Stormwater Solutions

Sustainable Solutions to Ensure Compliance and Reliability and Safety of Critical Infrastructure

Expanding industrialization and urbanization, increasingly severe floods and prolonged droughts linked to climate change, ageing critical infrastructure and increased focus on environmental regulatory compliance have created significant challenges and opportunities for all stakeholders. The pursuit towards sustainable solutions is transforming views of stormwater as a resource, not a problem, and has migrated from end-of-pipe solutions to more holistic, programmatic approaches.

TRC provides comprehensive stormwater solutions for the entire project life cycle, from regulatory assistance, compliance, planning, permitting, water quality modeling, design, construction assistance, operations and maintenance support. Our integrated services allow our clients to focus on their core business while we ensure seamless management and operations of their stormwater assets.

TRC's highly trained stormwater specialists include planners, regulatory/compliance specialists, water resource engineers, process engineers, design engineers, construction managers and stormwater treatment system operators who have successfully completed numerous projects in various market segments. These market segments include oil and gas, chemical, industrial, consumer goods, rail roads, general manufacturing, utilities and state/local agencies. We engage our stormwater specialists who have in-depth knowledge, expertise and professional credentials to address clients' needs. For over 50 years, TRC has served a broad range of industrial clients and prides itself on maintaining long term, valued relationships. Our team is ready to assist with your stormwater management, permitting and compliance services' needs.

Services Include:

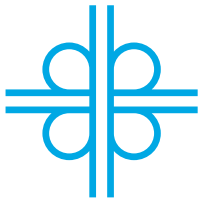
- Stormwater Pollution Prevention Planning (SWPPP) Preparation
- Environmental Planning and Permitting
- Construction Administration and Inspection
- Vegetation Management
- Evaluation, Design, and Construction of Stormwater Control Measures
- Stormwater Drainage System Design and Construction
- Stormwater maintenance
- NPDES and Nationwide Permitting
- Drinking Water Compliance and Well Management
- Low Impact Development (LID) and Green Infrastructure (GI) Practices
- Water Quality/Watershed Modeling and Management
- GIS Mapping and Analysis
- Asset Management
- Hydraulic and Hydrologic Modeling
- Stormwater Management Plan Development and Auditing

About TRC

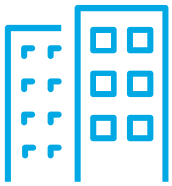
Groundbreaker. Game changer. Innovator. TRC is a global firm providing environmentally focused and digitally powered solutions that address local needs. For more than 50 years, we have set the bar for clients who require consulting, construction, engineering and management services, combining science with the latest technology to devise solutions that stand the test of time.

TRC's more than 7,000 professionals serve a broad range of public and private clients, guiding complex projects from conception to completion to help solve the toughest challenges. We break through barriers for our clients and help them follow through for sustainable results.

Power & Utilities

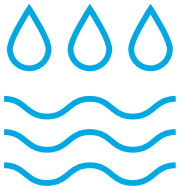


Transportation



Real Estate

Government



Water

Environment & Sustainability

Digital Solutions

404 Wyman Street, Ste. 375
Waltham, MA 02451
T 781.419.7696
TRCcompanies.com

TRC Overview and Structure

A pioneer in groundbreaking scientific and engineering developments since the 1960s, TRC is a leading consulting, engineering and construction management firm that provides technology-enabled solutions to the power, infrastructure, environmental and digital markets. We serve a broad range of public and private clients, steering complex projects from concept to completion to help solve the toughest challenges. TRC is a privately held company headquartered in Windsor, Connecticut, with over 170 offices across the United States. We work in a broad range of markets spanning Power and Utilities, Transportation, Real Estate, Water and Government. Services span categories including:

- Air Quality Management
- Building Sciences and Industrial Hygiene
- Construction and Construction Management
- Digital Grid Solutions
- Energy Efficiency
- Environmental Permitting, Testing and Compliance
- Environmental Engineering and Remediation
- Environmental Health and Safety Management
- ESG and Sustainability Advisory
- Field and Inspection Services
- Industrial and Manufacturing
- Infrastructure Services
- Permitting and Regulatory Filings
- Power Delivery Engineering and Support Services
- Power Generation
- Renewable Energy Development
- Technology Enablement
- Transaction Advisory Services

Key Project Team Members

The following personnel are proposed as key personnel based on their technical areas of expertise and relevant experience. The following is a brief description of their qualifications.

Matt Ladewig, CLM – Senior Scientist

Mr. Ladewig is a Certified Lake Manager and ecologist with more than 20 years of experience in the monitoring, modeling, and management of aquatic ecosystems. He has completed studies on over 75 lakes and ponds for a variety of clients, including water suppliers, state and municipal governments, lake associations, and private landowners. Mr. Ladewig has also developed and implemented numerous surface water sampling, sediment testing, and biomonitoring programs for a wide variety of water resource projects.

Stephanie Martin – Project Manager

Ms. Martin is an Environmental Scientist with over ten years of experience in the collection and analysis of a wide range of data types. She regularly provides technical and regulatory support for large, complex coastal and marine projects. Ms. Martin's experience includes, environmental monitoring, field surveys and data collection, environmental policies and regulatory programs, visuals studies, and remediation strategies. Her hands-on field sampling experience has included geophysical and geotechnical surveys, water quality and stormwater sampling, sediment sampling and classification, and sound surveys.

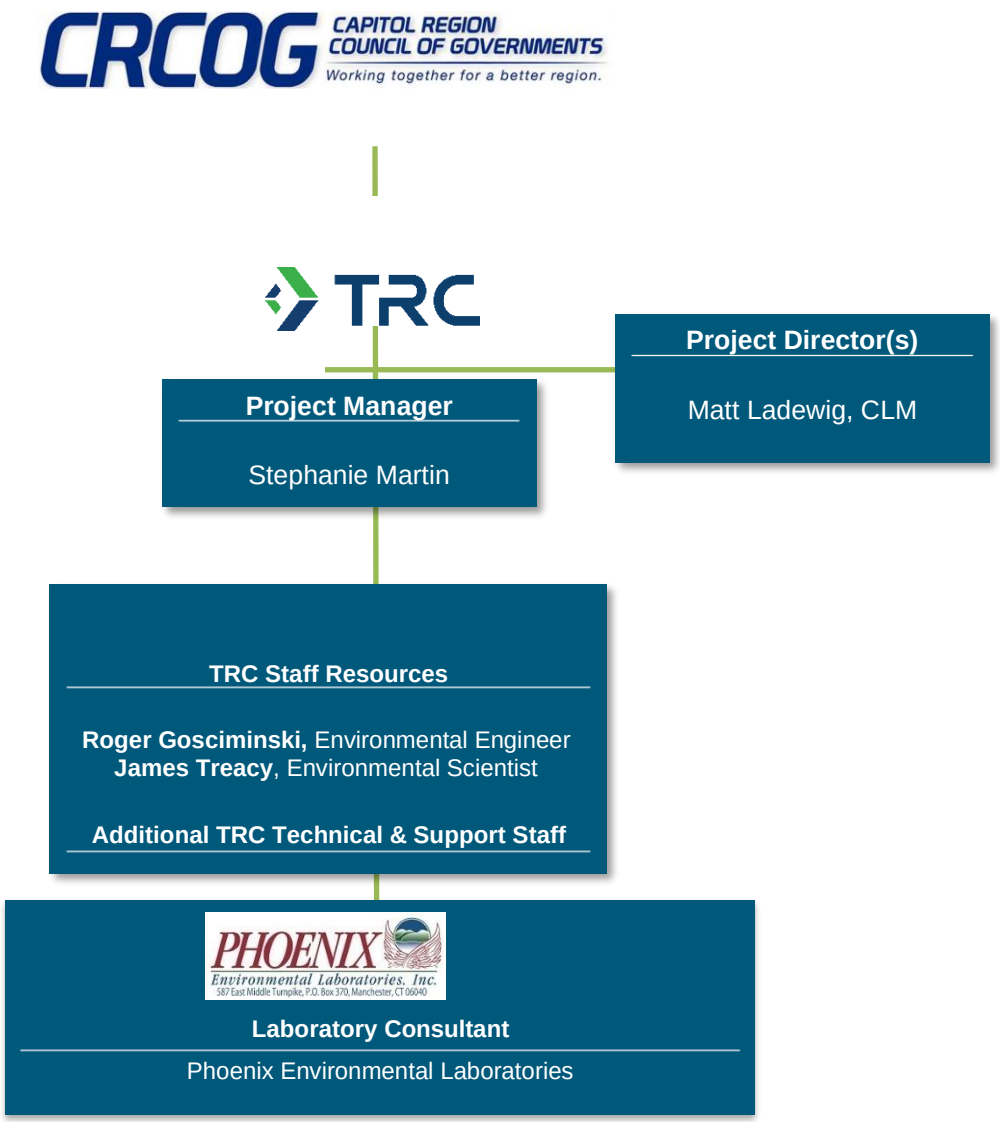
Roger Gosciminski – Environmental Engineer

Mr. Gosciminski is an Environmental Engineer with more than 20 years of experience in environmental engineering and multi-media compliance management. He has provided environmental, health, and safety compliance support for manufacturing operations that include preparation of SPCC, stormwater pollution prevention and other compliance plans, environmental reporting, training of plant personnel, and associated technical and regulatory analysis.

James Treacy – Environmental Scientist

Mr. Treacy is an environmental scientist who has performed various natural resource and ecological field investigations, including vegetative surveys and mapping, wildlife surveys, macroinvertebrate sampling and analysis, watershed and water quality assessments, construction compliance monitoring, geophysical and geotechnical surveys.

TRC Team Organizational Chart



MATTHEW LADEWIG

EDUCATION

M.S., Aquatic Resource Ecology and Management, University of Michigan, 2006

B.A., Physical Geography, University of Illinois at Urbana-Champaign, 2000

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

North American Lake Management Society – Certified Lake Manager

AREAS OF EXPERTISE

Mr. Ladewig has program management and technical experience in the following general areas:

- Submarine Cable System Planning
- Marine Geophysical and Geotechnical Field Investigation Program Planning
- Assessment and Monitoring Program of Benthic Macroinvertebrate and Habitats
- Benthic Sampling Planning
- Biological and Water Quality Surveys
- Environmental Impact Assessment
- Marine Biology
- Fisheries
- Water Resources Management
- Aquatic Macrophyte Monitoring and Management

REPRESENTATIVE EXPERIENCE

Mr. Ladewig is a Certified Lake Manager and ecologist with more than 18 years of experience in the monitoring, modeling, and management of aquatic ecosystems. He has completed studies on more than 100 water bodies for a variety of clients, including water suppliers, state and municipal governments, lake associations, and private landowners. Mr. Ladewig is also an experienced taxonomist who has analyzed thousands of macroinvertebrate samples collected from freshwater and marine habitats in the Northeast, the Mid-Atlantic and the Bahamas. His taxonomic experience extends to a wide variety of other biological resources, including fish, birds, aquatic plants, and a number of rare species. In addition to his water resources work, Mr. Ladewig regularly completes field studies and environmental impact assessments associated with all phases of submarine cable, upland transmission, and renewable energy generation projects. Mr. Ladewig has been responsible for evaluating shellfish and benthic habitats for offshore energy projects, as well as developing and implementing benthic biomonitoring plans. Mr. Ladewig has developed and implemented numerous surface water sampling, sediment testing, and biomonitoring programs for a wide variety of energy developments.

<u>(Stormwater) Project Experience</u>

Schnitzer Northeast, Industrial Stormwater Compliance Monitoring – Attleboro, MA

Mr. Ladewig provided quarterly stormwater monitoring compliance services for multiple outfalls at the metals recycling facility in Attleboro. Results are reported to the client for required filings.

Town of Barrington, Phosphorus Reduction Analysis for Brickyard Pond – Barrington, RI (2016)

Mr. Ladewig developed a US EPA-approved QAPP for this project to ensure the collection of high-quality primary data and appropriate use of secondary data in meeting project goals. Data collection and analysis were used to estimate the annualized phosphorus loading from each stormwater and non-stormwater source. This included field reconnaissance, which was completed along the shorelines of the pond to document and map specific areas of erosion to quantify the levels of loading. Sediment samples and in-pond water quality profiles completed during the warm season captured the extent of anoxia and potential phosphorus release in bottom waters. Waterfowl inputs were assessed through dedicated and opportunistic surveys. Prioritized management actions and developed conceptual designs and approaches to address both the stormwater and non-stormwater sources of phosphorus. A stormwater management plan and BMP engineering design for the man-made Brickyard Pond in Barrington, RI was developed after the Rhode Island Department of Environmental Management (RIDEM) prepared a TMDL for the pond to address impairments due to excessive phosphorus.

Town of Berlin, MS4 Stormwater Compliance Monitoring – Berlin, CT

Mr. Ladewig managed the annual MS4 and stormwater monitoring efforts on behalf of the Town's Public Works Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Brookfield, Watershed Nonpoint Source Assessment – Brookfield, MA

Mr. Ladewig assisted with collection of discharge and water quality data at targeted sites throughout the Quaboag Pond watershed. The results of the monitoring and watershed assessment were used to design and implement Best Management Practices (BMPs) to address non-point source pollution in Quaboag Pond.

Town of Enfield, MS4 and Industrial Stormwater Compliance Monitoring – Enfield, CT (2014 -)

Mr. Ladewig managed the annual MS4 and quarterly industrial stormwater monitoring efforts on behalf of multiple Public Works divisions, including Water Pollution Control, Highway, Building and Grounds, and Solid Waste. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Manchester, MS4 Stormwater Compliance Monitoring – Manchester, CT (2018 -)

Mr. Ladewig manages the annual MS4 and stormwater monitoring efforts on behalf of the Town's Public Works Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Rocky Hill, MS4 Stormwater Compliance Monitoring – Rocky Hill, CT (2018 -)

Mr. Ladewig managed the annual MS4 and stormwater monitoring efforts on behalf of the Town's Engineering Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Tiverton, RIPDES MS4 Stormwater Compliance Services –Tiverton, RI

Mr. Ladewig assisted the Town with the development of a Scope of Work and Implementation Plan to address fecal coliform sources identified in the Mt. Hope Bay and the Upper Kickemuit River Estuary total

maximum daily load (TMDL). As part of the ongoing work to reduce these sources, developed an educational stormwater brochure targeted to residents in the TMDL priority watersheds. Designed and conducted an illicit discharge detection and elimination study for these priority watersheds. Provided stormwater outfall sampling and annual reporting required for compliance with the small Municipal Separate Storm Sewer Systems (MS4) permit issued through the Rhode Island Pollutant Discharge Elimination System (RIPDES) program.

Town of Vernon, MS4 and Industrial Stormwater Compliance Monitoring – Vernon, CT (2019)

Mr. Ladewig managed the annual MS4 and quarterly industrial stormwater monitoring efforts on behalf of the town Highway Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Windsor, MS4 Stormwater Compliance Monitoring – Windsor, CT

Mr. Ladewig managed the annual MS4 monitoring efforts on behalf of the town Engineering Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Windsor Locks, MS4 Stormwater Compliance Monitoring – Windsor Locks, CT

Mr. Ladewig managed the annual MS4 and stormwater monitoring efforts on behalf of the Town's Public Works Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

United States Navy, Illicit Discharge Tracking at Naval Station – Newport, RI

Mr. Ladewig conducted GPS-aided field tracking of dry-weather flow from storm water outfalls within the Station boundaries as part of the illicit discharge tracking and elimination program. Supported the project with GIS storm water feature mapping, outfall sampling and report writing. Helped coordinate updates to the overall storm drainage system map for the Station. Illicit discharge detection was completed as part of Naval Station Newport's Phase II Storm Water Management Plan (SWMP) in order to comply with the Rhode Island Pollution Discharge Elimination System (RIPDES) regulations as required by the Environmental Protection Agency (EPA) under the Clean Water Act.

United States Navy, Storm Water Drainage Map Updates for Naval Station – Newport, RI

Mr. Ladewig performed field verification of storm water structures using a Global Positioning System (GPS) unit with sub-meter accuracy. Coordinated the incorporation of these field-verified updates into Computer-aided Design (CAD) files of the overall storm water drainage plan for Naval Station Newport. Mr. Ladewig contributed to drafting of the final report.

SPECIALIZED TRAINING

- Alum for Phosphorus Control in Lakes and Ponds, 8-hour Workshop
- 40-hour OSHA HAZWOPER Training and 8-hour Supervisor Refreshers
- Boat Massachusetts Boat Safety Certification
- 8-hour Offshore Water Survival Certification
- SafeGulf Marine Safety Certification

PROFESSIONAL AFFILIATIONS

Rhode Island Environmental Monitoring Collaborative, Appointed Member, 2013 to present

Northern Rhode Island Conservation District: Healthy Farm, Healthy Watershed, Technical Steering Committee Member, 2019 to 2021

SELECTED PUBLICATIONS AND PRESENTATIONS

Ladewig, M. D. 2023. "Application of the CMECS Habitat Classification System to Inland Lakes" Presented at North American Lake Management Society 43rd Annual Symposium. October 2023. Erie, PA.

Ladewig, M. D. 2023. "Monitoring" and "Nutrient Control and Alum Treatment" portions of the "Harmful Algal Blooms- Management & Treatment" Workshop. Presented at the AEHS Foundation's 39th Annual International Conference on Soils, Sediments, Water and Energy. October 2023. Amherst, MA.

Ladewig, M. D. 2021. "Harmful Algal Blooms: Management and Control." Presented at Environmental Business Council Virtual Webinar "Beyond PFAS – What Other Emerging Contaminants Should We Be Concerned With?" May 18, 2021. Virtual.

Ladewig, M. D. 2019. "Big Problems, Limited Data: Going from 0 to 60 to Assess and Address HABs, Pathogens, Emerging Contaminants, and More in a Problematic Coastal Pond." Presented at North American Lake Management Society 39th Annual Symposium. November 2019. Burlington, VT.

Ladewig, M. D. 2019. "Managing Cyanobacteria in Lakes and Ponds." Presented at Lakes and Ponds Association (LAPA) West Symposium. October 5, 2019. Pittsfield, MA.

Ladewig, M. D. 2019. "Don't Leave it to Beaver: Comprehensive Pond Restoration in the Face of Wildlife-enhanced Stormwater Impacts." Presented at Massachusetts Congress of Lake and Pond Associations. Annual Workshop. April 12, 2019. Westboro, MA.

Ladewig, M. D. 2017 "So Your Pond Has Issues…Now What?" Presented at Save the Lakes Rhode Island Annual Workshop. April 27, 2017. Johnston, RI.

Ladewig, M. D. 2017 "Where's Walden: A Look at the Evolving Health of One of Massachusetts' Most Treasured Water Resources." Presented at Massachusetts Congress of Lake and Pond Associations. Massachusetts Division of Fisheries & Wildlife. April 7, 2017. Westborough, MA.

Ladewig, M. D. 2015. "Quantifying Pollutant Loads from Lake Shorelines Using Stormwater First-flush Samplers." Presented at New England Association of Environmental Biologists 39th Annual Meeting Joint with the New Hampshire Water/Watershed Conference. March 2015. Bartlett, NH.

Ladewig, M. D., and C. D. Nielsen. 2014. "Use of Stormwater First-flush Samplers to Quantify Shoreline Pollutant Sources." Presented at New England Chapter of the North American Lake Management Society, 2014 Annual Meeting. June 2014. Storrs, CT.

Nielsen, C. D., and M. D. Ladewig. 2011. "Marine Benthic Analysis Needed for Offshore Permitting in the U.S." Presented at North American Benthological Society (Society for Freshwater Science) 2011 Meeting. May 2011. Providence, RI.

Nielsen, C. D., and M. D. Ladewig. 2009. “Boating Channel Pilot Study: Feasibility versus Acceptance.” Presented at North American Lake Management Society 29th Annual Symposium. November 2009. Hartford, CT.

Ladewig, M. D., and C. D. Nielsen. 2007. “The Benefits of Biomonitoring for Watershed Assessment.” Presented at Charles River Watershed Association. June 2007. Weston, MA.

Riseng, C.M., M.J. Wiley, B. Sparks-Jackson, M. D. Ladewig, and S. R. David. 2006. “Assessment of the Interacting Effects of Channel Unit Substrate and Hydraulics on Benthic Standing Stock in the Lower Muskegon River, Michigan.” Presented at North American Benthological Society 53rd Annual Meeting. June 2006. Anchorage, AK.

STEPHANIE L. MARTIN

EDUCATION

BS, Earth Science/Geology, Bridgewater State University, 2012

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

OSHA 40-hour HAZWOPER and 8-hour refresher training

OSHA 8-hour HAZWOPER Supervisor training

5 Hour Cold Water Survival Skills and Boating Safety Workshop

REPRESENTATIVE EXPERIENCE

Ms. Martin is an environmental scientist with over ten years of experience in the collection and analysis of a wide range of data types. She regularly provides technical and regulatory support for large, complex coastal and marine projects. Ms. Martin's experience includes, environmental monitoring, field surveys and data collection, environmental policies and regulatory programs, visuals studies, and remediation strategies. Her hands-on field sampling experience has included geophysical and geotechnical surveys, water quality sampling, sediment sampling and classification, and sound surveys.

Project Experience

Town of Windsor Locks – MS4 Stormwater Compliance Monitoring – Windsor Locks, CT.

Manages the annual MS4 and stormwater monitoring efforts on behalf of the Town's Public Works Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Windsor - Industrial Stormwater Compliance Monitoring – Windsor, CT.

Manages the quarterly industrial monitoring efforts on behalf of the town Engineering Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Vernon – NPDES MS4 Stormwater Monitoring – Vernon, CT.

Manages the annual MS4 and stormwater monitoring efforts on behalf of the Town's Public Works Department. All field sampling and laboratory analyses are reported to the Town for the required annual filing with CTDEEP.

Town of Rocky Hill, Municipal Separate Storm Sewer System (MS4) Monitoring – Rocky Hill, CT

Ms. Martin conducted stormwater monitoring at six stormwater outfalls throughout the Town of Rocky Hill, Connecticut. At each outfall location, water samples were collected for laboratory analysis, and in situ measurements were obtained and documented. In situ measurements and the results of laboratory analysis for each outfall location were reported to the Town for the required annual filing with CTDEEP.

Town of Simsbury, Industrial Stormwater Monitoring – Simsbury, CT

Ms. Martin conducted quarterly stormwater sampling at municipal industrial facilities in the Town of Simsbury, Connecticut. At each outfall location, water samples were collected for laboratory analysis, and in situ measurements were obtained and documented. The results of each sampling event were reported to the Town.

Town of Enfield, NPDES MS4 and Industrial Stormwater Monitoring – Enfield, CT

Ms. Martin conducted the annual and quarterly NPDES MS4 and Industrial Stormwater Monitoring for the Town of Enfield. Stormwater monitoring included the collection of stormwater from six (6) MS4 Outfall Monitoring locations and the visual monitoring of one (1) Industrial Monitoring Location.

Green Pond Marina, Stormwater Compliance – East Falmouth, MA

Ms. Martin assisted in conducting a Comprehensive Site Inspection (CSI) in accordance with the facility's Stormwater Pollution Prevention Plan (SWPP), Multi-Sector General Permit (MSGP) requirements. She collected stormwater samples for laboratory analysis in support of the facility's stormwater compliance sampling program.

Long Pond – Water Quality Assessment – Little Compton, RI.

Collected water quality data and surface water samples for laboratory analysis of total phosphorous, dissolved phosphorous, total Kjeldahl nitrogen, nitrate nitrogen, herbicides, and bacteria. Collected water quality data on Secchi disk depth, pH, and turbidity. Generated water column profiles of temperature, dissolved oxygen, and conductivity with salinity and assisted in preparing a report to interpret the results of the water quality assessment.

Jay Packaging Group, Inc. – Stormwater Compliance – Warwick, RI.

Conducted quarterly visual monitoring of stormwater outfalls in support of the stormwater compliance program at the Jay Packaging facility in accordance with the facilities Stormwater Pollution Prevention Plan (SWPP) and the Rhode Island Pollutant Discharge Elimination System (RPDES) Multi-Sector General Permit (MSGP) requirements.

Anbaric Development Partners, Juno Power Express Project – Long Island, NY (Assistant Project Manager: 2022 - Present)

Ms. Martin serves as the Assistant Project Manager for the Juno Power Express Project. This Project will import power produced by an offshore wind generator expected to construct offshore wind facilities in areas leased in Federal waters of the Atlantic Ocean into the transmission system of the Long Island Power Authority (LIPA) within the New York Independent System Operator's Zone K of the New York Control Area. The Project consists of the following elements: approximately 7.7 miles of HVDC submarine cable and an associated submarine fiber optic cable, approximately 17.9 miles of HVDC underground cable with associated fiber optic cable, an underground transition vault, where the submarine cable system will be spliced to the HVDC land cable, underground transition vaults used to splice sections of the HVDC land and submarine cable, a temporary gravity cell, converter station and approximately 0.6 miles of HVAC land cable. As the Assistant Project Manager, Ms. Martin assists with coordinating the Project Team to support the development and submission of an Article VII application for a Certificate of Environmental Compatibility and Public Need from the New York Public Service Commission

ROGER E. GOSCIMINSKI, TURP

EDUCATION

M.S., Environmental Engineering (Concentration in Water Resources), University of New Haven, 2004

B.S., Chemical Engineering, University of New Haven, 2000

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Engineer-In-Training (EIT), Massachusetts, (#20898), April 2004

Toxic Use Reduction (TUR) Planner

TUR Resource Conservation Planner

TUR Environmental Management System Planner

AREAS OF EXPERTISE

Mr. Roger Gosciminski, TURP, has program management and technical experience in the following general areas:

- Air and Stormwater Permitting
- Corporate Environmental Health and Safety Compliance
- Database Development
- Environmental Compliance and Monitoring
- Environmental Impact Studies
- Environmental Site Assessments and Audits
- Environmental Reporting
- GIS Data Analysis
- Spill Prevention Control and Countermeasures (SPCC) Plans
- Stormwater Pollution Prevention Plan (SWPPP)
- RCRA hazardous waste awareness, DOT hazardous materials, SWPPP, and SPCC trainings

REPRESENTATIVE EXPERIENCE

Mr. Gosciminski, TURP, is an Environmental Engineer with more than 20 years of experience in environmental engineering and multimedia compliance management. He has provided environmental, health, and safety compliance support for manufacturing operations that include preparation of compliance plans, environmental reporting, training of plant personnel, and associated technical and regulatory analysis. He has also assisted in the preparation of environmental impact studies for new project development, soil, and groundwater monitoring to assess existing conditions, and environmental site assessments to support property transactions. Mr. Gosciminski has extensive expertise and experience with preparing and updating SPCC plans at various facilities such as electric power generation, transmission and distribution facilities, scrap metal recycling facilities, manufacturing facilities, and municipalities. He is proficient in stormwater modeling, GIS data analysis, and permitting. Mr. Gosciminski currently serves as an Environmental Engineer for the Permitting, Planning, and Licensing (PPL) division out of the East Providence, RI office.

Environmental Compliance, Monitoring, and Permitting / Industrial and Manufacturing

Cooley Inc., Stormwater Permit Assistance

Mr. Gosciminski assisted with a review the Cooley's Pawtucket, Rhode Island and Lancaster, South Carolina SWPPPs and compared it to the requirements in the state agency's NPDES General Permit. Mr. Gosciminski also assisted with the no-exposure certification of Cooley's Cranston, Rhode Island location.

Town of North Providence, Stormwater BMP Design and Utility Study – North Providence, RI

Mr. Gosciminski served as Field Engineer for the Town of North Providence in wet-weather sampling to identify sources of bacteria and potential illicit discharges. The results of this work led to selection of specific outfalls for retrofit of BMPs to abate water quality impairments to Woonasquatucket River.

SWPPP and SPCC Plans

Clark Cutler McDermott Company, SWPPP and SPCC Plan – Franklin, MA

Mr. Gosciminski prepared the SWPPP and SPCC Plan for an acoustic insulation and interior trim product manufacture facility in Franklin. He conducted SWPPP training and conducted training for visual monitoring of two outfalls.

Confidential Client, MSGP Required Inspections and Sampling – MA

Mr. Gosciminski was responsible for EPA's Multi-Sector General Permit's (MSGP) required inspections and sampling. The inspections included monthly site inspections and the comprehensive site inspection. The sampling included quarterly visual monitoring and analytical sampling of the stormwater samples collected at two outfalls. Mr. Gosciminski coordinated a clean out of storm drains and catch basins.

Confidential Energy Facility, Technical Support to Defend against Citizen Suit under the Clean Water Act and continue support of MSGP required sampling

Mr. Gosciminski was responsible for providing permitting, compliance, and litigation support for an electric, steam, and chilled water generation facility served with a 60-day notice of intent to sue under the Clean Water Act. Worked closely with the facility owner and their attorney to develop strategies for resolving the complaint through legal settlement and participated in settlement negotiations. He provided technical solutions that balanced compliance with NPDES MSGP requirements with cost effectiveness and speed of implementation. Responsible for EPA's MSGP-required sampling. The sampling included quarterly visual monitoring and analytical sampling of the stormwater samples collected at three outfalls.

Green Pond Marina, MSGP Required Inspections and Sampling – East Falmouth, MA

Mr. Gosciminski was responsible for EPA's Multi-Sector General Permit's (MSGP) required inspections and sampling. The inspections included the annual comprehensive site inspection. The sampling included quarterly visual monitoring and analytical sampling of the stormwater samples collected at three outfalls.

Rohrer Corporation, Industrial Stormwater Compliance Monitoring – Warwick, RI

Mr. Gosciminski updated the SWPPP for a packaging facility. He oversaw and conducted quarterly stormwater visual and analytical monitoring compliance services for multiple outfalls. He conducted the comprehensive site inspection. Results were reported to the client for internal filing and Discharge Monitoring Reports were submitted to RIDEM.

Manufacturing Facilities, MSGP No Exposure Certification

Mr. Gosciminski reviewed facilities operations and reviewed and completed the No Exposure Certification Form, Appendix K of the 2015 MSGP.

Masters of Design, Stormwater Pollution Prevention Plan – Attleboro, MA

Mr. Gosciminski updated the SWPPP for jewelry manufacturing facility. Activities related to the update of the SWPPP included analyzing facility drainage, updating potential pollutants, determining the impacts of pollutants on stormwater, updating Best Management Practices to assure impacts are minimal, and updating management practices to ensure the facility's stormwater plan will adequately protect the waters of the state.

New Athens Generating Company, LLC, SPCC Plan Update – Athens, NY

Mr. Gosciminski updated the SPCC Plan for an electric power generating station consisting of three, combined-cycle, combustion turbine electric power generating units and supporting equipment.

ReSteel Supply Company, Inc. New England, SWMP – Warwick, RI

Mr. Gosciminski prepared a stormwater management plan for a fabricate high quality rebar, wire mesh, continuous spirals, anchor bolts, couplers, and bar support facility in Warwick. He conducted SWPPP training and conducted training for visual monitoring of two outfalls.

Schnitzer Northeast, Industrial Stormwater Compliance Monitoring – Attleboro, MA

Mr. Gosciminski oversaw and conducted quarterly stormwater monitoring compliance services for multiple outfalls at the metals recycling facility in Attleboro. Results were reported to the client for required filings.

State Line Scrap, Stormwater Pollution Prevention Plan and Spill Prevention, Control, and Countermeasure Plan – Attleboro, MA

Mr. Gosciminski updated the SWPPP, which included analyzing facility drainage, updating outfall and sampling locations, updating Best Management Practices to assure impacts were minimal, and updating management practices to ensure the facility's stormwater plan adequately protects the waters of the state. He prepared a SPCC plan, which included a description of fuel and oil storage and handling procedures, facility drainage patterns, inspections, and emergency response procedures.

SPECIALIZED TRAINING

- 40-Hour Hazardous Waste Operations & Emergency Response Certified
- DOT Hazardous Materials Transportation Certified
- Center for Chemical Process Safety (CCPS) Process Safety Management Certified
- Ammonia Safety and Training Institute – Ammonia Training, Emergency Shutdown, Evaluating Hazards, Risks, and Threats Certified

SELECTED PUBLICATIONS AND PRESENTATIONS

"EPA 2021 NPDES Multi-Sector General Permit (MSGP) for Stormwater Discharges from Industrial Activity." Presented at the Mass Marine Trades Association Business of Boating Conference. January 2022. Foxboro, Massachusetts.

JAMES TREACY

EDUCATION

BS, Environmental Biology, Bridgewater State University, 2014

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

Constructed Wetlands for Stormwater Management (2017)

New York State Erosion and Sediment Control Training (2015)

Society for Freshwater Science – Certified Taxonomist: Eastern Ephemeroptera, Plecoptera, and Trichoptera,

OSHA 40-hour HAZWOPER (2017)

AREAS OF EXPERTISE

Mr. James Treacy, is an environmental scientist that has performed various natural resource and ecological field investigations including:

- Vegetative Surveys and Mapping
- Wildlife Surveys
- Macroinvertebrate Sampling and Analysis
- Watershed and Water Quality Assessments
- Construction Compliance Monitoring
- Geophysical and Geotechnical Surveys

REPRESENTATIVE EXPERIENCE

Mr. Treacy has over 10 years of experience and progressive responsibility in environmental consulting. His qualifications include extensive hands-on field investigations, laboratory analysis, permitting, cost estimating, and project management. Mr. Treacy has been responsible for vegetative mapping surveys including delineations, vegetation plots and aquatic plant mapping, and identification of both native and non-native aquatic and terrestrial plant species. Mr. Treacy has also participated in various wildlife surveys and habitat assessments including serving as a marine mammal observer and an observer for rare avian species during the construction of a new transmission line. Mr. Treacy performs freshwater fish identification and is highly knowledgeable in the native reptile and amphibian species of the New England area. Mr. Treacy is a subject matter expert responsible for the sorting, enumerating, and identification of macroinvertebrates. Mr. Treacy has served as the environmental construction monitor and stormwater inspector for a transmission line re-build project in up-state New York. Mr. Treacy was responsible for the project to remain compliant with all the environmental permits associated with the project. Mr. Treacy's background includes extensive service to public and private-sector clientele including but not limited to Environmental Protection Agency (EPA), National Grid, Massachusetts Water Resource Authority (MWRA), Massachusetts Department of Conservation & Recreation (MassDCR). He currently serves in the capacity of Environmental Scientist and Field Crew Leader.

(Water Resources) Project Experience

Environmental Protection Agency (EPA), San Juan Watershed Monitoring Program – San Juan Watershed, CO, UT, and NM (2018-2020)

Mr. Treacy has assisted with water and sediment sampling and testing throughout the San Juan River watershed in Colorado, Utah, Arizona, and New Mexico on numerous occasions in support of the EPA's program that focuses on water sampling and testing at different regions of the San Juan River watershed following the Gold King Mine spill in 2015.

Environmental Protection Agency (EPA), Streamflow Duration Assessment Methods (SDAM) – Great Plains, United States (2019-2022)

Mr. Treacy leads field visits to various locations around the Northern and Southern Great Plains to support EPA in developing a rapid protocol for the assessment of streams to try and determine if the stream is ephemeral, intermittent, or perennial. The protocol calls for the analysis of a number of different factors both biological and geomorphic. Mr. Treacy assists with the monthly reporting as well as the aquatic invertebrate family level collection and identification.

(Stormwater Sampling) Project Experience

Town of Enfield, NPDES MS4 and Industrial Stormwater Monitoring – Enfield, CT (2014)

Mr. Treacy conducted the annual and quarterly NPDES MS4 and Industrial Stormwater Monitoring for the Town of Enfield. Stormwater monitoring included the collection of stormwater from six (6) MS4 Outfall Monitoring locations and the visual monitoring of one (1) Industrial Monitoring Location. Reported all field sampling and laboratory analyses to the Town for the required annual filing with CTDEEP.

Town of Manchester, NPDES MS4 and Industrial Stormwater Monitoring – Manchester, CT (2018)

Mr. Treacy conducted the annual and quarterly NPDES MS4 and Industrial Stormwater Monitoring for the Town of Manchester. Stormwater monitoring included the collection of stormwater from MS4 Outfall Monitoring locations and the visual monitoring. Reported all field sampling and laboratory analyses to the Town for the required annual filing with CTDEEP.

Town of Rocky Hill, Municipal Separate Storm Sewer System (MS4) Monitoring – Rocky Hill, CT (2018)

Mr. Treacy monitored six stormwater outfalls throughout the Town during a rain event, collected water samples, took *in situ* measurements using water quality instruments, and prepared reports. Reported all field sampling and laboratory analyses to the Town for the required annual filing with CTDEEP.

Town of Simsbury, Industrial Stormwater Monitoring – Simsbury, CT (2018-2020)

Mr. Treacy monitored outfalls at four facilities during a rain event, collected water samples, and prepared reports. Reported all field sampling and laboratory analyses to the Town for the required annual filing with CTDEEP.

Town of Vernon, Municipal Separate Storm Sewer System (MS4) Monitoring and Industrial Stormwater Monitoring – Vernon, CT (2019)

Mr. Treacy monitored stormwater outfalls throughout the Town during a rain event, collected water samples, took *in situ* measurements using water quality instruments, and prepared reports. Reported all field sampling and laboratory analyses to the Town for the required annual filing with CTDEEP.

SPECIALIZED TRAINING

- New York State Erosion and Sediment Control Training (2015)
- Constructed Wetlands for Stormwater Management (2017)
- OSHA 40-hour HAZWOPER (2017)

KRISTEN BACHAND

EDUCATION

M.S., Marine Science, Virginia Institute of Marine Science, William & Mary, 2019

B.S., Marine Biology, Brown University, 2016

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

FAA-Certified Remote Pilot, Small Unmanned Aircraft Systems (Cert. No 4285406)

AREAS OF EXPERTISE

Ms. Kristen Bachand, M.S., has program management and technical experience in the following general areas:

- Acoustic Monitoring
- Aquatic Plant Surveys and Mapping
- Benthic Sediment Sampling
- Coastal and Marine Policy
- Geographic Information Systems (GIS), Statistics
- Marine Surveys

REPRESENTATIVE EXPERIENCE

Ms. Bachand has over six years of experience in coastal and marine science, data analysis, and field work. Her specific experience includes performing coastal field surveys on small vessels, Geographic Information Systems (GIS), statistics, and coastal and marine policy. Ms. Bachand frequently uses data analysis and management tools in both ArcMap and QGIS. These tools include extracting vertices to calculate the chainage of a route, summarizing field data by attribute for further analysis, georeferencing maps and images, performing definition queries to organize spatial data, using symbology to examine change over time, and creating strip maps using Data Driven pages in ArcMap and Atlas in QGIS. Her skills in Python include data organization and graphing, along with experience in using PyQGIS, its interface with QGIS, to manage and edit spatial data.

Ms. Bachand is an active participant in field surveys on small vessels and offshore. She has experience in invasive plant mapping in lakes and ponds, collecting and processing vibracore samples, collecting benthic grab samples, and acquiring remotely operated vehicle (ROV) imagery.

Ms. Bachand graduated with a BS from Brown University and a MS from the Virginia Institute of Marine Science, William & Mary. Her graduate work focused on determining the distribution of submerged aquatic vegetation in the lower Chesapeake Bay using satellite imagery and its influence on juvenile Atlantic blue crabs. Ms. Bachand currently serves as a Coastal Environmental Scientist at the Waltham, MA office.

Anbaric Development Partners, LLC, NE Offshore Connector – Multiple Locations, MA

Ms. Bachand served as a Project Scientist for a project involving offshore energy infrastructure development and permitting. She assisted in the completion of an Expanded Environmental Notification Form to the Massachusetts Environmental Protection Act Office for the installation of a subsea cable in Massachusetts state waters.

Confidential Submarine Electric Cable Projects – Northeast U.S. (Project Scientist: 2020)

Ms. Bachand served as a Project Scientist responsible for preparing multiple, simultaneous desktop routing studies for several proposed submarine electric cable projects that included potential merchant projects, reliability projects, and projects that were being investigated by developers for possible response to RFP's issued by regulated utilities to provide Clean Energy to various ISO zones. She researched the physical and environmental constraints for the proposed project activities and assisted in the various GIS tasks required as part of the study, including calculating route lengths and chainage.

Eversource Energy (Northeast Utilities), Long Island Replacement Cable Project – Norwalk, CT to Northport, NY

Ms. Bachand served as a Project Scientist for an energy infrastructure development and permitting project. She assisted in the completion of an application for a federal consistency certification to the New York Department of State, Office of Planning and Development. This project needed to be compliant with the state coastal policies and the policies of the Long Island Coastal Management Program.

Massachusetts Water Resources Authority, Reservoir Monitoring Program – MA

Ms. Bachand served as a Project Scientist for annual aquatic surveys of several Massachusetts drinking water reservoirs. She performed field work identifying invasive aquatic plant presence. In the office, she produced figures using GIS to detail various plant measurements and the change in invasive plant cover over time.

Providence Water Supply Board, Unmanned Aerial Systems Services – RI (Project Scientist: 2020)

Ms. Bachand served as a Project Scientist for a drone aerial survey project. She assisted in the collection of orthoimagery in a Providence, RI, neighborhood and has assisted in the post-processing of the imagery collected on site.

Rise Light & Power, Renewable Connector Projects Marine Surveys – NY and NJ State Waters

Ms. Bachand served as a Project Scientist on multiple marine survey investigations for HVAC and HVDC submarine electric transmission cable interconnections planned to deliver renewable energy in New York. In conjunction with survey contractor, Ocean Surveys, Inc., completed marine surveys for multiple potential in-state transmission line projects to support the State of New York's Clean Energy goals. The scope included designing the surveys to solicit bids from marine survey contractors, reviewing bids received and advising Rise on contractor selection, obtaining required state and federal permit authorization for survey work, serving as the onboard owner's representative services, and coordinating daily survey efforts. The first phase of the marine surveys collected remote sensing data along approximately 1,100 trackline miles to map bottom contours, potential surface and shallow subsurface obstructions, and potential obstructions in the survey corridors to identify feasible linear routing alternatives and provides preliminary assessments of existing riverbed/seabed environmental conditions along the planned routes to avoid or minimize potential riverbed/seabed, fisheries, or water quality impacts. The second phase involved collecting sediment and benthic samples from over 160 locations to characterize riverbed/seabed habitats and sediment quality. Acoustic monitoring for the presence of Atlantic Sturgeon was performed during sampling vessel operations. Collected sediment samples were analyzed by testing laboratories for a variety of physical and chemical parameters. Collected benthic samples were sorted and analyzed by TRC (formerly ESS Group, Inc.) to document benthic habitats. The

results of these surveys informed Rise's decision making on project selection and route selection and also formed the basis for developing project designs. This information will also be used during major state and federal permitting processes and during submarine cable installation activities.

TDI-Brooks, Inc., Vineyard Northeast – Outer Continental Shelf, Federal Waters off the Coast of MA (Project Scientist: 2022)

Ms. Bachand served as a Project Scientist for an offshore wind development. She assisted in the collection of benthic samples along the proposed export cable corridor route in federal waters and Massachusetts state waters. Ms. Bachand also assisted in the collection of ROV imagery, which will be used to assess the essential fish habitat in the project area.

Unilock of New York, Inc., Water Supply Development and Permitting – Uxbridge, MA

Ms. Bachand served as a Project Scientist for a project involving the development of a new well on an industrial site. She assisted in the creation of maps using GIS to show the existing site conditions for submission to the Massachusetts Department of Environmental Protection.

US Wind, Maryland Offshore Wind Energy Project – Outer Continental Shelf, Federal Waters off the Coast of MD and DE

Ms. Bachand served as a Project Scientist for a project involving offshore wind development and permitting. She led a benthic sampling program for macrofaunal investigations within the lease area and transmission cable corridor. Ms. Bachand provided on-board consultation, supervision, and initial quality control for ROV video transects within the lease area and the cable corridor. She also provided quality control and data handling of on-board Bat detector data to aid a six-month long bat monitoring program developed and implemented by TRC (formerly ESS Group, Inc.).

Ms. Bachand also assisted in multiple permitting efforts for the proposed offshore wind farm off the coast of Maryland. Federal permits and plans include the Construction and Operations Plan Survey Plan, the 2022 Geophysical and Geotechnical Exploration Plan, United States Army Corps of Engineers permits, and the Construction and Operations Plan (COP) submitted to the Bureau of Ocean Energy Management. State permits include a Special Use Permit for onshore work and a Wetlands and Subaqueous Lands Permit to the State of Delaware. Ms. Bachand is actively involved in the submission and revision process for the COP, focusing on figure revisions, quality control, and updating the information on marine birds, threatened and endangered species, and coastal habitats. She also serves as a point of contact for subcontractors assisting with various technical studies.

SPECIALIZED TRAINING

- Wilderness First Aid. March 17, 2022
- Offshore Survival Training. August 17, 2022

SELECTED PUBLICATIONS AND PRESENTATIONS

Bachand, K. 2019. "Using Satellite Imagery to Track Changes in Seagrass Bed Area Over Time in the York River, Virginia, USA." Presented at Benthic Ecology Meeting, Benthic Ecology Meeting Society. April 4, 2019. St. John's, Newfoundland, Canada.

Bachand, K. 2018. "The Importance of Seagrass to Blue Crabs." Presented at Virginia Sea Grant Research Symposium, Virginia Sea Grant. February 9, 2018. Richmond, Virginia, USA.

MORGAN PROKO

EDUCATION

B.A., Biology and Environmental Studies and Sustainability, Merrimack College, 2020

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

American Red Cross First Aid and CPR

MA Boat Safety Certification

AREAS OF EXPERTISE

Ms. Morgan Proko, has experience in the following general areas:

- Aquatic Plant Mapping
- Bathymetry and Sediment Mapping
- Benthic Macroinvertebrate Sorting
- Sediment Sampling
- Stream Monitoring
- Water Quality Sampling

REPRESENTATIVE EXPERIENCE

Ms. Proko has more than four years of experience conducting field investigations and two BAs in Biology and Environmental Studies and Sustainability, from Merrimack College. Her technical capabilities include surface water quality monitoring, aquatic plant surveys, sediment sampling, and bathymetric mapping as well as macroinvertebrate sampling. Ms. Proko performs field work, compiles technical reports, and conducts data analysis and research. She has led a variety of projects throughout Massachusetts which have included aquatic vegetation surveys, invasive species surveys, working within the context of habitat management or restoration plans, working on state-managed conservation land, and working for Massachusetts state agencies. Ms. Proko is one of two female staff approved by the U.S. Environmental Protection Agency's (EPA) Streamflow Duration Assessment Methods (SDAM) as crew leaders to serve on the multi-year studies – the first two females in the nation approved as crew leaders under the SDAM program.

(Water Resources Management: Lake and Pond) Project Experience

City of Worcester, Algae and Cyanobacteria Monitoring for Coes Pond, Indian Lake, and Patch Reservoir – Worchester, MA (2018 - 2021)

Ms. Proko assisted with understanding the ecology of three surface waterbodies that the Town of Worcester manages: Coes Pond, Indian Lake, and Patch Reservoir. Ms. Proko collected water samples and other environmental data from the lakes between May and September of 2018 at varying frequencies. The data collected helped to provide a summary of the quantities and types of algae, cyanobacteria, and cyanotoxins that were present in these lakes during the summers of 2018, 2019, and 2020.

City of Worcester, Indian Lake – Worcester, MA

Indian Lake, a popular recreational lake, suffers from recurring algae blooms that can result in beach closures if not addressed. Ms. Proko was responsible to visit Indian Lake on a weekly basis and make field observations, collect water samples, and report the laboratory data.

Massachusetts Water Resources Authority (MWRA), Aquatic Invasive Macrophyte Surveys – Statewide, MA

Ms. Proko served as a Field Scientist for comprehensive survey of aquatic macrophytes at multiple source and emergency reservoir areas jointly managed by MWRA and the DCR. Ms. Proko was responsible for identification of native and non-native aquatic plants at hundreds of survey points. Tasks included collection of data including baseline water quality, macrophyte community composition, vegetative cover, biomass/volume, and water depth.

Providence Water Supply Board, Secondary Reservoirs Small Impoundments Monitoring – RI (2019 - 2020)

Ms. Proko assisted with the bathymetry and sediment mapping as well as the surface and groundwater water testing and sampling at four waterbodies which included Coomer Lake, Kimball Reservoir, Shoestring Pond, and Pine Swamp.

Providence Water Supply Board, Watershed Sampling and Analysis – Scituate, RI

Ms. Proko was responsible for collecting and filtering water samples on a quarterly basis of seven sites within the Scituate Reservoir watershed as well as two samples at the P.J. Holton Water Purification Plant.

SOLitude Lake Management, Westford Ponds Post-Treatment Monitoring – Westford, MA

Ms. Proko conducted water quality sampling and post-treatment surveys of aquatic vegetation at Keyes, Burges, and Old Mill Graniteville ponds to characterize the effectiveness of herbicide treatments aimed at reducing the abundance of invasive milfoil.

Town of Norton, Aquatic Plant Management – Norton, MA

Ms. Proko identified and mapped native and invasive aquatic plant species along transects in four ponds in the Town of Norton; Norton Reservoir; Winnecunnet Pond; Chartley Pond; and Barrowsville Pond; using a sub-meter accurate GPS receiver. Aquatic plant species of concern included fanwort, variable-leaf milfoil, Eurasian milfoil, and water chestnut.

Town of Plymouth, Bartlett Pond Watershed Assessment – Plymouth, MA (2019)

ESS was tasked to work with the town of Plymouth to address environmental eutrophication and harmful bacteriological concerns in the White Horse Beach/Bartlett Pond area as well as understand the Bartlett Pond ecosystem and potential pathogen and contaminant exposures that may impact population health. Ms. Proko assisted with field work which included taking water quality measurements and samples during the summer months. Ms. Proko also deployed and maintained data loggers in the pond as well as the inlet and outlet of the pond.

US Environmental Protection Agency (US EPA), Streamflow Duration Assessment Methods (SDAM) – Northeast: ME, VT, NH, RI, MA, NY, and CT (2021)

The US EPA has been working to develop a rapid protocol for the assessment of streams to determine if the stream is ephemeral, intermittent, or perennial. Ms. Proko assisted with field visits to various locations throughout the Northeast for the analysis of a number of different factors both biological and geomorphic.

US Environmental Protection Agency (US EPA), Streamflow Duration Assessment Methods (SDAM) – Southeast: North Carolina, South Carolina, Puerto Rico, and the US Virgin Islands (2021)

The US EPA has been working to develop a rapid protocol for the assessment of streams to determine if the stream is ephemeral, intermittent, or perennial. Ms. Proko assisted with field visits to various locations throughout the Southeast for the analysis of a number of different factors both biological and geomorphic.

(Stormwater Sampling) Project Experience

Town of Rocky Hill, Municipal Separate Storm Sewer System (MS4) Monitoring – Rocky Hill, CT (2018)

Ms. Proko visited six stormwater outfalls throughout the town during a rain event, collected water samples, took *in situ* measurements using water quality instruments, and prepared reports. All field sampling and laboratory analyses were reported to the Town for the required annual filing with CTDEEP.

Town of Simsbury, Industrial Stormwater Monitoring – Simsbury, CT (2018 – 2020)

Ms. Proko planned and conducted the required quarterly sampling of municipal industrial facilities in the Town of Simsbury, Connecticut. She visited outfalls at four facilities during a rain event, collected water samples, and prepared reports.

Leach Garner – Attleboro, MA (2021 – 2022)

Ms. Proko planned and conducted the required quarterly sampling of a precious metals facility in Attleboro, MA. This involved planning and sampling for water quality during storm events.

(Compliance) Project Experience

Leach Garner – Attleboro, MA (2021 – 2022)

Ms. Proko planned and conducted the monthly SPCC inspections at the Leach Garner facility. Her role included inspection various locations within the building for oil spills and other safety hazards.

SPECIALIZED TRAINING

- 40 Hour HAZWOPER
- Wilderness First Aid

JOSEPH BERTHERMAN

EDUCATION

M.S., Environmental Science and Management, University of Rhode Island, 2021

Graduate Certificate, GIS and Remote Sensing, University of Rhode Island, 2021

B.S., Biology, Stonehill College, 2018

PROFESSIONAL REGISTRATIONS/CERTIFICATIONS

OSHA 40hr HAZWOPER Certification

AREAS OF EXPERTISE

Mr. Bertherman has program management and technical experience in the following general areas:

- Aquatic Plant Surveys
- Benthic Sampling
- Lake, Pond, and Stream Assessments
- Sediment Sampling
- Spatial Data Analysis, GIS software
- Stormwater sampling
- Water Quality Sampling and Monitoring
- Wetland Delineation and Habitat Surveying
- Wetland and Environmental Permitting

REPRESENTATIVE EXPERIENCE

Joseph Bertherman is a Project Scientist specializing in wetland ecology with four years of experience in natural resources science. He completed graduate studies at the University of Rhode Island with a concentration in wetlands, soils, hydrology, and ecosystem science. During his graduate studies he focused on the effects of dam removal on riparian vegetation and sediment morphology and became proficient in GIS technologies. He also has previous professional experience in clean energy, sustainability, and hazardous waste removal. Mr. Bertherman's technical capabilities include wetland delineation, aquatic plant mapping, water quality monitoring, sediment sampling, and geospatial analysis using GIS data and software. As a Project Scientist, Mr. Bertherman performs field work, compiles technical reports and permit applications, conducts data analysis and research, and drafts figures. He has supported a variety of projects throughout the New England and Mid-Atlantic regions for federal, state, and private sector clients involving aquatic vegetation surveys, wetland surveys, sediment surveys, and environmental permitting.

(Water Resources: Lake and Pond) Project Experience

Aquarion Water Company, Assessment of Reservoirs and Impoundments – CT (Field Scientist: 2021-2022)

Mr. Bertherman conducted aquatic macrophyte surveys at multiple reservoirs in Connecticut including Putnam Lake, Rockwood Lake, Trap Falls, Means Brook, and Far Mill Reservoirs to inform long-term vegetation management program recommendations. Mr. Bertherman assisted in the collection and analysis of sediment cores at Mystic reservoir in Mystic, Connecticut.

Surveys – Statewide, MA (Field Scientist: 2021-2022)

Mr. Bertherman conducted comprehensive surveys of aquatic macrophytes at multiple source and emergency reservoir areas jointly managed by MWRA and the DCR, including identification of native and non-native aquatic plants at hundreds of survey points. Tasks included collection of data including baseline water quality, macrophyte community composition, vegetative cover, biomass/volume, and water depth.

Providence Water Supply Board, Scituate and Moswansicut Reservoir Buoy Maintenance – Scituate, RI (Field Scientist: 2021-Present)

Mr. Bertherman conducted water quality monitoring at Moswansicut reservoir with the analysis of temperature, pH, dissolved oxygen, turbidity, and specific conductance at the water surface as well as depths throughout the profile. He collected water samples at surface and bottom depths for laboratory analysis. He completed the retrieval of data buoys at Scituate reservoir North and Main basins as well as at Moswansicut reservoir. He extracted water quality monitoring equipment, conducted maintenance, and properly stored data buoys, with a post-retrieval calibration of data sensors.

Providence Water Supply Board, Regulating Reservoir Monitoring – Scituate, RI (Field Scientist: 2022)

Mr. Bertherman conducted a comprehensive survey of aquatic macrophytes, including the identification of native and non-native aquatic plants at hundreds of survey points. Data collection included macrophyte community composition, vegetative cover, biomass/volume, and water depth.

Town of Columbia, Columbia Lake Assessment – Columbia, CT (Field Scientist: 2022-Present)

Mr. Bertherman conducted water quality sampling at Columbia Lake measuring temperature, pH, dissolved oxygen, turbidity, and specific conductance at the deep hole of the Lake as well as at inlet and outlet stream locations. Mr. Bertherman also mapped aquatic macrophytes within the lake, assessing macrophyte community composition, vegetative cover, biomass/volume, and water depth. These results have been compiled into monthly reports to inform the Town's Lake Management Advisory Commission of lake conditions.

Town of Weymouth, Whitman's Pond Management Program – Weymouth, MA (Field Scientist: 2022-Present)

Mr. Bertherman led efforts to map aquatic macrophytes at all basins of Whitman's Pond including macrophyte community composition, vegetative cover, biomass/volume, and water depth. He also conducted water quality sampling, measuring temperature, pH, dissolved oxygen, turbidity, and specific conductance.

University of Maine System, Maidford River Restoration Pilot Project Baseline Monitoring – Middletown, RI (Field Scientist: 2021 – 2022)

Mr. Bertherman deployed water level loggers and led field efforts to complete both wet and dry weather water quality sampling and streamflow discharge measurements at sites along the Maidford River. He helped compile and analyze water level data for use in project reporting. He also helped to design and complete a survey for anuran call monitoring surveys from March through June of 2022, including analysis and reporting of survey findings.

University of Maine, Santuit Pond Dredge Feasibility – Mashpee, MA (Field Scientist: 2022)

Mr. Bertherman conducted sediment sampling, sediment depth and bathymetry mapping, water quality sampling, and stormwater sampling.

US Environmental Protection Agency (US EPA), Development of Streamflow Duration Assessment Methods (SDAM), Field Sampling and Sample Processing Northeast, North Central and Southeast Regions – United States and Puerto Rico

US EPA SDAM aims to develop a rapid field assessment protocol that use hydrological, geomorphological, and/or biological indicators to classify streamflow duration as perennial, intermittent, or ephemeral. Mr. Bertherman conducted field visits to Rhode Island, Minnesota, Wisconsin, North Carolina, South Carolina, and Puerto Rico where he applied knowledge of the EPA rapid assessment protocol. He assisted in the identification and assessment of hydrophytic plant species, hydric soils, and stream morphology parameters.

Stormwater Sampling and Compliance Project Experience

Clearway Energy Group, LLC, Dighton Solar Site Monitoring – Dighton, MA (Wetland Scientist: 2022-Present)

Mr. Bertherman conducts weekly site inspections to ensure the proper function of sediment and erosion controls, inspect wetland resource areas, and maintain compliance with the Town of Dighton's Wetland Bylaws and the Order of Conditions in place for solar array construction at the site.

Town of Rocky Hill, Industrial Stormwater Monitoring – Rocky Hill, CT (Field Technician: 2021)

Mr. Bertherman collected in situ stormwater samples from outfalls in Rocky Hill, Connecticut during a rain event using water quality instruments. He delivered samples to an environmental laboratory for testing for the purpose of reporting to the towns for the required annual filing with CTDEEP.

Town of Windsor – Industrial Stormwater Monitoring – Windsor, CT (Field Technician: 2021)

Mr. Bertherman collected in situ stormwater samples from outfalls in Windsor, Connecticut during a rain event using water quality instruments. He delivered samples to an environmental laboratory for testing for the purpose of reporting to the towns for the required annual filing with CTDEEP.

SPECIALIZED TRAINING

- Forty-Hour OSHA Health and Safety Training, March 2019
- NASBLA Boater Safety Training, June 2021
- Wilderness First Aid 16-Hour Training, March 2022
- OSHA 8-hr HAZWOPER Refresher Training, March 2023