

## Jeffrey C. Cornwell – Biographical Sketch

Research Professor  
University of Maryland Center for Environmental Science  
Horn Point Laboratory  
P. O. Box 775  
Cambridge, MD 21613  
cornwell@umces.edu

### Professional Preparation

Hobart College (Geneva, NY), Chemistry	B.S. 1976
University of Alaska (Fairbanks), Oceanography	Ph.D. 1983
Texas A&M University (College Station), Oceanography	Post-Doc, 1984-1986

### Appointments

2012-	Research Professor, UMCES
1996-2012	Research Associate Professor, University of Maryland Center for Environmental Science, Horn Point Laboratory
1986-1996	Research Associate, Research Assistant Professor, University of Maryland Center for Environmental Science, Horn Point Laboratory

### Products (Five Most Relevant to Proposed Research)

Gurbisz, C., W.M. Kemp, **J.C. Cornwell**, L.P. Sanford, M.S. Owens and D. Hinkle. 2017. Interactive effects of physical and biogeochemical feedback processes in a large submerged plant bed. *Estuaries and Coasts*. 40:1626-1641.

Palinkas, C.M., J.M. Testa, **J.C. Cornwell**, M. Li, and L.P. Sanford. 2019. Influences of a river dam on delivery and fate of sediments and particulate nutrients to the adjacent estuary: case study of Conowingo Dam and Chesapeake Bay. *Estuaries and Coasts* 42:2072-2095.

Cornwell, J.C. M.S. Owens, L.W. Staver and J.C. Stevenson. 2020. Tidal Marsh Restoration at Poplar Island I: Transformation of Estuarine Sediments into Marsh Soils. *Wetlands* 40:1673-1686

Staver, L.W., Stevenson, J.C., Cornwell, J.C., Nidzieko, N, Staver, K.W., Owens, M.S., Logan, L., Kim, C. and Malkin, S. 2020. Tidal marsh restoration at Poplar Island: II. Elevation trends, vegetation development, and carbon dynamics. *Wetlands* 40:1687-1701

Staver, L.W., J.C. Cornwell, N.J. Nidzieko, K.W. Staver, J. C. Stevenson, M.Owens, W. Boynton and L. Lopez-Gonzalez. 2021. The Fate of Nitrogen in Dredged Material Used for Tidal Marsh Restoration. *Journal of Marine Science and Engineering*. 9:849.

## **Five Other Recent Products**

- Roose, J.J., J.M. Stribling, M.S. Owens, and J.C. Cornwell 2020. The Development of Denitrification and the Denitrifying Community in a Newly-Created Freshwater Wetland. *Wetlands*. 40:1-12
- Russ, E., C.M. Palinkas and J.C. Cornwell. 2020. Evaluating estuarine sediment provenance from geochemical patterns in upper Chesapeake Bay. *Chemical Geology* 533:119404
- Su, J., W.J. Cai, J. Bordeur, B. Chen, H. Hussain, Y. Yao, C. Ni, J. Testa, M. Li, X. Xie, W. Ni, M. Scaboo, Y. Xu, J. Cornwell, C. Gurbisch, M.S. Owens, G.G. Waldbusser, M. Dai and W.M. Kemp. 2020. A bay-wide self-regulated pH buffer mechanism in response to eutrophication and acidification in Chesapeake Bay. *Nature Geoscience* 13:441–447.
- Owens, M.S. and J.C. Cornwell. 2020. Temporal enhancement of denitrification in bioirrigated estuarine sediments. *Aquatic Sciences* 82:1-12
- Allen, J.R., J.C. Cornwell and A.H. Baldwin. 2021. Contributions of organic and mineral matter to vertical accretion in tidal wetlands across a Chesapeake Bay subestuary. *Journal of Marine Science and Engineering* 9:752

## **Synergistic Activities:**

- Chair, Chesapeake Bay Oyster Best Management Practices Panel (current)
- Past Chair, Maryland Aquaculture Coordinating Council
- Advisor or co-advisor to 20 MDSG REU interns since 1989

## **Honors and Awards:**

- University of Maryland Center for Environmental Science Presidential Award for Science Application 2014
- University System of Maryland Regents Award for Excellence in Public Service 2018
- 

## **Education/Mentorship:**

- Advisor or co-advisor to 17 M.S. and 7 Ph.D. students
- Currently a graduate committee member for 5 MEES/UMCES graduate students (95 total)
- Mentor for 20 MDSG REU interns since 1989