



BENJAMIN MAHER

CR Environmental, Inc., July 2014 to Present

Years with Other Firms: N/A

TWIC card expires 2022

**SENIOR OCEANOGRAPHIC TECHNICIAN
HYDROGRAPHER**

FIELD OPERATIONS MANAGER

USCG LICENSED BOAT CAPTAIN

GIS MAPPING/ NAVIGATION

AREAS OF SPECIALIZATION

- Vessel and Field Operations Management
- Single beam and Multibeam Bathymetry
- Side-scan Sonar
- Marine Safety, Survey Vessel Operations and Navigation
- Vibracoring Technician
- GIS Mapping of Hydrographic Data and Bottom Classification Maps

EDUCATION/CERTIFICATIONS

2023 April USCG Certified Safety & Survival Training

2020 THSOA (The Hydrographic Society of America) Member

2017, 2019 HYPACK Conferences New Orleans and Corpus Christi Multibeam Training

2014 B.S. Marine Safety and Environmental Protection, Massachusetts Maritime Academy

2014 USCG Captain's License - Operator of Uninspected Passenger Vehicles

- Geographic Information Systems (GIS)
- OSHA 40 hr Hazardous Materials Management and OSHA Hazard Communication Standard, and 8hr refreshers
- OSHA 30 hr Construction
- OSHA Bloodborne Pathogen Training
- OSHA Asbestos 2 Hour Awareness
- STCW Basic Safety Training
- Transportation Worker Identification Card (TWIC)
- Advanced Firefighting Training
- CPR Certification First Aid w/AED

INSTRUMENTATION & SOFTWARE EXPERIENCE

- Mutibeam bathymetric systems (R2 Sonic and Reson)
- Single beam systems & side-scan sonar systems (Edgetech, SyQwest, ODOM, Reson)
- Sub-bottom profiling systems (Edgetech systems)
- Side scan & Sub-Bottom sonar software (Sonar Wiz, Discover, Chesapeake, HYPACK/Geocoder)
- GPS Systems and Software (Hemisphere RTK and DIFF units)
- HYPACK and HYSWEEP
- Golden Software Surfer

WORK HISTORY

CR Environmental, Inc., East Falmouth, MA	Oceanographic Tech/Hydrographer/Captain	July 2014- present
USCG Internship, Woods Hole, MA	Safety and Environmental Protection	Jan-Mar 2013
D&D Fisheries, Plymouth, MA	Captain, First Mate	2004-2013

SUMMARY OF PROFESSIONAL EXPERIENCE

Mr. Maher has been responsible for a variety of hydrographic and geophysical surveys which include single beam bathymetry, multibeam bathymetry, side scan sonar, sub bottom profiling, and underwater video. He has conducted sediment grab and vibracore sampling operations and navigation at several sites throughout New England and New York for bridge scour assessments, dam removal, reservoir monitoring, and site remediation investigations. As a USCG licensed captain versed in marine safety he has experience navigating nearshore waters and major rivers of the northeast and is familiar working in this dynamic environment deploying scientific gear. Mr. Maher is currently acting as a hydrographer and senior oceanographic technician for bathymetric, sediment quality monitoring programs, and underwater video sled surveys to assess bottom habitat characteristics.

REPRESENTATIVE PROJECT EXPERIENCE

Hydrographer, U.S. Army Corps of Engineers New England District, DAMOS (2014-Present)

Supported DAMOS Vision LLC of which CR Environmental was a partner, and ENSR/AECOM, Battelle and Inspire contracts with the NED U.S. Army Corps of Engineers under the DAMOS and Environmental Services Contract programs. Performed NAE Disposal Area Monitoring System (DAMOS) inspections of offshore disposal sites and inshore CAD cells from Connecticut to Maine. During 2020 conducted dredged material disposal site surveys at the Massachusetts Bay Disposal Site, Western Long Sound, Isle of Shoals North, Cape Arundel, Cape Cod Bay, and Rhode Island Disposal Sites. Projects have included monitoring of CAD cells, capped contaminated sediment deposits and other offshore disposal sites using high resolution multibeam sonar and other remote sensing instrumentation. The monitoring efforts require high spatial accuracy to allow meaningful comparisons between time series of survey data. Offshore Disposal Sites and Reference Sampling Sites located in close proximity to each Disposal site also have series of sediment and water sampling surveys to ensure the health of the benthic community is not being affected by the dredge disposals. The 2022 DAMOS surveys have included Down East Maine Historic Disposal Sites in Stonington, and the Rhode Island Disposal Site.

Hydrographer and Vessel Captain, New Bedford Harbor Superfund Site Remediation, New Bedford, MA (2014-Present)

Conducting multibeam bathymetric pre- and post-dredge, and confirmatory single beam bathymetric and progress dredge bathymetric surveys for the ongoing PCB remediation efforts in New Bedford Harbor for Jacobs under contract to the USACE New England Division. Pre/Post and progress CAD cell volume multibeam and single beam surveys were performed while the CAD Cell was actively being used. Numerous CAPs in several area of the harbor were completed where pre and post single beam surveys were completed to ensure the CAP's were structurally completed properly. The data that was collected was processed, and results delivered in GIS and CAD compatible products.

Hydrographer/Field Manager, MA DCR Phase II Dam Inspection Surveys (2019 and 2022)

Conducted surveys in five ponds (Bird Pond, Barre Reservoir, Factory Village Pond, Lowes Pond, Monument Pond, and Bird Pond) for the Massachusetts Department of Conservation and Recreation Office of Dam Safety, Dam Maintenance, and Repair Unit under contract with AECOM. This effort included single beam bathymetric, sediment thickness surveys, and sediment sampling (push core and vibracore). Surveys used precise single beam data combined with gird-based sediment thickness efforts to identify sediment deposition and elevation-based water depth maps. Sediment deposition information was used to assist the sampling effort for sediment collected for chemistry and grain size analysis. Data were processed and results delivered in GIS and CAD compatible products along with reports to help with the Phase II Dam Inspections at each pond.

Vessel Captain/Hydrographer, Mayflower Wind Landing Sites in Vineyard Sound Eelgrass Survey, Falmouth, MA (2020)

Mr. Maher was vessel captain and hydrographer at three potential Mayflower Wind cable landfall sites off the coastline of Falmouth, MA. The purpose of the survey was to identify, and map submerged aquatic vegetation (eelgrass) at the three possible cable landing sites for AECOM. To accomplish this task CR used a combination of single beam bathymetry, side scan sonar and towed underwater video. This approach provided multiple lines of evident to accurately map the eelgrass distribution for the three landfall approaches. Data collected were processed, and results delivered in GIS and CAD compatible products

Hydrographer, U. S. Army Corps of Engineers, NY District, Historic Area Remediation Site (HARS) Monitoring (2015-2020)

Since 2015 Coastal Vision/Inspire conducted annual multibeam monitoring surveys of the 25 square mile Historic Area Remediation Site in NY Bight for Survey challenges include highly variable water column sound velocity due to freshwater inputs from the Hudson River and severe sea states.

Vessel Captain/Hydrographer, DOT Malden River Redevelopment Debris Mapping, Beverly, MA (2020)

Responsible for captaining vessel and assisting in performing a single beam bathymetric and high-resolution side scan sonar survey for the redevelopment of a dock at a Mass DOT site in the Malden River. The side scan sonar was used to map underwater debris and obstructions. The collected data were processed, and results delivered as GIS and CAD compatible products.

Vessel Captain/Senior Oceanographic Technician, Springfield Water and Sewer Commission at the West Parish Filters Water Treatment Plant, Westfield, MA (2020)

Navigating the vessel and leading the CR field efforts in two separate on-site lagoons used to discharge spent residuals. Field efforts included a single beam bathymetric survey that included survey staff measurements where acoustic data could not be gathered, sediment sampling and sediment probing. Survey data were collected and processed for quantifying the volume of sludge and percent solids for removal and disposal.

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Vessel Captain/Hydrographer, MWRA Saugus River Pipeline Crossing, Lynn and Revere, MA (2019-2020)

Captaining the survey vessel and assisting as a hydrographer in performing a survey of two proposed pipeline crossings spanning the Saugus River. Single beam bathymetric, sub-bottom sonar and side scan sonar surveys were conducted to map current bathymetry, characterize sediment stratigraphy, and identify surficial bed features which could affect other aspects of site investigations.

Vessel Captain/Senior Oceanographic Technician, Charles River Allston I-90 Interchange Project Sediment Thickness and Sediment Sampling, Boston, MA (2020)

Navigated the survey vessel and conducted sediment sampling and sediment thickness surveys on the eastern shoreline of the Charles River, Boston, MA. Soft sediment thickness was estimated in two separate areas of the Charles River providing sediment surface elevations, soft sediment thickness and sediment refusal depth and type. The collected data were processed, and results delivered as GIS and CAD compatible products. These data products were then used to assist the CR field effort in conducting vibracore samples up to 20 feet in length.

Hydrographer, Governors Island Shoreline Survey, Manhattan, NY (2020)

Conducted nearshore multibeam bathymetric and high-resolution side scan sonar surveys of Governors Island to assist with Jacobs Civil Consultants in developing a digital elevation model of the island's shoreline. High-resolution side scan imaging was used to identify submerged obstructions, debris, and ship wrecks that will be used to help guide diving inspections.

Vessel Captain/Oceanographic Technician, WHOI CWATER Iselin Dock Modernization Eelgrass, Shellfish, and Benthic Surveys and Sampling, Falmouth, MA (2020)

Navigated the survey vessel and assisted in sampling efforts for permitting of the Woods Hole Oceanographic Institution's Iselin Dock Modernization. CR used a combination of single beam bathymetry and precise navigation with underwater video to conduct an eelgrass survey to delineate the eelgrass bed at the northern ends of the western and eastern extents of the dock. In addition, sediment sampling was conducted for a shellfish survey and benthic grab sampling for chemistry, physical properties, and benthic community analysis. The data were collected and carefully processed to help assist with the permitting of the dock modernization project.

Vessel Captain/Oceanographic Technician, Schoharie Reservoir Shandaken Tunnel Intake Chamber Sediment Sampling, Roxbury, NY (2020)

Captained sampling vessel and assisting in the collection of vibracore sediment samples in the vicinity of the Shandaken Tunnel Intake Chamber. Samples were used for testing chemical and grain size analysis of sediments to be dredged at the intake chamber.

Vessel Captain/Oceanographic Technician, Centerdale Manor Superfund Site Restoration Project, North Providence, RI (2019-Present)

Performed single beam bathymetric surveys, sediment coring, and sediment probing of Lyman Mill and Allendale Pond in North Providence, Rhode Island. The surveys generated high resolution maps of bed elevations, helped to determine the remediation footprint for future dredge activity, and determined depth to native sediments. Hundreds of sediment samples have been taken in Allendale Pond in a grid-based system to help identify the extents of the contamination and assist with the sampling/dredge plan.

Oceanographic Technician/Navigator, Sconset Beach Sand Monitoring Study, Nantucket, MA (2015-Present)

Conducted two annual underwater video surveys with precise navigation to monitor the sensitive hard bottom habitat offshore of a bluff receiving sand nourishment at Sconset Beach. The video data is processed and compared to baseline conditions to ensure the Sconset Beach bluff restoration project is not affecting the surrounding underwater habitat.

Vessel Captain/Oceanographic Technician, NRG Middletown Generating Station Bathy and Sediment Sampling, Middletown, CT (2019-2020, and 2022)

Captained the survey and sampling vessel and assisted with sediment sampling efforts at Dart Island Bay and the Connecticut River for site characterization at the Middletown Generating Station in Middletown, CT for APTIM. Single beam bathymetric data were combined with a grid-based sediment probe survey to estimate sediment deposition in Dart Island Bay. Data were processed and results delivered in GIS and CAD compatible products for use in assisting a sediment sampling effort.

Vessel Captain/Oceanographic Technician, USACE Environmental Services Block Island Maintenance Dredging Sediment Sampling, Block Island, RI (2019)

Captained vessel and assisted with sediment sampling for the New England District of the U.S. Army Corps of Engineers (USACE) at the Block Island Harbor of Refuge. The maintenance dredging consisted of 29,000 cubic yards of sand sediments in shoaled areas within the channel, anchorage, and basin of the harbor. The sediment sampling effort consisted of vibracoring samples taken throughout the harbor for bulk chemistry and toxicity analysis. One hundred and thirty gallons of dredge site

water were collected from a central location in the FNP anchorage in the harbor. Offshore sediment and water was collected at the Rhode Island Sound Disposal Site Reference Site for comparison.

Vessel Captain, Vineyard Wind Barnstable Proposed Cable Landing Sites Vineyard Wind, Barnstable, MA (2019)

Captained survey vessel for Seaforth Geosurveys, Inc. to conduct geophysical and geotechnical surveys for proposed cable landing sites in Centerville Harbor. Precise towed underwater was performed after to ground truth Seaforth's findings.

Hydrographer/Vessel Captain, Algonquin Ground Bed Site Cable Trenching Survey, Fall River, MA (2018-2019)

On a multi-year project assisted with underwater video, side-scan sonar, single beam bathymetry, and sediment vibracoring sampling surveys for the proposed Algonquin Ground Bed Site in Mount Hope Bay. The purpose of the surveys was to document baseline conditions prior to cable trenching operations and describe substrate type and biota. Single beam bathymetry and high-resolution side scan sonar were used to document baseline conditions at the site and towed underwater video with precise navigation was used to ground truth the findings. Data were processed, and results delivered in GIS and CAD compatible products.

Vessel Captain/Oceanographic Technician/Hydrographer, NSTAR/HEEC Cable Route Replacement, Boston Harbor, MA (2017-2019)

Captained, conducted, and assisted on multiple geophysical and hydrographic surveys between 2017 - 2019 for a 115kV cable route replacement in Boston Harbor. Use of this multi-instrument suite resulted in the acquisition of overlapping high-resolution digital side scan sonar data, high-resolution CHIRP sub-bottom profiler data, and multibeam bathymetric and backscatter data. When coupled with underwater video, SPI and vibracore data, remote sensing data allowed quantitative assessment (pre- vs. post) of impacts to eelgrass and flounder habitats and allowed selection of stations for detailed archaeological inspections of paleosols.

Vessel Captain/Oceanographic Technician, Massachusetts Estuary Program, National Coastal Conditions Assessment for Mass Bays National Estuary Program/EPA (2015)

Responsible for captaining vessel and sampling at fifty-two sites off the coast of Massachusetts for EPA's nationwide assessment of water and sediment quality.

Vessel Captain/Oceanographic Technician Crystal Lake Electrofishing, Peabody, MA

Fish sampling through electrofishing and rod and reel to characterize the general fish populations in Crystal Lake for the purposes of assessing the pre and post dredge conditions.

Oceanographic Technician, MA Coastal Zone Management Sand Resources Surveys

Assisting with navigation, underwater video, and confirmatory grab operations at five sites off the Massachusetts coast being investigated for sand to be used for beach nourishment projects.

Oceanographic Technician, Former Anaconda Wire Superfund Site, Hastings-on-Hudson for Atlantic Richfield, Hudson River, NY.

Multi-year assistance with navigation and vibracoring for an ongoing effort to characterize the extent of sediment contamination in the Hudson River adjacent to the former facility.

Navigator/Oceanographic Technician, U.S. Army Corps of Engineers, Environmental Services Contract, Muddy River, Boston, MA

Responsible for navigation, sediment grabs and vibracores in aquatic environments, and push cores in bordering marsh and wetlands for assessment of contaminants for flood management along the south shore of the Charles R

Navigator, Oceanographic Technician, York Harbor, Cape Porpoise and Searsport, ME

Conducted navigation and coring for the collection of sediment necessary for dredging permits with the NE USACE for Battelle Ocean Sciences.

Captain/Oceanographic Technician, Sediment Sampling for Ecological Risk, Thames River, CT

Sediment grab and vibracore samples Electric Boat, Groton, CT for Woodard & Curran

Navigator, Oceanographic Technician, Sediment Sampling, Kensico Reservoir, Westchester County, NY.

Collected sediment grabs and cores from the reservoir for an investigation of alum concentration and distribution.

Hydrographer, Town of Dennis, MA Comprehensive Dredge Project, Bass River, MA

Conducted single beam bathymetric survey using RTK corrections along the Bass River, and nearby estuaries/inlets for dredge planning and estimates for ESS Group, Inc. and the Town of Dennis

Captain/Oceanographic Technician, MA DOT Water Quality Monitoring Route 6 Bridge, New Bedford Harbor

Captain research vessel and assist with water quality monitoring for turbidity monitoring at Route 6 Bridge construction in New Bedford Harbor, MA for AECOM.

Oceanographic Technician, Vibracoring South Meadow Pond, Clinton, MA

Vibracoring in a shallow freshwater pond adjacent to a landfill as part of a remedial investigation for Brown & Caldwell

Hydrographer, NRG Devon Power Plant, Housatonic River, Milford, CT

Periodic bathymetric surveys and data processing for Dredge America during sediment remediation efforts.

Captain/Oceanographic Technician, Lake Onondaga Superfund Site, Syracuse, NY

Captain/navigator and technician supporting a multibeam bathymetric survey of remediation site within the Lake for Parsons

Vibracoring Technician, Power Plant, Cayuga Lake, Ithaca, NY

Collected vibracores for geophysical data required for construction of a new intake structure within the Lake for Makai Engineering.

Captain/Coring Technician, Remedial Investigation Former MGP Facility, Allegheny River, Olean, NY

Conducted staff bathymetry, sediment probing, and vibracoring in a reach of the river contaminated with coal tar from a former MGP facility for Roux Associates.