

Edward (Ned) H. Burger, M.A., B.S.

Marine Scientist

EXPERTISE

Design, integration, fabrication, set-up, calibration, deployment and maintenance of water quality sensors, current meters (ADCP and conventional), meteorological sensors and remote platforms, including moored buoys and fixed platforms. Development of field program design, grant proposal writing, budget management, field sampling, data analyses and reporting. Experience with various analytical software including Matlab, Stella and Minitab, ESRI ArcGlobe, ArcMap and ArcScene GIS.



QUALIFICATION SUMMARY

- Real-time oceanographic and meteorological measurement system design, deployment, operation and maintenance.
- Marine environmental data collection, processing, analysis, interpretation and reporting.
- Over 40 years of boat ownership, operation and navigation experience, including offshore and trans-Atlantic passages.
- SigmaPlot, SigmaStat, SAS, SPSS, Surfer, Matlab, Stella, Minitab,
- ESRI ArcGlobe, ArcMap, ArcScene GIS
- Dive experience with oceanographic instrumentation deployments.
- Strong mechanical aptitude, marine electronics, troubleshooting, construction and computer skills.
- Excellent communication, technical writing, and public speaking skills.

WORK EXPERIENCE

2007-Present	Marine Scientist, Woods Hole Group, Inc.
2003-2005	Marine Scientist VIMS
2002-2003	Faculty Research Assistant, University of Maryland Center for Environmental Scientist
1994-2002	Faculty Research Assistant, Chesapeake Biological Laboratory (CBL) University of Maryland Center for Environmental Sciences
1989-1994	Environmental Engineer, Virginia Division of Soil and Water Conservation
1985-1989	Teaching and Research Assistant Virginia Institute of Marine Science, College of William and Mary
1983-1985	Physical Scientist, National Oceanic and Atmospheric Administration (NOAA)
1981-1983	Research Associate, U.S. Environmental Protection Agency
1981	Field Research Technician, Marine Systems Laboratories, Smithsonian Institution

Education

1989 – M.A.
 Marine Science
Virginia Institute of Marine Science College of William and Mary
 1981 – B.S.
 Biology
St. Mary's College of Maryland

Licenses and Registrations

N/A

Professional Affiliations

- Atlantic Estuarine Research Federation (AERS)
- SCUBA Advanced Open Water - PDIC
- SCUBA Open Water Diver - NASDS
- Oxygen First Aid in Dive Accidents – DAN
- CPR-AED/ECC - American Heart Association
- Water Safety Instructor American Red Cross
- Boating Safety - US Coast Guard Auxiliary
- Basic Seamanship - US Coast Guard Auxiliary

Publications & Presentations

17

KEY PROJECTS

National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), Physical Oceanographic Real-Time Systems (PORTS), Chesapeake Bay – Marine Scientist

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Delaware Field Office. Assist on an as-needed basis with technical support and reporting tasks, including field support for routine and emergency operation & maintenance activities, day-to-day scheduling, client correspondence, and monthly reporting requirements.

National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), Physical Oceanographic Real-Time Systems (PORTS), Delaware River & Bay – Marine Scientist

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Delaware Field Office. Assist on an as-needed basis with technical support tasks, including field support for routine and emergency operation & maintenance activities.

Design, Construction, Servicing and Maintenance of the Virginia Institute of Marine Science Observing System – Marine Scientist

In coordination with other observing system project team members, performed duties required to establish permanent monitoring stations in and around the Chesapeake Bay and provide real-time, quality assured data via the Internet. Role included evaluating, adapting and integrating environmental sensor instrumentation and wireless telemetry systems for operation on moored coastal buoys and other fixed platforms, required a general knowledge of marine operations and scientific instruments, the ability to set up, calibrate, deploy and maintain instruments such as water quality data loggers and current meters, the ability to work on large and small research vessels in various sea conditions and knowledge of mooring systems to research and evaluate mooring options in support of observing system platforms.

Review existing water quality and weather data at National Oceanic and Atmospheric Administration National Estuarine Research Reserve (NOAA/NERR) sites in Chesapeake Bay Reserve, Maryland – Advanced Faculty Research Assistant

Analyzed data to identify short-term patterns as well as long-term trends in water quality data and provided a report synthesizing water quality data and weather data for the Patuxent River Jug Bay Component. Results were used to guide research and data collection at other Chesapeake Bay Maryland NERR sites under development. Redesigned and fabricated a sustainable method for deploying data loggers at all sites. Deployed and maintained two continuous water quality monitoring data logger sites twice a month, downloaded data and recalibrated equipment. Performed quality assurance for all 2002 NERR SWMP (System-Wide Monitoring Program) data, composed metadata documentation and submitted the final product to the NOAA/NERRS/CDMO (Centralized Data Management Office).

KEY PROJECTS (CONTINUED)

Chesapeake Bay Observing System (CBOS) Program – Senior Faculty Research Assistant

Developed and implemented field programs for collecting long-term, high frequency in-situ water quality data in several Chesapeake Bay tributaries using various sensors and mooring apparatus over an eight year period.

Directed diverse team of assistants for buoy deployment and maintenance operations, electronics technology, database management and World Wide Web site development, SCUBA and small boat operations.

PUBLICATIONS & PRESENTATIONS

Burger, N.H., W.R. Boynton. 2002. Development and Operation of the Continuous Environmental Monitoring Program for Real Time Habitat Assessments in Chesapeake Bay Tributaries (May - October 2001). Prepared for the Maryland Department of Natural Resources. Ref. No. 02-0105. UMCES Technical Report Series No. TS-366-02-CBL.

Boynton, W.R., N.H. Burger. 2001. High Frequency Data Collection for Time Relevant Water Quality and Habitat Monitoring Assessments in Chesapeake Bay Tributaries. Prepared for the Maryland Department of Natural Resources. Ref. No. Ref. No. 00-0322. UMCES Technical Report Series No. TS-294-01-CBL.

Boynton, W.R., N.H. Burger. 1999. Time-Relevant Data Collection to Supplement Maryland's Pfiesteria Monitoring in Chesapeake Bay (April - September 1998). Prepared for the Maryland Department of Natural Resources. Ref. No. 99-0335. UMCES Technical Report Series No. TS-224-99-CBL.

Boynton, W.R., N.H. Burger, R.M Stankellis, F.M. Rohland, L.L. Matteson, J.D. Hagy, L.L. Matteson and M.M. Weir. May 1998. An Environmental Evaluation of the Back River with Selected Data from Patapsco River. June - September 1997. Prepared for Whitman, Requart and Associates, LLP. Baltimore MD. Ref. No. 98-112.

Boynton, W.R., F.M. Rohland - Editors; W.R. Boynton, R.M Stankelis, N.H. Burger, F.M. Rohland, J.D. Hagy III, J.M. Frank, L.L. Matteson, and M.M. Weir - Contributors. May 1998. Ecosystems Processes Component (EPC) Level One Report # 15, Interpretive Report. July 1984 - December 1997. Prepared for Department of Natural Resources, Annapolis, MD. [UMCES]CBL Ref. No. 98-073a.

Boynton, W.R., R.M Stankelis, F.M. Rohland, L.L. Matteson, J. Frank, N.H. Burger and M.M. Weir. November 1997. Ecosystems Processes Component (EPC) Level One Report # 15, Data and Progress Report. January - June 1996. Prepared for Department of Natural Resources, Annapolis, MD. [UMCES]CBL Ref. No. 97-096.

Ibison, N.A., J.C. Baumer, C.L.Hill, J.E. Frye, N.H. Burger. 1992. Eroding Bank Nutrient Verification Study for the Lower Chesapeake Bay. Virginia Division of Soil and Water Conservation. Gloucester Point, Virginia. 80pp.

Ibison, N.A., C.W. Frye, J.E. Frye, C.L. Hill, N.H. Burger. 1990. Sediment and Nutrient Contributions of Selected Eroding Banks of the Chesapeake Bay Estuarine System. Virginia Division of Soil and Water Conservation. Gloucester Point, Virginia. 71pp.

PUBLICATIONS AND PRESENTATIONS (CONTINUED)

Burger, N.H. 1989. Hypoxic Water Transport by Sub-Tidal Circulation from Chesapeake Bay to the Lower Rappahannock Estuary. Master's Thesis, Virginia Institute of Marine Science, College of William and Mary, Gloucester Point, Virginia. 115pp.

Price, K.S., D.A. Flemer, J.L. Taft, G.B. Mackiernan, W. Nehlsen, Biggs, N.H. Burger, D. Blaylock. 1985. Nutrient Enrichment of Chesapeake Bay and Its Impact on the Habitat of Striped Bass: A Speculative Hypothesis. *Trans. Am. Fish. Soc.* 114:97-106.

Flemer, D.A., G.B. Mackiernan, W. Nehlsen, V.K. Tippie Coor. R.B. Biggs, D. Blaylock, N.H. Burger, L.C. Davidson, D. Haberman, K.S. Price, J.L. Taft – Contributing Authors. 1983. A Profile of Environmental Change. USEPA - Chesapeake Bay Program. 200pp.

Lubbers, L.S., S. Bunker, K. Staver, W. Boynton, N. Burger, M. Meteyer, W.M. Kemp. 1981. Comparative Abundance and Structure of Littoral Nekton Communities at Vegetated and Non-Vegetated Sites in the Chesapeake Bay. University of Maryland., Cambridge, MD. pp. 461-574.

Yarbro, L.G., P.R. Carlson, R. Crump, J. Chanton, N. Burger, T.R. Fisher, W.M. Kemp. 1981. Seston Dynamics and a Seston Budget for the Choptank River Estuary in Maryland. Final Rept. Contract C14-80-430, Dept. Natural Res., Annapolis, Maryland 223pp.

Burger, N.H., J.D. Hagy and W.R. Boynton. 1999. Open Water Metabolism Measurements in Three Eutrophic Chesapeake Bay Tributaries (Poster). 15th International Biennial ERF Conference. New Orleans, LA. September 1999.

Burger, N.H. Results of In Situ Fluorometer Field Tests. 1999. Special Session of the 15th International Biennial ERF Conference. New Orleans, LA. September 1999.

Burger, N.H. and W.R. Boynton. Open Water Metabolism Measurements in Six Eutrophic Chesapeake Bay Tributaries (Oral Presentation). 2001. 16th International Biennial Estuarine Research Federation Conference 2001: An Estuarine Odyssey. St. Pete Beach, FL. November 4-8, 2001.

Burger, N.H. and Theo Dillaha. 1994. Riparian buffer zone effectiveness model/procedure. Virginia Water Resources Conference. Richmond, Virginia.