgan O'Hara, MS Student (Horn Point Fellowship). 2021. Nutrients, chlorophyll and emergent harmful algal bloom species of concern in coastal waters of Assateague Island National Seashore. Master of Marine, Estuarine, and Environmental Science Thesis, University of Maryland, 102 p
- Keller, Shayna MS Student (Sea Grant Fellowship) 2024. *Investigating Microbial Diversity and Ecophysiology of Filamentous Cyanobacteria on the Susquehanna Flats, Chesapeake Bay.* MS Thesis, MEES Program, University of Maryland College Park/UMCES 128 pp.

3. *Graduate Student Committee Membership:*

Eric Nagel	MS	2004 MEES HPL UMCES; Advisor J. Cornwell
Monica Salerno	MS	2006 MEES HPL UMCES; Advisor D. Stoecker
Tim Salmon	PhD	2006 Env. Engin. Univ. NSW Sydney; D. Waite
Anne Thessen	PhD	2007 MEES HPL UMCES; Advisor D. Stoecker
Ji Li	MS	2008 MEES HPL UMCES; Advisor P. Glibert
Desmond Johns	MS	2009 MEES HPL UMCES; Advisor P. Glibert
Yonghui Gao	PhD	2011 MEES HPL UMCES; Advisor D. Stoecker
Caroline Fortunato	PhD	2012 MEES HPL UMCES; Advisor B. Crump
Emily Saeck	PhD	2012 Griffith Univ, Australia; Advisor M. Burford
Dorothea Bender	PhD	2014 Univ QLD Aus.; Advisor: O. Hoegh-Guldberg
Fan Zhang	PhD	2015 MEES IMET UMCES; Advisor: Russell Hill
Suzanne Spitzer	PhD	2019 MEES UMCES/UMCP; Dennison & Paolisso
Maureen Brooks	PhD	2019 MEES HPLUMCES; Advisor: V. Coles
Anna Windle	PhD	2022 MEES UMCES-HPL; Advisor: Greg Silsbe
Haoran Liu	PhD	current MEES UMES; Advisor: Meng Xia
Lauren Jonas	PhD	current MEES UMCES-IMET; Advisor: R. Hill
Michella Salvitti	PhD	current MEES UMES; Advisor: Joe Pitula

B. MD Sea Grant Research Experience for Undergraduates (REU) Program & Interns

(List of all student projects <https://www.mdsg.umd.edu/reu/students>)

1. REU Students:

- 2024 Sarah Gasko, University of Michigan, Ann Arbor
- 2023 Ana Vader, Allegheny College
- 2022 Dana Sanchez, Pennsylvania State University
- 2021 Mia Lenzenweger, University of North Carolina Wilmington
- 2019 Olivia Saliger, Towson University
- 2018 Norberto Latorre Arzola, Univ. del Turabo, Puerto Rico
- 2016 Heather Goldsborough, Univ of Maryland Eastern Shore
- 2014 Adam McAnally, University of the South
- 2013 Austin Boardman, University of Tulsa
- 2012 Caroline Rodriguez, Duke University
- 2010 Katherine Studholme, St. Mary's College of Maryland
- 2009 Elizabeth Brunner, St. Mary's College of Maryland
- 2007 David M. Needham, Huntingdon College
- 2006 Jeanette Davis, Hampton University
- 2005 Kahla Elliston, Texas A&M University, Corpus Christi

2. *Student Interns:*

Emily Benson	Colgate University Sep 2006- May 2007
Kyleen Breslin	St. Paul's High School, Brooklandville, MD 2008
Nolan O'Brien	Univ. of Maryland, College Park July-October, 2011
Rachel Gannon	Hood College, summer-fall 2014
Dylan Taillie	Tulane University 2015 (co-advise with IAN)
Selena Zhang	Staten Is. Technical High School, 2020-2021 (virtual)
Will Scharf	Penn State University Summers 2022 & 2023
Nick Nishioka	University of Maryland College Park Summer 2024

C. Classes taught

1. Biological Oceanography MEES 622: **O'Neil, J.M.** co-instructor Fall 2009-present with Raleigh Hood (course coordinator) and main co-instructors: Louis Plough. Lectures on microzooplankton, energetics, harmful algae and grazing & field-laboratory work aboard *R/V Rachel Carson* and salt-marsh field trips to Poplar Island.
2. Readings in Aquatic Science MEES 608A: **O'Neil, J.M.** led Spring semester 2008/2010
3. Chesapeake Bay Trust: Eastern Shore MWEE Academy: Teacher Professional Development class **O'Neil, J.M.** created and co-instructed with Shore Rivers and Bryan Gomes; Summer/Fall 2020.
4. Issue Study Group: MEES 718G: Taught Fall semester 2021-Instructors: **O'Neil, J.M.** Greg Silsbe and Jian Zhao: *Synthesizing Oceanographic Data: Case Study on the S. Mid-Atlantic Bight*
5. Environmental Science Field Methods MEES 698V/FSU SUST 698Z: Created new course Fall 2023 co- taught with Drs. Katia Englehardt (AL) and Bill Dennison (IAN). Fall 2024 co-taught with: Dennison and Mark Castro (AL); joint MEES and a new Frostburg University, Sustainability Program class as part of Masters of Environmental Management (MEM) degree.
6. Diseases in Chesapeake Bay Fisheries MEES 608C: Instructor Eric Schott: **O'Neil, J.M.** Guest Lecturer on Cyanobacterial Harmful Algal blooms: April 2018 & 2020
7. Issue Study Group: MEES 718U: Instructors Eric Schott and Jeff Cornwell *Ecosystem Services and Urban Estuaries*- **O'Neil, J.M.** Guest Lecturer on Urban Ecology and the World Harbour Project- November 2023
8. Issue Study Group: MEES 718M: Instructors Vanessa Vargas-Nguyen and Heath Kelsey (IAN) *Coastal Environment and Community Health*-**O'Neil, J.M.** Guest Lecturer on Harmful Algal Blooms in the Coastal Zone- October 2024.

VI. Outreach and Service

Editorship: Editorial Board, *Harmful Algae*; Elsevier journal. Associate Editor for cyanobacterial and dinoflagellate submissions (2005- 2019); Editorial Board, *Frontiers in Microbiology* and *Frontiers in Aquatic Science* (2022-present)

Public Service: Dorchester County STEM Science Fair Incentive Trip- HPL Day 2016-2019; Not held 2020-2022 Talbot County/SSPP Science Fair Judge 2014-2024

Federal/State/Local Government

- i) Chair Maryland Coastal Bays Program Science and Technical Advisory Committee (STAC); an EPA National Estuary Program, Berlin, MD Jan 2024-present
- ii) Member: Harmful Algal Task Force, DNR Annapolis. 2007-present
- iii) Member: Coastal Bays Science and Technology and Advisory Committee: 2008 present; STAC Chair January 2024-present
- iv) Member: Maryland Sea Grant Research Experience for Undergraduates (REU) Selection Committee (2016-2018).
- v) Organized Citizen Science Sampling Program at Black Water National Refuge for cyanobacteria and water quality w/ Rangers & DNR C. Wazniak; 2018 to present

International: UMCES contact for the World Harbour Project, Sydney Institute of Marine Science; Workshop November 2014; Chair of Education Committee and Member of Water Quality Committee 2014-2023.

UMCES and Laboratory

- i) Member of UMCES/Frostburg Masters of Environmental Management (MEM) Program Advisory Committee 2023- to present
- ii) Elected HPL representative to UMCES Faculty Senate May 2020-2023
- iii) Chair of HPL Analytical Services, October 2020- present;
- iv) Member of HPL Diversity Equity and Inclusion (DEIC) Committee-2020-present
- v) Member of HPL American Geophysical Union *Unlearning Racism in the Geophysical Science* (URGE) Group 2021-2022
- vi) Faculty Senate Representative on UMCES DEIC Committee 2021-2023
- vii) HPL member on DEIC OMBUDS sub-Committee-2020-present

- viii) Horn Point Environmental Sustainability Committee 2018-2020; *Ad hoc* committee 2020 to present
- ix) Member of the Horn Point Lab Chapter of the *Society for Women in Marine Science* (SWMS) 2018-present
- x) Horn Point Open House Committee 2017-2023 (cancelled '20 & '21)
- xi) Member UMCES Sustainability Committee; 45th Annual Earth Day Clean-up (2015-2019 and 2021-2022)
- xii) HPL Environmental Education Coordinator – supervised EE STEM specialist: Bryan Gomes and coordinated all STEM bookings 2017-present
- xiii) Member HPL Graduate Education Committee 2022- present
- xiv) Chair of Faculty Senate run UMCES Faculty Convocation, at HPL May 2022

Manuscript reviewer: *Estuarine and Coast Science, Limnology and Oceanography; Harmful Algae, Microbial Ecology, Applied and Environmental Microbiology; Nature; Plos One, Frontiers-Microbiology, Frontiers- Oceanography; Microbial Ecology. AGU Water Resources; Oecologia, MERES Limnology and Oceanography; FEMS Microbiology, Hydrobiologia; Harmful Algae, Oikos*

Active Memberships in Professional Societies

Association for the Sciences of Limnology and Oceanography (ASLO); International Society for Study of Harmful Algae (ISSHA); Coastal and Estuarine Research Federation (CERF); Atlantic Estuarine Research Society (AERS); World Seagrass Association (WAS)