

David B. Parrish

Environmental Data Center Manager

Virginia Institute of Marine Science, William & Mary

📞 804 684 7835 | ✉ parrishd@vims.edu

🆔 0000-0002-5970-784X | 🌐 MaiFwycAAAAJ | 📄 David_Parrish4



My research focuses on the assessment of water quality conditions and associated ecological implications in shallow water, estuarine and coastal environments. As part of this scope, I am interested in the analysis of water quality monitoring datasets, working closely with our state, federal, and local partners, and developing web application platforms that serve as an interface between science and the community.

🎓 Education

Central Washington University

MS Resource Management

Ellensburg, WA

2003 - 2005

James Madison University

BS Integrated Science and Technology

Harrisonburg, VA

2000 - 2003

👛 Professional

Environmental Data Center Manager

VIMS, William & Mary

Gloucester Point, VA

2020 - Present

Scientist II

VIMS, William & Mary

Gloucester Point, VA

2012 - 2020

Scientist I

VIMS, William & Mary

Gloucester Point, VA

2007 - 2012

Floodplain Program Planner

VA DCR

Richmond, VA

2006 - 2007

⚙️ Technical

Coding Languages

R – Python – SQL – C# –
JavaScript

Software

Visual Studio – RStudio –
ArcGIS

Other

Git – Markdown – Leaflet –
Vue

💡 Projects

🧪 Lab

Environmental Data Center

The Environmental Data Center manages and analyzes environmental data products in support of the Chesapeake National Estuarine Research Reserve, Va and the Virginia Institute of Marine Science.

VIMS, William & Mary

🌐 Web Applications

Virginia Estuarine and Coastal Observing System (VECOS)

VECOS distributes results of water quality and meteorological monitoring efforts conducted in the Chesapeake Bay and its tributaries in Virginia.

<http://vecos.vims.edu>

> 170 million samples

Chesapeake Monitoring Cooperative Data Explorer

The Data Explorer shares information collected by a network of water quality community monitors working with the Chesapeake Monitoring Cooperative

<http://cmc.vims.edu>

> 370,000 samples

Research

PI or CO-PI

2015 - 2021 Data Entry Tools and Online Database for Monitoring Data for the Integration of Volunteer and other Nontraditional Monitoring Data into the Chesapeake Bay Program Network \$170,000

Participant

2020 - Virginia Water Quality Initiative
2020 - Lynnhaven SAV Restoration Pilot
2007 - Water Quality Monitoring for Southern Chesapeake Bay Water Quality Standards Assessment
2007 - Cheseake Bay National Estuarine Research Reserve Operations

Publications

For a complete list of publications see *my Google Scholar profile*.

Shields, E. C., Parrish, D., & Moore, K. (2019). Short-term temperature stress results in seagrass community shift in a temperate estuary. *Estuaries and Coasts*, 42(3), 755–764. <https://doi.org/10.1007/s12237-019-00517-1>

Shields, E. C., Moore, K. A., & Parrish, D. B. (2018). Adaptations by *zostera marina* dominated seagrass meadows in response to water quality and climate forcing. *Diversity*, 10(4), 125. <https://doi.org/10.3390/d10040125>

Moore, K. A., Shields, E. C., & Parrish, D. B. (2014). Impacts of varying estuarine temperature and light conditions on *zostera marina* (eelgrass) and its interactions with *ruppia maritima* (widgeongrass). *Estuaries and Coasts*, 37(1), 20–30. <https://doi.org/10.1007/s12237-013-9667-3>

Moore, K. A., Shields, E. C., Parrish, D. B., & Orth, R. J. (2012). Eelgrass survival in two contrasting systems: Role of turbidity and summer water temperatures. *Marine Ecology Progress Series*, 448, 247–258. <https://doi.org/10.3354/meps09578>

Orth, R. J., Moore, K. A., Marion, S. R., Wilcox, D. J., & Parrish, D. B. (2012). Seed addition facilitates eelgrass recovery in a coastal bay system. *Marine Ecology Progress Series*, 448, 177–195. <https://doi.org/10.3354/meps09522>

Shields, E. C., Moore, K. A., & Parrish, D. B. (2012). Influences of salinity and light availability on abundance and distribution of tidal freshwater and oligohaline submersed aquatic vegetation. *Estuaries and Coasts*, 35(2), 515–526. <https://doi.org/10.1007/s12237-011-9460-0>

Parrish, D. B. (2005). *An ecological characterization of salmon habitat restoration efforts on abandoned gravel pits along the yakima river system, washington* [Master's thesis, Central Washington University]. <https://searchlib.cwu.edu/permalink/f/15utse1/CP71188302100001451>

Presentations

First-Author

Parrish, D. B., Friedrichs, C., Reay, W. G., & Shields, E. C. (2019). An investigation of an historic low salinity event in the York River Estuary, Chesapeake Bay. *2019 CERF Biennial Conference*.

Parrish, D. B., Neikirk, B. B., & Moore, K. A. (2017). Assessing the use of high frequency spatial water quality datasets to target future monitoring efforts. *24th Biennial CERF Conference*.

Parrish, D. B., Moore, K. A., & Neikirk, B. B. (2015). Assessing trends in estuarine water quality using high frequency spatial and temporal sampling. *23rd Biennial CERF Conference*.

Co-Authored

Friedrichs, C. T., Fall, K., Massey, G., Moore, K., Neikirk, B., Parrish, D., Reay, W., & Shields, E. (2020). Controls on light attenuation and secchi depth as a function of water column suspended particle properties and other water column constituents: Insights from the York River Estuary, Virginia, USA. *Ocean Sciences Meeting 2020*.

Jasinski, D., Parrish, D. B., & Chudoba, L. (2019). Lessons learned in the development of a multi-organizational citizen's monitoring database. *2019 CERF Biennial Conference*.

Moore, K. A., Neikirk, B. B., Shields, E. C., & Parrish, D. B. (2017). Chesapeake bay SAV water quality habitat requirements: How robust and useful have these metrics been? *24th Biennial CERF Conference*.

Neikirk, B. B., Parrish, D. B., & Moore, K. A. (2017). Assessment of estuarine water quality condition: The intersection of science, management and citizen involvement. *24th Biennial CERF Conference*.

Plaisted, H. K., Shields, E. C., Carr, J., Evans, N. T., Fox, S. E., Heck, S. M., Hudson, R., Moore, K. A., Neckles, H. A., Neikirk, B., & others. (2017). Seagrass responses to environmental variables from maryland to new hampshire show impacts of ocean warming. *24th Biennial CERF Conference*.

Shields, E. C., Moore, K. A., & Parrish, D. B. (2017). Assessing changes in seagrass species dominance after die-off events. *24th Biennial CERF Conference*.




Moore, K. A., Shields, E. C., Parrish, D. B., & French, E. (2015). Seagrass vegetation monitoring: Assessing seagrass recovery and shifts in species dominance after seagrass diebacks. *23rd Biennial CERF Conference*.

Moore, K. A., Parrish, D. B., & Neikirk, B. (2013). The use of high frequency water quality monitoring results to improve the management and modeling of shallow water habitats. *22nd Biennial CERF Conference*.

Shields, E. C., Moore, K. A., Parrish, D. B., & Orth, R. (2011). Eelgrass survival within two contrasting systems in the mid-atlantic: The critical role of summer temperature. *21st Biennial CERF Conference*.

Wilcox, D., Orth, R., Moore, K. A., Whiting, J., Kenne, A., Owens, A., Nagey, L., & Parrish, D. B. (2011). Monitoring submersed aquatic vegetation: Techniques and applications in management in chesapeake bay, USA. *21st Biennial CERF Conference*.

Memberships, Workgroups, & Teams

- 2011 - Coastal and Estuarine Research Federation 
- 2015 - Chesapeake Monitoring Cooperative 
- 2020 - Chesapeake Bay Program Criteria Assessment Protocol Team 
- 2020 - Chesapeake Bay Program Integrated Trends Analysis Team 