

## Daniel R. Weirauch, M.S., B.A.

*Marine Technician/Oceanographer*

### EXPERTISE

Preparation, installation, and maintenance of real-time monitoring systems, including the deployment of Acoustic Doppler Current Profilers (ADCPs), tidal and meteorological equipment. Configuration and installation of real-time and long-term deployment data collection and communication platforms. Responsible for day-to-day management, planning, reporting, and customer correspondence on multiple projects. Regular quality-control of data for all stations in the Delaware River and Bay, Chesapeake Bay, New York / New Jersey Harbor, Narragansett Bay, and Jacksonville PORTS systems. Experience with computer programming, hardware installation, networking, and electronics device troubleshooting.

### QUALIFICATION SUMMARY

- 10+ years of preparation, calibration, and maintenance of oceanographic and land-based meteorological monitoring equipment
- Assembly, deployment, and recovery of current monitoring systems
- Operation and maintenance of YSI water quality sensors and associated data collection platforms
- Geodetic survey work, including benchmark installations, NGS documentation, digital level operation, and level data processing
- Research at sea for extended periods of time on both small and large vessels
- Experience in quality control and analysis of real-time oceanographic data
- Experience with Sutron Xpert, Sutron 9210, Sutron 9000, NexSens, YSI EcoNet, Campbell Scientific, and Vitel data collection platforms
- Software expertise: Nortek Aquapro, Sontek SonUtils, RD Instruments, Windesc, Translev, YSI software, X-CTU, Ace Manager, SigmaPlot, SmartDraw, ProComm, Microsoft Office
- Computer hardware installation and troubleshooting
- Excellent technical writing and communication skills

### WORK EXPERIENCE

2008-Present Woods Hole Group, Marine Technician/Oceanographer  
2005-2007 University of Delaware, Research Assistant  
2004-2005 Event Network, Data Entry Specialist  
2003 Pennsylvania State University, Lab Assistant



### Education

2007 – M.S.

Marine Studies

*University of Delaware*

2004 – B.A.

Geosciences

*Pennsylvania State University*

### Licenses and Registrations

- OSHA 40-Hour HAZWOPER

- NOAA National Geodetic

Survey Digital Leveling

- SUTRON Data Collection

Platform

### Professional Affiliations

N/A

### Publications & Presentations

N/A

## KEY PROJECTS

**National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), Great Lakes VDatum Water Level Stations – Field Party Chief / Technician Lead**

Management of station reconnaissance, installations, and removals for seasonal water level stations in the Great Lakes region in support of hydrographic and shoreline mapping and new release of the International Great Lakes Vertical Datum 2020. In charge of managing day-to-day operations, project timelines, budgeting, documentation, and final deliverables. Provide technical and field support for installations, removals, and emergency maintenance visits.

**Planning Studies and Feasibility Analysis to Mitigate High Concentrations of Nitrogen and Phosphorous in the South Bethany Canals– Field Technician**

Organize field activities to support investigation of canal sediment characterization and distribution, including bathymetric and sub-bottom sonar surveys, sediment sampling, description, and delivery for analysis.

**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 – Local Operator/Marine Technician**

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Delaware Field Office. Assist with day-to-day operations, technical support and reporting, including field support for routine operation and maintenance, annual inspection, and emergency service visits.

**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 – Local Operator/Marine Technician**

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Delaware Field Office. Assist with day-to-day operations, technical support and reporting, including field support for routine operation and maintenance, and emergency service visits.

**National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), Physical Oceanographic Real-Time Systems (PORTS), New York/New Jersey Harbor – Local Operator/Marine Technician**

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Delaware Field Office. Assist with day-to-day operations, technical support and reporting, including field support for routine operation and maintenance activities, annual inspection, and emergency service.

**Philadelphia Water Department, Measurements of Current Profile and Sediment Oxygen Demand in Select Tidal Reaches for the City of Philadelphia – Marine Technician**

Serve as marine technician, providing assistance to Project Manager, David Walsh, for long-term current monitoring buoys, short term current meter deployments, and water quality sampling. Perform current meter calibrations, data recovery, and routine system inspections. Assist with site selection and survey data collection

### **KEY PROJECTS (CONTINUED)**

for short-term current meter deployments. Perform routine inspection, cleaning, calibration, and configuration of water quality instrumentation.

#### **Jacksonville Marine Transportation Exchange, Physical Oceanographic Real-Time Systems (PORTS), Jacksonville, FL – Survey Party Chief/Marine Technician**

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and WHG installation team. Assist with installation of current monitoring, water level, and meteorological stations. Serve as survey party chief for installation of benchmarks, documentation of benchmark descriptions and photographs, and operation of digital level and level data processing.

#### **The Nature Conservancy of Delaware, Milford Neck Preserve Restoration – Field Operations Lead/Marine Technician**

Serve as the primary point-of-contact for field service scheduling. Organize field activities, carry out hydrodynamic sensor deployment, RTK GPS surveying, and field data collection.

#### **AKRF, B. L. England Generating Station, Great Egg Harbor Bay, Thermal Plume Monitoring –Marine Technician**

Organize field activities, carry out hydrodynamic sensor deployment, RTK GPS surveying, and field data collection.

#### **The Port Authority of NY & NJ, La Guardia Airport Water Quality Monitoring Buoys– Project Lead/Marine Technician**

Serve as the primary point-of-contact for field service scheduling and general correspondence with customer. Perform monthly water quality instrument calibrations, preventative maintenance on buoy components, repairs, and monthly reporting.

#### **World Meteorological Organization, MARINEMET Project: Supply, Installation, Commissioning, and Maintenance of Tide Gauge Stations and Meteorological Stations for Mauritania, Cape Verdi, Senegal and The Gambia – Survey Party Chief/Installation Technician**

Serve as survey party chief for installation of benchmark network, documentation of benchmark descriptions and photographs, and operation of digital level and level data processing. Assist with tide station installation and station documentation for sensor diagrams and reports.

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

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Houston Field Office. Assist with day-to-day operations, technical support and reporting, including field support for routine operation and maintenance, annual inspection, and emergency service visits.

## KEY PROJECTS (CONTINUED)

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

Serve as PORTS technical assistant to Project Manager, Clinton Hare, and Falmouth Field Office. Assist with day-to-day operations, technical support and reporting, including field support for routine operation and maintenance, annual inspection, and emergency service visits.

### **Kinder Morgan, Fairless Hills Terminal, PA – Project Lead**

Designed and installed a wind monitoring system linked to visual and audio alarms to meet permitting requirements for offloading fine grain products. Primary tasks included oversight of design, testing, and installation of system, along with coordination with site personnel before, during, after the installation.

### **GHD, Rehoboth Beach Ocean Outfall Study– Local Operator/Marine Technician**

Serve as local point-of-contact for field service scheduling, data delivery, and general field activity correspondence with the customer. In charge of bi-monthly CTD transect survey planning and field data collection. Assist with deployment and recovery of ADCP platforms and guard buoys.

### **Environ International Corporation, Morton Salt Mixing Zone Study– Marine Technician**

Serve primarily as field technician for CTD survey data collection and processing. Assist with construction, mobilization, deployment, and recovery of ADCP platform and river currents transect.

### **National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), Physical Oceanographic Real-Time Systems (PORTS), Lake Charles – Marine Technician**

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

### **National Oceanic and Atmospheric Administration, National Ocean Service, Center for Operational-Oceanographic Products and Services (NOAA/NOS/COOPS), National Water Level Observation Network (NWLON), Category 3 Hurricane Hardened Single Pile Water Level & Meteorological Observing Stations (4), Gulf of Mexico – Marine Technician**

Serve as technical assistant to Project Manager, Robert Catalano. Assist on an as needed basis with initial equipment installation, testing, technical support, and reporting tasks.

### **A High-Resolution Record of Climate Instability Spanning ~1.0 Myr across the Mid-Pleistocene Transition – Research Scientist**

A study of millennial-scale variability using oxygen isotopes of planktonic foraminiferal species *Globigerinoides ruber*. Prepared over 500 samples for analysis, operated and maintained mass spectrometer, analyzed dataset using spectral, wavelet, and other statistical techniques.