SECTION 4 TECHNICAL ABILITY

The Teichos Energy team, led by Stephen Voorhees and Shuman Moore, is an assembly of experts with deep-rooted expertise in large-scale renewable energy systems. Mr. Voorhees, with his rich 25-year background in the renewable sector, has demonstrated proficiency in the strategic development and execution of significant energy projects, including the development of 450-megawatt (MW) wind energy capacity under Ridgeline Energy. This expertise is complemented by his insightful leadership during Veolia's integration, showcasing his adeptness in managing complex energy projects at scale. On the other hand, Shuman Moore contributes his extensive 40-year experience in the global power sector, with a particular focus on the operational startup and management of diverse generation technologies. His experience encompasses the leadership of over 8,500 MW of various energy generation projects, including substantial geothermal power ventures, underscoring his capability in handling multifaceted energy systems.

The team's technical expertise is further elevated by specialists like Darrel VanCoevering and Jim Voorhees. Mr. VanCoevering, with a 61-year career in power system operations, offers in-depth knowledge in managing large-scale energy infrastructures, crucial for the logistical and technical challenges of utility-scale solar projects. His previous role as Director of System Operations at Bonneville Power Administration exemplifies his command over intricate energy distribution systems. Jim Voorhees' focused experience in renewable energy project management, particularly in site identification and development for solar and wind projects, is vital for the early stages of solar project development. Additionally, the team's strategic approach is fortified by Dani Torcolacci's specialization in environmental compliance and permitting, and Boyd Pro's analytical expertise in energy assessment, equipment procurement and construction, ensuring that the project not only adheres to stringent environmental standards but also is grounded in sound economic analysis.

Central to the Teichos Energy team's approach is the emphasis on forging strong local partnerships, particularly in Maine, to ensure the seamless integration of the solar project within the regional context. This involves collaborating closely with local stakeholders, including landowners, regulatory bodies, and community groups, to align the project with Maine's specific environmental, economic, and social objectives. The team's collective experience in nurturing robust relationships at various project locales will be instrumental in establishing a cooperative framework in Maine, leveraging local knowledge and resources. This community-centric approach not only facilitates smoother project execution but also fosters sustainable and mutually beneficial outcomes for both the project and the local Maine communities.

The local Project development team includes Tetra Tech (civil engineering, stormwater management, natural resource assessments, wildlife, permitting, historic archaeological resources, sound assessment); James W. Sewall Company (Survey), Public Archaeology Laboratory, Inc. (historic architecture survey); Viewshed, LLC. (visual impact analysis); Broadwater Environmental, LLC (soil surveys); Verrill Dana (legal counsel); POWER Engineers (community outreach); S.W. Cole Engineering, Inc. (geotechnical engineering); and SGC Power Engineering (Interconnection).

An organizational chart is provided in Figure 4-1. Resumes detailing the experience and qualifications of key team members are presented in Exhibit 4-1.

Figures

- Figure 4-1 Project Organizational Chart

Exhibits

- Exhibit 4-1 Resumes

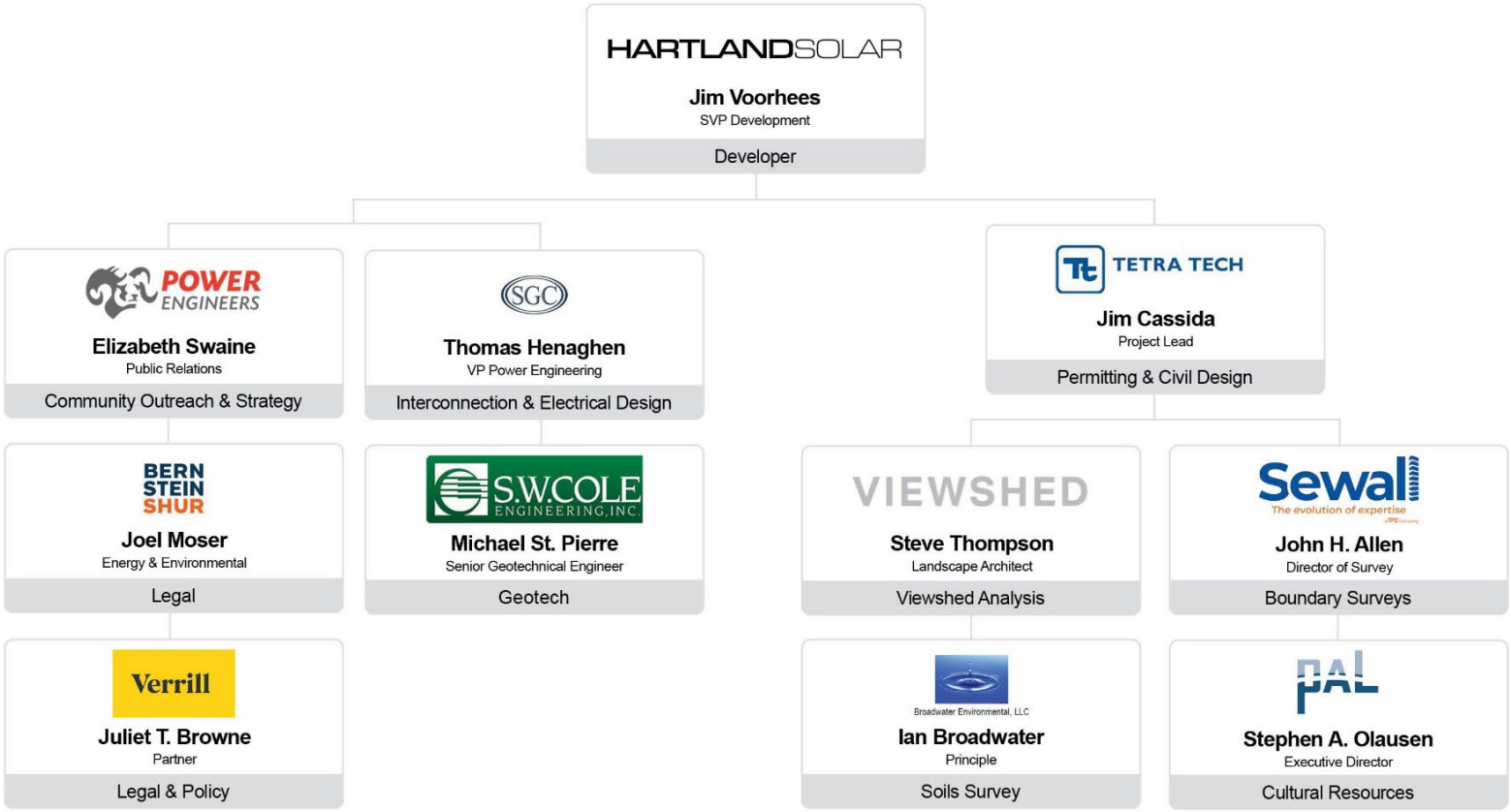


Figure 4-1 Project Organizational Chart.

EXHIBIT 4-1 RESUMES

Darrel VanCoevering
SVP Electric Utilities

Mr. VanCoevering's extensive career in the energy sector spans 61 years, with a significant focus on system operations and energy consulting. He spent 37 years at the Bonneville Power Administration, advancing through various roles and eventually serving as the Director of System Operations for 11 years. In this role, Mr. VanCoevering was responsible for overseeing the operation of the power system, and he also held key positions such as the Chairman of the Board of the Northwest Power Pool and a board member of the Pacific Northwest Security Coordinator. His tenure at the Bonneville Power Administration was characterized by his effective leadership and technical expertise in managing large-scale power systems.

Post-retirement, Mr. VanCoevering founded EnTranTek LLC, an energy consulting firm. His work involved the initial formation of early Independent System Operators (ISOs), including Grid South and Grid West. He also played a significant role in various interconnection projects for both wind and solar generation with major utilities and ISOs such as Florida Power & Light, New York ISO, Oklahoma Gas & Electric, and California ISO. These projects included key developments like the Pattersonville Solar in New York and multiple wind farms in Idaho, highlighting his contribution to integrating renewable energy sources into the grid. Mr. VanCoevering holds a Bachelor of Science in Electrical Engineering from Oklahoma State University and is a retired Registered Professional Engineer in Oklahoma and an IEEE Life Member, reflecting his technical background and professional commitment to the field of electrical engineering.

Relevant Experience

61 years of experience

Bonneville Power Administration, 37 years

- Various roles (26 years)
- Director of System Operations (11 years) – During this period, also served as Chairman of the Board of the Northwest Power Pool and was a member of the Board of Directors of Pacific Northwest Security Coordinator.

EnTranTek LLC

Worked on the formation of early Independent System Operators (ISOs), including Grid South and Grid West (both projects were abandoned before startup).

Interconnection projects involving wind generation with:

- Florida Power & Light
- New York ISO
- Oklahoma Gas & Electric (Southwest Power Pool)
- Western Area Power Administration
- Idaho Power
- PacifiCorp
- Sierra Pacific
- California ISO
- Bonneville Power Administration

- Tri-State
- ERCOT

Interconnection projects involving solar generation with:

- California ISO
- Imperial Irrigation District
- PacifiCorp
- Southern Company
- Tennessee Valley Authority
- Idaho Power
- New York ISO
- PJM
- ISO-NE

Project Developments Include

- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA
- Rockland Wind Farm, 124 MW, ID
- Goshen Wind Farm, 124 MW, ID
- Wolverine Creek Wind Farm, 50 MW, ID
- Meadow Creek Wind Farm, 120 MW, ID

Education

- Bachelor of Science in Electrical Engineering, Oklahoma State University

Memberships

- Registered Professional Engineer, Oklahoma (retired)
- IEEE Life Member

Jim Voorhees
SVP Development

Mr. Voorhees brings 20 years of experience in renewable energy development, primarily focusing on originating and developing utility-scale wind and solar projects. His journey in this field began in 2001 when he became a founding member of Ridgeline Energy, taking on roles as a project manager and land agent. In this capacity, he was instrumental in prospecting greenfield wind energy generation projects across the western United States. His achievements include advancing 180 Megawatts of wind generation from early site feasibility to development and permitting stages, eventually transitioning these projects to the construction phase.

During his tenure at Ridgeline Energy, Mr. Voorhees directed wind and solar land use projects on federal and state lands, collaborating with agencies like the BLM, Department of Interior, US Forest Service, Department of Agriculture, and various state land agencies. His work often involved pioneering projects in these Western regional offices, necessitating extensive consultation, permitting efforts across multiple agencies, and managing applications for Environmental Assessment and Environmental Impact Statements under the National Environmental Policy Act (NEPA).

Since 2012, Mr. Voorhees has been a key figure at Teichos Energy, contributing as a founding member, Director of Site Origination, and currently as the Senior Vice President of Development. His notable contributions at Teichos include initiating the first coal to solar project, successfully securing $8 million in federal mine reclamation funding to transform an abandoned mine site into a 45-megawatt solar facility.

Relevant Experience

20 years of experience

- Teichos Energy, Founding Member
- Ridgeline Energy, Founding Member

Project Developments Include

- Audenried Solar, 45 MW, PA
- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA
- Rockland Wind Farm, 124 MW, ID
- Goshen Wind Farm, 124 MW, ID
- Wolverine Creek Wind Farm, 50 MW, ID
- Meadow Creek Wind Farm, 120 MW, ID

Education

- Bachelor of Applied Science (BASc), Geography, University of Utah

William Parkhurst
SVP Finance

Mr. Parkhurst has had an extensive career spanning over 30 years in the financial services industry, specializing in project finance, risk management, and e-commerce, among other areas. He has been instrumental in leading technological advancements and financial product innovations, helping companies adapt to new market structures, client service methodologies, and operational technologies.

He notably served as the US Head of Fixed Income e-Commerce at UBS Investment Bank, where he played a key role in strategic investments in Thompson TradeWeb and The Clearing Corp (ICE Clear), also serving on the board of both companies.

Mr. Parkhurst also founded Phoenix Greenworks Capital, a merchant banking firm focused on financing renewable energy projects and offering investment advisory services. Under his leadership, the team collaborated with various stakeholders in the renewable energy sector, including developers, utilities, and government agencies, to enhance operational efficiency and reduce costs, energy consumption, waste, and pollution.

At Phoenix, his focus was on fostering partnerships with project sponsors, both public and private sector entities, and investors, to engage in investment activities in the global market for renewable energy, waste management, and carbon reduction infrastructure projects.

Currently, Mr. Parkhurst is a board member of Teichos Energy LLC, a large-scale solar development company, directing the Marketing and Finance areas. He aims to use his investor network to expand the utility-scale solar market opportunity.

Relevant Experience

30 years of experience

- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA

Companies

- UBS Investment Bank - Served as the US Head of Fixed Income e-Commerce.
- Phoenix Greenworks Capital - Founded this merchant banking enterprise.
- Teichos Energy LLC - Currently sits on the board, directing Marketing and Finance.

Additionally, he held significant roles in strategic investments and board positions at:

- Thompson TradeWeb
- The Clearing Corp (ICE Clear)

Education

- Baldwin Wallace College, Berea Ohio

Licenses

- FINRA series 7, 24 and 63 licenses

Dani Torcolacci
Director of Permitting

Ms. Torcolacci is an eminent professional in the renewable energy industry, with an extensive background spanning over a decade in environmental management, project development, and regulatory affairs. As Vice President of Permitting and Regulatory Affairs at Teichos Energy since 2013, she has effectively supervised the permitting processes for over 400 MW of solar development across diverse regions in the United States. Her responsibilities include the formulation of local solar legislation, conducting thorough environmental reviews, and facilitating coordination with local, state, and federal agencies. Demonstrating proficient leadership, Ms. Torcolacci has managed the permitting team with a focus on assessing project viability, monitoring performance metrics, and overseeing internal budgeting processes for the development team.

Additionally, Ms. Torcolacci has played a pivotal role in significant transactional activities, achieving the successful sale of over 60 MW of energy assets. Her comprehensive expertise is further evident in her strategic responses to Requests for Proposals (RFPs) for renewable energy projects, her adept handling of lobbying efforts at both state and federal levels, and her commitment to staying informed of market trends and policy changes across the United States.

In her academic endeavors, Ms. Torcolacci has excelled as an Adjunct Instructor in Alternative Energy at Lansing Community College. There, she significantly contributed to the orchestration of educational workshops and the enhancement of curriculum, an initiative supported by a National Science Foundation grant. Her tenure as a Staff Naturalist at Fenner Nature Center underscores her active engagement in environmental education and the effective management of volunteer-led programs.

Relevant Experience

17 years of experience

Director of Permitting & Regulatory Affairs (March 2013-Present)
Teichos Energy, Birmingham, MI

- Overseeing permitting for over 400MW of solar development.
- Creating local solar laws and managing local zoning approvals.
- Conducting environmental reviews and coordinating with local, state, and federal agencies.
- Leading the permitting team and monitoring project viability and performance.
- Managing environmental contractors for studies on species, wetlands, cultural reviews, and mitigation strategies.
- Participating in transaction teams for the sale of significant assets.

Project Manager (May 2009-December 2012)
Hurricane Wind / Ridgeline Energy, Miami, Florida

- Managing utility scale wind and solar energy projects.
- Engaging in market analysis, legislative reviews, and negotiations with off-takers and utilities.
- Supporting strategic planning, proposal development, and research efforts.
- Managing environmental consultants and coordinating environmental permits and agency relations.
- Overseeing lobbying efforts, land procurement, and lease negotiations.

Wind Group Co-op (June 2008-March 2009)
DTE Energy, Detroit, Michigan

- Planning communication and development timelines for wind farm development.
- Summarizing Requests for Proposal (RFPs) and forming an ordinance reference book.
- Supporting marketing efforts for renewable energy programs.

Adjunct Instructor- Alternative Energy (March 2013-June 2014, Part-time)
Lansing Community College, Lansing, Michigan

- Coordinating educational workshops and assisting in planning international conferences.
- Aiding in curriculum development for building smart programs, including LEED curriculum.

Staff Naturalist (August 2012-December 2013, Part-time)
Fenner Nature Center, Lansing, Michigan

- Coordinating and delivering environmental programming.
- Overseeing volunteer coordination and management.

Project Developments Include

- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA
- Rockland Wind Farm, 124 MW, ID
- Goshen Wind Farm, 124 MW, ID
- Wolverine Creek Wind Farm, 50 MW, ID
- Meadow Creek Wind Farm, 120 MW, ID

Education

- Bachelors: University of Michigan (Ann Arbor)
    - Major: Program in the Environment, Sustainable Development & Marketing
    - Minor: Italian

Memberships & Certifications

- USGBC LEED
- Former Lobby Day Chair of Florida Renewable Energy Producers Association
- Certified in 3 environmental educational programs (Project WET, Project Wild, and Project Learning Tree)
- Member of Brownfield Redevelopment Authority for City of Birmingham

Boyd H. Pro
Director EPC

Mr. Pro, with over 19 years of experience in the renewable energy industry, is a well-regarded expert in energy resources, technologies, and various related disciplines. His areas of specialization include wind and solar performance, transportation electrification, strategic planning, energy storage, distributed energy resources, and biomass energy. Serving a diverse global clientele, Mr. Pro's work encompasses engagements with state energy offices, private developers, banks, non-profits, owner/operators, Native American Tribes, and over 30 US utilities. Additionally, he collaborates closely with EPC (Engineering, Procurement, and Construction) firms and equipment manufacturers, playing a vital role in designing projects and procuring equipment.

During his 5-year tenure at Black & Veatch Corporation, he served as a Lead Renewable Energy Consultant, playing a crucial role in the Global Renewable Energy Group with a special focus on strategic planning and solar performance. His innovative contributions in developing new analytical methods and leading solar performance initiatives are especially noteworthy. Furthermore, his combined 7 years at Chinook Wind / ArcVera Renewables as a Solar Services Lead and Wind Energy Analyst were transformative. In this position, he provided comprehensive wind and solar energy engineering services, including resource assessment, remote sensing campaign management, and the development of various analytical tools and applications.

Relevant Experience

19 years of experience

Chinook Wind & ArcVera Renewables
Solar Services Lead & Wind Energy Analyst, Seattle, WA

Provided wind and solar energy independent and owner's engineering services, specifically resource assessment, remote sensing campaign management, energy production estimation, project design, site evaluation, power output simulation, operational performance review, and due diligence for potential and existing wind and solar power sites. Developed several analytical tools and applications for these purposes. Served as Solar Services Group Lead under ArcVera Renewables (Chinook Wind and V-Bar).

Black & Veatch Corporation
Lead Renewable Energy Consultant, Seattle, WA & Overland Park, KS

Lead consultant within the Global Renewable Energy Group, specializing in strategic planning, distributed energy assessment, solar performance, and biomass energy. Served as a technical lead in B&V's solar performance group, developing new analytical methods and training material. Lead member of B&V's strategic planning group, focusing on advanced technologies and distributed energy resource modeling. Supported technical wind energy due diligence work, bioenergy technology assessments, and internal tool development efforts.

Convivium Renewable Energy
Project Manager, Seattle, WA

Managed consulting services focusing on community-scale renewable energy development, including resource assessment, feasibility review, environmental impact analyses, remote sensing campaign management, wind turbine monitoring and maintenance, and integrated resource planning.

Technical Consulting
Los Angeles, CA

Provides consulting services for clients including project developers, utilities, government, non-profit and community organizations, and Native American Tribes. Specializes in strategic planning, distributed energy, project development, solar PV generation, energy storage, and transportation electrification.

Project Developments Include

- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA

Emily Graham
Project Engineer

Ms. Graham has established a noteworthy career in engineering, marked by her role as a Project Development Engineer at Teichos Energy LLC in Seattle since January 2020. In this position, she plays a key role in developing utility-scale solar sites, which involves creating detailed civil site plans and performing extensive terrain and civil analyses. Her work is critical in identifying feasible points of interconnection and suitable sites for solar energy projects. Ms. Graham's expertise in renewable energy is further evidenced by her previous experience as a Project Engineer at Seattle University Project Center. During her tenure there, she collaborated with Sound Transit and other engineers to design an interactive noise map for Seattle's Light Rail expansion. This project showcased her technical skills in ArcGIS and her ability to engage effectively with community projects.

Beyond her professional pursuits, Ms. Graham's dedication to global sustainability and community service is evident in her volunteer efforts. With Kilowatts for Humanity in Zambia, she made a lasting impact by implementing a solar energy kiosk, electrifying a rural community. Her stint as a Volunteer Structural Engineering Intern with Miyamoto International in Nepal involved the seismic retrofit of essential infrastructure, highlighting her versatility and commitment to diverse engineering challenges. Ms. Graham's educational background, a Bachelor of Science in Civil Engineering with a major in Spanish from Seattle University, underpins her technical and intercultural expertise. Her academic journey, distinguished by multiple honors and scholarships, reflects her dedication to engineering and her pursuit of excellence in her field.

Relevant Experience

4 years of experience

- Designed preliminary site plans for over 700 MW of early-stage solar sites.
- Designed mine reclamation plans in coordination with state agencies to reclaim 320 acres of abandoned mine lands.
- Conducted power flow analysis for interconnection applications in several power markets.
- Identified a portfolio of 20 GW of solar prospects in the United States.

Project Developments Include

- Jackson Center Solar, 40 MW, PA
- Audenried Solar, 45 MW, PA

Education

- Bachelor of Science in Civil Engineering, Major in Spanish, Seattle University, Seattle, WA

Honors

- Bannan Scholar, Sperry Goodman Scholar, Society for Women Engineers Scholar
- American Water-Works Association Scholar
- Janet Quillian Scholarship for International Development
- Dean's List, Tau Beta Pi Engineering Honors Society
- Alpha Sigma Nu Jesuit Honors Society.

Vincent Hansen

Director Greenfield Development / Project Manager

Vincent Hansen offers over 15 years of comprehensive experience in the renewable energy sector, with a focus on the technical intricacies of solar and wind energy projects. His expertise lies in the nuanced areas of asset origination, management, and rigorous due diligence, underpinned by a deep understanding of the renewable energy landscape. His tenure at Teichos Energy, Veolia Environment America, and Ridgeline Energy have seen him excel in areas like site identification, detailed analysis of power markets and policies, and the strategic management of Request for Proposals (RFPs) for Power Purchase Agreements (PPAs). He is adept at establishing and maintaining complex financial tracking systems, managing project deliverables, invoices, and performing sophisticated financial forecasting.

Mr. Hansen's technical acumen is complemented by his strong project management abilities. He has effectively navigated the complexities of developing and originating high-volume solar and wind energy projects. This includes playing a key role in securing significant contracts such as a 20-year REC Contract with NYSERDA and a 140 MW PPA with the Maine PUC. His ability to manage and oversee the development of 250 MW of solar projects and the origination of an extensive pipeline of solar and wind leases across numerous U.S. states highlights his deep technical knowledge and managerial expertise. Vincent led in leading the development of a comprehensive knowledge database, detailing critical elements like transmission capacities, zoning ordinances, environmental constraints, and landowner information, demonstrating his technical proficiency and leadership in the field of renewable energy.

Relevant Experience

15 years of experience

- Instrumental in securing major contracts like a 20-year REC Contract for 25 MW with NYSERDA and a 140 MW PPA with the Maine PUC.
- Initiated and facilitated the development of 250 MW of solar projects, operational, under construction, or in late-stage development.
- Originated a pipeline of several hundred MW of solar and wind leases across various U.S. states.
- Identified over 20 GW of new solar prospects across eight US states.
- Led the creation of a comprehensive knowledge database covering transmission capacities, zoning ordinances, environmental constraints, and landowner information.

Notable Project Developments Include

- Pattersonville Solar, 20 MW, NY
- Jackson Center Solar, 40 MW, PA
- Rockland Wind Farm, 124 MW, ID
- Goshen Wind Farm, 124 MW, ID
- Wolverine Creek Wind Farm, 50 MW, ID
- Meadow Creek Wind Farm, 120 MW, ID

TETRA TECH

James Cassida

Senior Program Director, Energy & Natural Resources

EXPERIENCE SUMMARY

Mr. Cassida has worked for his entire career as a director and/or project manager specializing in regulatory permitting and compliance. He has extensive management experience within the power delivery and renewables industry and a documented record of guiding projects through design and development, permitting, construction and operation. He has worked on transmission, wind, and solar energy projects throughout the U.S. and Canada with a strong concentration in the Northeast and Mideast regions. Within the challenging regulatory permitting environment, Mr. Cassida has taken on various program roles working as a regulator, environmental consultant and developer. As the Director of the Maine Department of Environmental Protection (Maine DEP), Division of Land Resource Regulation, he managed a staff of 37 licensing, enforcement, and planning professionals in 4 regional offices and was responsible for the implementation of a 3.7 million-dollar annual budget. He directly managed the administration of Maine's Wind Energy Act and established the Maine In-Lieu-Fee wetland mitigation program in cooperation with the U.S. Army Corps of Engineers. Mr. Cassida was the Senior Manager of Environmental Affairs for First Wind, LLC/SunEdison, Inc./TerraForm Power, Inc. for 4 years and managed a portfolio that included hundreds of wind, solar, and transmission projects at all stages of development, construction, and operation. He has a proven record of collaboration with project engineers, consultants and regulators developing design plans that meet or exceed project goals and expectations. His experience includes organizing and conducting scoping meetings; evaluating environmental impacts; Federal, State and Local permitting; and construction compliance monitoring. He is skilled at applying strategic communication techniques to encourage productive dialogue between stakeholders and to facilitate informed decision making.

RELEVANT EXPERIENCE

Senior Program Manager, 2022-Present
Confidential Transmission Line Project - Maine

Provided project management for the Tetra Tech team developing a Critical Issues Analysis (CIA) for a proposed transmission route in Maine, in response to the Maine Public Utilities Commission Northern Maine Renewable Energy Development Program Transmission Request for Proposals. The purpose of the CIA is to evaluate the development of the potential project in more detail and identify possible environmental constraints, fatal flaws, or permitting issues that would impact construction. The CIA provides information related to local, state, and federal environmental regulations, protected species, applicable permits, and potential regulatory obligations associated with the proposed project.

Senior Program Manager, 2021-Present
Hartland Solar Project – Teichos Energy., Hartland, Maine

Provided project management to other Tetra Tech staff directly managing the completion of a critical issue analysis (CIA) and subsequent field studies for a proposed 150 MW solar project with an approximately 1,200 acres study area. Field studies being completed for the project include vernal, pools, wetlands, RTE surveys, soil surveys, various wildlife surveys as well as cultural surveys, sound studies, and visual impact analysis.

Project Manager, 2021
Saddleback Solar Project – Patriot Renewables, LLC., Carthage, Maine

Managed spring vernal pool studies for an approximately 400 acres study area in accordance with the Maine Department of Environmental Protection's Chapter 335 of the Natural Resources Protection Act and the criteria for identifying a Significant

EDUCATION

MS, Public Administration, University of Southern Maine, 2009

BS, Botany & Marine Resources, University of Maine, 1986

AREAS OF EXPERTISE

Federal, State & Local Permitting

Erosion & Sediment Control

Regulatory Compliance Management

Stormwater Management

Project Management

Wetland Delineation

Mitigation Planning

TRAINING/CERTIFICATIONS

Trainer - Basic & Advanced Erosion & Sediment Control Practices, Maine Nonpoint Source Training Center, August, ME, 1995-2007

CPR and First Aid, 2018

OSHA HAZWOPER Certification, 2012

ORGANIZATIONS

Northern New England Chapter of the American Planning Association

National Association of Environmental Professionals

International Erosion Control Association

Maine Association of Wetland Scientists

Society of Wetland Scientists

The Wildlife Society, New England Chapter

YEARS OF EXPERIENCE

33

Vernal Pool are described in detail in the April 2014 Maine Association of Wetland Scientists Vernal Pool Technical Committee Vernal Pool Survey Protocol. This survey effort focused on the requirements to meet Maine regulations related to vernal pools, as well as recording egg mass counts in Amphibian Breeding Areas.

Project Manager, 2019-Present
Western Maine Renewable Energy Project – Western Maine Renewable Energy, LLC., Moscow, Maine
Project Manager for the natural resource studies, civil design and Federal, State and local permitting for the 58.8 MW wind project. Managed field teams conducting all required natural resource surveys including wetlands, vernal pools, RTE, soils, lynx, eagles, bats, breeding birds, norther spring salamanders as well as other technical surveys including historic architecture, archeological, sound, visual and shadow flicker.

Project Manager, 2019-2020
Winslow Solar Project – NextEra Energy, Inc., Clinton and Benton, Maine
Project Manager for the civil design and State and local permitting for the 20MW solar project. The Project has received a State Site Law permit and local approval from the Town of Clinton. Permits for the Town of Benton are currently in development with expected completion in the second quarter of 2020.

Project Manager, 2019-2020
Confidential 5MW Project – Maine
Project Manager for the civil design and State and local permitting for a confidential 5MW solar project in central Maine. The project is currently under development.

Program Compliance Manager, 2019
Central Maine Power, North American Electric Reliability Corporation Compliance Project, ME
Project Compliance Manager responsible for managing the construction compliance for the North American Electric Reliability Corporation (NERC) Compliance Project throughout the Central Maine Power (CMP) service area. The NERC Compliance Program identified locations within the existing CMP transmission corridors that did not conform to NERC safety standards and required system upgrades. System upgrades included the replacement of poles and conductors at 55 locations and required construction compliance monitoring to ensure that the general contractors followed the construction stormwater pollution prevention plan (SWPPP). Conducted weekly tailgates to review erosion & sediment control requirements and periodic site inspections to review project status and compliance.

Project Compliance Manager, 2015–2016
First Wind /SunEdison, Rock Springs Wind Project, TX
Project Compliance Manager responsible for managing the construction and permit compliance for the 149.7 MW wind project in Del Rio, TX. Worked cooperatively with Mortenson's Wind Energy Group to temporarily close the construction down during the transition in ownership from SunEdison, Inc. to Akuo Energy.

Project Developer, 2014–2016
First Wind /SunEdison, Massachusetts Solar Project, MA
Project Developer responsible for managing the construction and permit compliance for the 17 MW DC solar project in Warren, MA. Spread across three sites, the MA Solar Project is the second largest solar facility in Massachusetts. The project is comprised of more than 57,000 72-cell, 300-watt solar panels. This energy powers the University of Massachusetts and contributes to the state's goal of installing 1,600 MW by 2020. The projects will collectively produce more than 20,000 MWh per year.

Program/Project Manager, 2009–2010
Fox Island Wind Project, ME
Supervised the project management team at Maine DEP responsible for the review of the Fox Island Wind Project. The Fox Island Wind Project is a 1.5 MW community wind energy facility on the island of Vinalhaven, Maine in Penobscot Bay which provides energy for the communities of Vinalhaven and North Haven, Maine.

Program/Project Manager, 2011
Section 241 Re-design, ME
Supervised the project management team at Maine DEP responsible for the review of the expansion of the 39-mile, Section 241, 115kV transmission line. This transmission line expansion project resulted in a 75 foot wide expansion of an existing right-of way and involved the permanent loss of 1,379 square feet of freshwater wetland, 2.06 acres of temporary wetland impact, 64.2 acres of conversion from forested wetland to scrub shrub wetland and impacts to the critical terrestrial habitat of one Significant Vernal Pool along the corridor expansion. The project was located in the Towns of Moscow, Bingham, Solon, Brighton Plantation, Athens, Cornville, Skowhegan, Clinton, and Benton.

Program/Project Manager, 2011
Downeast Reliability Project, ME
Supervised the project management team at the Maine DEP responsible for the review of the permit application for the Downeast Reliability Project. The Downeast Reliability Project involved utility line upgrades to approximately 43 miles of 115 kilovolt (kV) electric transmission line. The transmission line upgrades located in the City of Ellsworth and the towns and

townships of Fletchers Landing Township, Franklin, Sullivan, Township T7 SD, Steuben, Cherryfield, Milbridge, Harrington, and Columbia, Maine.

Program/Project Manager, 2010–2011
Maine Power Reliability Project (MPRP), ME
Supervised the project management team at Maine DEP responsible for the review of the permit application for the Maine MPRP. The MPRP included the construction of five new 345kV substations, one new 115kV substation, and related facilities linked by approximately 440 miles of new transmission lines.

Project Compliance Manager, 2014–2015
First Wind/SunEdison, Inc., Oakfield Wind Project, ME
Project Compliance Manager responsible for managing the construction and permit compliance for the 148 MW wind project in Oakfield, ME. Managed a compliance team that conducted daily inspections of the construction site throughout the construction process to ensure compliance with all SWPPP requirements and permit standards. Worked cooperatively with the Maine DEP third-party inspector (3PI) to inspect the project site on a weekly basis.

Project Compliance Manager, 2014–2016
First Wind/SunEdison, Inc., Bingham Wind Project, ME
Project Compliance Manager responsible for managing the construction and permit compliance for the 185 MW wind project in Bingham, ME. Managed a compliance team that conducted daily inspections of the construction site throughout the construction process to ensure compliance with all SWPPP requirements and permit standards. Worked cooperatively with the Maine DEP 3PI to inspect the project site on a weekly basis.

Project Manager, 2014–2016
First Wind/SunEdison, Inc., Hancock Wind Project, ME
Project Compliance Manager responsible for managing the construction and permit compliance for the 51 MW wind project in Eastbrook, ME. Managed a compliance team that conducted daily inspections of the construction site throughout the construction process to ensure compliance with all SWPPP requirements and permit standards. Worked cooperatively with the Maine DEP 3PI to inspect the project site on a weekly basis.

Project Compliance Manager, 1998–1999
Maritimes & Northeast Pipeline Project, ME
Maine DEP Compliance Manager responsible for overseeing the construction of the Maritime & Northeast Pipeline segment between the Kennebec River & the Penobscot River. Conducted daily compliance of the construction site throughout the construction process to ensure compliance with all SWPPP requirements and permit standards. Worked cooperatively with the Maine DEP 3PI to inspect the project site on a weekly basis.

Project Compliance Manager, 1997–1998
Portland Natural Gas Transmission System (PNGTS) Pipeline Project, ME
Maine DEP Compliance Manager responsible for overseeing the construction of the PNGTS Pipeline between Portland and the New Hampshire border. Conducted daily compliance of the construction site throughout the construction process to ensure compliance with all SWPPP requirements and permit standards. Worked cooperatively with the Maine DEP 3PI to inspect the project site on a weekly basis.

TETRA TECH

Derek Hengstenberg, CWB®

Senior Ecologist

EXPERIENCE SUMMARY

Mr. Hengstenberg is a Certified Wildlife Biologist with 21 years of experience in wildlife biology, wind energy ecology, aero-ecology studies, restoration studies, endangered and threatened species studies, statistical analyses, and project management. Mr. Hengstenberg has extensive knowledge of wildlife studies and is well versed in scientific techniques and equipment including bat acoustic surveys, raptor migration studies, breeding bird surveys, avian radar ornithology, threatened & endangered species surveys, seabird & shorebird surveys, grassland bird surveys, tropical flora and fauna, and mist-netting of birds and bats. Mr. Hengstenberg has worked on natural resources projects across the country and throughout Latin America, conducting wildlife surveys on over 100 renewable energy projects, including solar, as well as onshore and offshore wind. Mr. Hengstenberg has extensive range of field experience throughout New England, the Mid-Atlantic, the Southeast, the Northwest, the Southwest, Puerto Rico, and Mexico. Mr. Hengstenberg is also experienced with endangered species and has worked closely with both state and federal agencies during the permitting process of wind energy and natural resource projects.

RELEVANT EXPERIENCE

Confidential Solar Projects, Dominion Energy, VA (2022). Mr. Hengstenberg managed and coordinated Northern-long Eared Bat acoustic surveys at multiple solar project sites. Tasks included work plan development, agency consultation, and reporting.

Coastal Virginia Offshore Wind, Dominion Energy (2018–present). Mr. Hengstenberg has been leading avian and bat related surveys and analysis in support of the COP development as well as with the onshore interconnection routing surveys. Mr. Hengstenberg has been the leading the offshore bat acoustic surveys and participating in agency consultation. Mr. Hengstenberg is providing senior-level input and review of the Avian and Bat sections of the COP, which was submitted to BOEM in 2021.

Northern Long-Eared Bat Planning Level Surveys/Acoustic Analysis - Camp Curtis Guild and Camp Edwards, Massachusetts Army National Guard, MA, (2019–present). Managing and providing support for a variety of natural resource services including acoustic analysis of large data sets as well as and planning level surveys for the northern long-eared bat (Myotis septentrionalis) at Camp Curtis Guild and Camp Edwards, Massachusetts. Field surveys include mist netting surveys, emergence surveys, and radio telemetry in accordance with federal protocols established by the United States Fish and Wildlife Service. Worked with team to facilitate the analysis of bat acoustic data as well as a bat database.

U.S. Department of the Navy, Naval Facilities Engineering Command, Mid-Atlantic, Northern Long-Eared Bat Surveys, Multiple East Coast locations (2015–2019)
Managing and providing field support for completion of presence/absence surveys for the federally threatened northern long-eared bat (*Myotis septentrionalis)* at multiple naval installations located along the east coast of the United States. Field surveys include bat acoustic and mist netting surveys in accordance with federal protocols established by the United States Fish and Wildlife Service. Information collected will be used by natural resources managers to make informed decisions at the eight Installations where these surveys are being conducted to avoid negative impacts to this vulnerable species from naval activities.

EDUCATION

MS, Wildlife & Fisheries Science, Mississippi State University, 2003

BS, Interdisciplinary Studies/Wilderness Research Administration, Plymouth State University, 1998

AREAS OF EXPERTISE

Wildlife Survey and Design

Endangered Species Surveys and Consultation

Statistical Analysis and Reporting

TRAINING/CERTIFICATIONS

Certified Wildlife Biologist, TWS, AL, Earned; 2011

Personal Survival Techniques (MAMAMT-363); 2017

Airport Wildlife Hazard Management Workshop; 2010

Basic and Advanced Erosion & Sediment Control; 2008

Bat Acoustic and Data Management Workshop; 2015

CPR and First Aid; 2015

OSHA HAZWOPER Certification and Refresher; 2008

Red Card Certification (Wildland Firefighter); 1997

PROFESSIONAL AFFILIATIONS

Member, The Wildlife Society

YEARS OF EXPERIENCE

21

OFFICE LOCATION

Portland, ME

Whiteface Mountain Solar Project, Borrego Solar, NY (2020–Present). Managed grassland bird and vegetation surveys at a solar mitigation site in upstate New York following a conservation lease work plan. Developed annual reports and consulted with state agencies.

Empire Wind I Offshore Wind Project, Equinor, NY. (2019–present). Mr. Hengstenberg lead the offshore bat acoustic survey and is providing senior-level input and review of the commercial avian and bat sections of the COP, submitted to BOEM in 2020, with revisions in-progress in support of the BOEM NEPA process.

Saddleback Ridge Wind Project, Patriot Renewables, ME, (2009–present). Managed and conducted pre-construction and post-construction natural resource surveys including a spring and fall avian radar survey, eagle use surveys, bat acoustic survey, raptor migration survey, migrant stopover survey, RTE species survey, and breeding bird survey as part of the permitting process. Conducted post-construction monitoring following permit conditions. Developed and negotiated pre- and post-construction monitoring plans, bird and bat conservation strategy plans with state and federal agencies, authored proposals, designed field studies, and prepared reports and memos.

Canton Mountain Wind Project, Patriot Renewables, ME, (2010–2021). Managed and conducted pre-construction and post-construction natural resource surveys including post construction monitoring, avian radar monitoring, eagle use and nest surveys, bat acoustic survey, raptor migration survey, migrant stopover survey, RTE species survey, and breeding bird survey as part of the permitting process. Developed and negotiated pre- and post-construction monitoring plans, bird and bat conservation strategy plans with state and federal agencies, authored proposals, designed field studies, conducted statical analyses, and prepared reports and memos.

Western Maine Wind Project, Patriot Renewables, ME, (2019–Present). Project biologist responsible for supporting a variety of pre-construction surveys including eagle use, Canada lynx, RTE, bat acoustics, bat hibernacula, and avian point counts. Developed and negotiated work plans and consulted with state and federal agencies.

Multiple Road and Bridge Improvement Projects, MassDOT, MA, (2015–Present). Worked with MassDOT lead biologist on designing a programmatic work plan to evaluate bridge and road projects for NLEB (*Myotis septentrionalis*). Provided support to over 100 presence/absence NLEB surveys at a variety of linear DOT projects in Massachusetts.

Construction and Operations Plan (COP), Bay State Wind Offshore Wind Farm, Ørsted, MA, (2018–2020). Project biologist responsible for completion of natural resource survey support including boat-based avian surveys and writing technical sections of permit documents.

Connecticut River Walk and Bikeway Project, Massachusetts Department of Transportation (MassDOT), MA, (2017–2020). Project Biologist who helped design a monitoring plan for a bald eagle (Haliaeetus leucocephalus) nest in the Project vicinity in accordance with USFWS Bald Eagle Monitoring Guidelines. Surveys included some field monitoring as well as installation of a camera. Camera was remotely monitored for two consecutive seasons.

Breeding Bird Surveys for the Biodiversity Initiative, Massachusetts Division of Fisheries and Wildlife (MassWildlife), (2017-2019). Principal Investigator overseeing breeding bird surveys throughout the state of Massachusetts to help MassWildlife monitor the effects of applied management practices at a variety of Wildlife Management Areas during breeding seasons of 2017 and 2019.

Multiple Road and Bridge Improvement Projects, Maine Department of Transportation, ME, (2015). Wildlife biologist supporting multiple presence/absence surveys for NLEB (*Myotis septentrionalis*) at a variety of linear DOT projects in Maine. Supported full spectrum bat detector deployment, habitat assessment, analysis of data, and reporting.

Spruce Mountain Wind Project, Patriot Renewables, ME, (2009–2015). Managed and conducted pre-construction and post-construction survey including a bird and bat mortality surveys, avian radar survey, bat acoustic survey, raptor migration survey, migrant stopover survey, RTE species survey, and breeding bird survey as part of the permitting process. Developed and negotiated pre- and post-construction monitoring plans with state and federal agencies, authored proposals, designed field studies, and prepared reports and memos. Provided the client advice on erosion and sediment control measures at the newly constructed site so that they comply with permit conditions.

TETRA TECH

Mao Lin

Wildlife Biologist/Environmental Scientist

EXPERIENCE SUMMARY

Mr. Lin is a biologist and environmental scientist with over 18 years of experience providing natural resource assessments and environmental permitting support for local, state, federal, and commercial clients. Prior to Tetra Tech, Mr. Lin worked for the U.S. Fish and Wildlife Service as a natural resource planner, wildlife biologist, and outreach specialist (2005–2014). He currently serves as the Program Chair for the Maine Chapter of The Wildlife Society and previously served as Chapter President (2015) and Board Member (2014–2019).

EDUCATION

BA, Environmental Studies, Binghamton University, 2002

Studied Conservation Biology, Antioch University New England

AREAS OF EXPERTISE

Rare, Threatened, and Endangered Plant and Wildlife Species Surveys

Invasive Species Surveys and Management Plans

Habitat Assessments

Field Data Collection

Technical Evaluations and Reports

Construction Compliance and Monitoring Support

Endangered Species Act Compliance

NEPA and State Environmental Policy Support

TRAINING/CERTIFICATIONS

Wilderness First Aid (exp. 2024/04/30)

OSHA Construction 30-Hour (completed 2022/03/08)

CPR, AED, First Aid (exp. 2023/11/03)

Erosion and Sedimentation Control Compliance (issued 2022/12/08)

Bat Acoustics (completed 2017)

PROFESSIONAL AFFILIATIONS

The Wildlife Society (Maine Chapter, Program Chair)

YEARS OF EXPERIENCE

18

OFFICE LOCATION

Portland, ME

RELEVANT EXPERIENCE

Confidential Solar Energy Project; Confidential Client; Hartland, Maine; 2021–Present. Task lead and field biologist for natural resource surveys including northern long-eared bat summer and winter habitat assessments, vernal pool surveys, stream delineations, rare natural communities, rare plants, and invasive plants. Consulted with state and federal wildlife agencies. Prepared, reviewed, or edited all technical reports and related permit sections.

Confidential Wind Energy Project; Confidential Client; Moscow, Maine; 2020–Present. Task lead and field biologist for natural resource surveys including northern long-eared bat summer and winter habitat assessments, wetland delineation/verification, vernal pools, rare natural communities, rare plants, invasive plants, bald and golden eagles, raptors, Canada lynx, Roaring Brook mayfly, northern bog lemming, northern spring salamander, and Phase 1 environmental site assessments. Consulted with state and federal wildlife agencies. Prepared, reviewed, or edited technical reports and permit sections.

Confidential Wind Energy Project; Confidential Client; Carthage, Maine; 2016–Present. Task lead and field biologist for natural resource surveys for an existing 12-turbine wind energy project. Surveys include northern long-eared bat habitat assessments, rare natural communities, post-construction fatality monitoring, bald and golden eagles, raptors, rare plants, invasive plants, and northern bog lemming. Consulted with state and federal wildlife agencies. Prepared, reviewed, or edited all technical reports and submitted them to the client and appropriate agencies.

Violette Brook Dam Natural Resource Inventory; Pare Corporation; Van Buren, Maine; 2023. Conducted a high-level habitat assessment and wetland delineation with a focus on federally listed threatened and endangered species habitat. Duties included desktop review, field reconnaissance, and agency consultation.

Confidential Solar Energy Projects; Confidential Client; Maine; 2022–2023. Evaluated 10 solar projects in Maine for their construction status and acquisition risks. Construction stages were documented as well as environmental conditions for compliance with state and federal permits.

Confidential Wind Energy Client; Confidential Client; Canton, Maine; 2016–2021. Deputy project manager, task lead, or field biologist for natural resource surveys for an eight-turbine wind energy project. Pre-construction surveys included a Phase I environmental site assessment, wetland delineation, vernal pools, and re-flagging natural resource boundaries and buffers prior to construction. Post-construction surveys include fatality monitoring, avian radar, and invasive plants. Prepared, reviewed, or edited all technical reports and submitted them to the client and appropriate agencies.

Confidential Solar Energy Project; Confidential Client; Clinton, Fairfield, and Benton, Maine; 2018–2020. Field biologist for natural resource surveys for three potential solar energy projects and associated connector lines. Surveys included bat habitat assessments, SM-3 bat acoustic detector deployment, wetland delineation, vernal pool documentation, natural community identification, and rare plant verification/mapping. Summarized results of the rare plant and natural community survey in a technical memorandum.

Post-Certification Compliance Inspection Task; Federal Energy Regulatory Commission; Nationwide; 2017–Present. Third-party inspector performing inspections on natural gas pipeline rights-of-way, compressor stations, and associated facilities for compliance with FERC's Plans and Procedures; FERC authorizations, and project-specific requirements. For each inspection, a formal and publicly available report and photo log provide observations and recommendations directly to FERC project managers. A total of 138 inspections have been completed across the country. Successfully completed FERC's 3-day environmental review and compliance training for natural gas facilities in 2017 and 2022.

Confidential Development Project; Confidential Client; Wyoming and Nebraska; 2023–Present. Field lead for baseline natural resource surveys including terrestrial visual encounter surveys (e.g., birds and other wildlife), noxious and invasive weeds, and aquatic resources (i.e., streams, wetlands). Duties include coordinating survey mobilizations and logistics, training field staff, leading daily safety briefings, writing and submitting daily field reports, tracking overall survey progress, conducting quality assurance and quality control of field data, and writing technical reports.

Confidential Renewable Energy Projects; Confidential Client; Oregon and Washington; 2022–Present. Field lead and field biologist for Washington ground squirrel surveys. Surveys include identifying ground squirrel burrows and delineating colonies. Additional survey work includes terrestrial visual encounter surveys (e.g., birds and other wildlife), and mapping noxious and invasive weeds. Duties include training field staff and leading daily safety briefings.

Massachusetts Department of Transportation; Statewide, Massachusetts; 2015–Present. Field biologist for transportation-related projects including northern long-eared bat habitat assessments, bat acoustic detector deployments (SM-3, SM-4), vernal pool studies, and raptor nest monitoring.

Various Commercial Wind Energy Clients; Northern Long-eared Bat Presence/Absence Survey Reports; Various U.S. Locations; 2015–Present. Provided technical review, editing, and data management support for northern long-eared bat presence/absence survey reports for multiple survey efforts throughout the U.S. Reports were reviewed and edited to ensure compliance with U.S. Fish and Wildlife Service guidelines.

Confidential Wind Energy Project; Confidential Client; Chesapeake and Virginia Beach, Virginia; 2022–2023. Conducted two consecutive years of aerial surveys for eagles, raptors, and waterbirds via helicopter. Other duties included desktop review; field reconnaissance; agency consultation; developing survey and monitoring plans; writing technical reports; developing presentations; and providing technical assistance related to bats, birds, and other natural resource concerns.

Wood Pawcatuck Watershed Resource Inventory; Pare Corporation; Rhode Island and Connecticut; 2022–2023. Conducted a high-level natural resource assessment of the Wood Pawcatuck watershed, with a focus on federally listed threatened and endangered species habitat. Duties included desktop review, field reconnaissance, agency consultation, coordinating the development of detailed figures, and writing a technical report.

Confidential Solar Energy Project; Confidential Client; New Hampshire; 2022. Field lead for reconnaissance-level wetland survey for six potential sites in New Hampshire. Duties included desktop review, field coordination, and daily safety briefings.

Confidential Wind Energy Project; Confidential Client; Long Island, New York; 2022. Conducted desktop and field-based habitat assessment for the federally listed endangered northern long-eared bat.

Confidential Gas Pipeline Upgrade Project; Confidential Client; Agawam, Massachusetts; 2021–2022. Field biologist conducting post-construction monitoring of a gas pipeline right-of-way for invasive species, wetland recovery, riparian buffer zone revegetation, and general vegetative cover and stabilization. All work completed according to permit authorizations and approvals including Massachusetts Department of Environmental Protection Water Quality Certification Conditions, Agawam Conservation Commission Order of Conditions, and the Federal Energy Regulatory Commission's Plans and Procedures.

U.S. Navy; Northern Long-eared Bat Presence/Absence Surveys and Reports; Northeast and Mid-Atlantic U.S.; 2015–2020. Wrote or provided technical review and editing of northern long-eared bat mist-netting and presence/absence survey reports for multiple survey efforts throughout the northeast and mid-Atlantic. Also provided data management support and assisted with mist-net surveys. Reports were written, reviewed, and edited to ensure compliance with U.S. Fish and Wildlife Service guidelines.

U.S. Navy; Natural Resource Assessments; Maine; 2015–2018. Performed a variety of natural resource services at three installations in Maine including erosion assessment, wetland delineation, vernal pool surveys, invasive plant species mapping and assessment, bat habitat assessment, bird and bat fatality monitoring, rare natural community mapping, and the development of a wild edible plant guide.

TETRA TECH

Clinton Parrish
Wildlife Biologist/Ecologist

EXPERIENCE SUMMARY

Mr. Parrish is a biologist with over 20 years of experience conducting wildlife and habitat projects throughout the Northeast and Western U.S. His responsibilities have included working as the lead wildlife biologist on a wide variety of terrestrial and aquatic projects with an emphasis on avian ecology, avian response to wind development, avian and bat acoustic monitoring, physical and biological stream surveys, habitat assessment and management, and carnivore monitoring. Most recently, Mr. Parrish's work has included conducting remote camera and winter tracking for Canada Lynx, Deer Wintering Area (DWA) assessment, bat acoustic surveys, breeding bird surveys, threatened and endangered species surveys, raptor migration studies, vernal pool surveys, and grassland bird surveys. Mr. Parrish has strong writing and data analysis skills and conducts analysis and reports for a majority of projects he participates in. Mr. Parrish is proficient with data management and analysis using Microsoft Access, geographic information system, and the program R.

EMPLOYMENT HISTORY

Tetra Tech, Inc., Biologist, 2013–present

Plymouth State University, Graduate Research and Teaching, 2011-2013

United Stated Department of Agriculture (USDA), Forest Service, Idaho Panhandle NF, Hydrologist, 2008–2010

Idaho Department of Fish and Game, Biological Technician, 2006–2008

USDA Forest Service, Region 5 FIA, Biological Technician, 2004-2005

New England Institute for Landscape Ecology, Biological Technician, 2003

Vermont Institute for Natural Science, Biological Technician, 2003

Student Conservation Association, GRSM NP, Forest Ecology Tech., 2002

RELEVANT PROPOSAL AREA EXPERIENCE

Western Maine Renewables, Pre- and Post-Construction Avian and Wildlife Surveys, Multiple Wind Project Sites, ME. 2014–2023. Served as field lead for completion of pre-construction and post-construction surveys at multiple wind/solar development sites in Maine, including Spruce Mountain, Saddleback Ridge, Canton Mountain, Dixfield Mountain, and Moscow Wind/Solar. Survey work was conducted in support of the permitting process and included surveys for breeding birds, Canada lynx, bat acoustics, bird and bat mortality, eagle use, raptor migration, migrant stopover; rare, threatened, and endangered species; and upland sandpiper (*Bartramia longicauda*) surveys Conducted field studies, data analysis and prepared reports.

Deer Winter Area Assessment. Various locations in Maine. 2018-2023-Revision Energy DWA assessment 2020. US Navy- Great Pond Deer Population Survey 2018. Cutler Deer Management Plan 2018. Cutler Deer Population Survey 2018. Teichos DWA assessment 2021.Indian Pond remote DWA assessment 2021. Project objectives varied though most

EDUCATION

M.S., Biology, Plymouth State University, 2013

B.S., Environmental Biology, Plymouth State University, 2003

AREAS OF EXPERTISE

- Avian Ecology
- Bat and Avian Acoustic Surveys
- Water and Stream Sampling and Assessments
- Benthic Invertebrate Sampling
- Biological Assessments

PROFESSIONAL AFFILIATIONS

- The Wildlife Society, New England Chapter
- Rocky Mountain Elk Foundation

TRAINING AND CERTIFICATIONS

- Wilderness First Aid, Freeport, ME (2018)
- Personal Survival Techniques, Mass Maritime Academy, Buzzards Bay, MA (2017)
- Bat Acoustic Survey Techniques and Analysis, BCM, Canoe Creek, PA (2015)
- GIS Certificate, University of Idaho (2012)
- Aquatic Invasive Species Detection and Prevention (2010)
- NEPA Training (2010)

OFFICE LOCATION

Portland, ME

YEARS OF EXPERIENCE

20

YEARS WITH FIRM

10

contained a component of on the ground assessment of deer use during winter conditions.

Maine Army National Guard, Canada Lynx Planning Level Survey, T2R9 Training Site, ME. 4/19–present. Task lead for Canada lynx (*Lynx canadensis*) surveys using remote cameras over a one-year period at a remote site in central Maine. Developed survey work plan, deployed units and is coordinating with staff to complete monthly camera checks. Future tasks include analysis of data and preparation of summary report.

Confidential Client, Vernal Pool Surveys, Hartland, ME; Bingham, ME; Winslow, ME and Winchendon, MA. spring 2018-Present. Vernal pool inventory team member for five large proposed solar projects in northern Massachusetts and central Maine. Surveys followed established survey protocols available from the Maine Association of Wetland Scientists and the Maine Department of Environmental Protection (Winslow site), and the Massachusetts Division of Fisheries and Wildlife Guidelines for Certification of Vernal Pool Habitat (Winchendon site). Vernal pools and potential vernal pools were located, delineated, mapped, and monitored in the spring/early summer. Described vegetation and habits associated with vernal pools.

Confidential Clients, NLEB Acoustic Bat Surveys, ME, NH, MA, MI, PA and CT. 2014–2020. Deployed hundreds SM3 and SM4 bat detectors for over 15 independent projects and conducted habitat assessments at each location in accordance with United States Fish and Wildlife Service (USFWS) Indiana Bat Summer Survey Guidelines. Preformed Habitat Assessments, analyzed bat acoustic data, manually vetted recordings to confirm species presence, and summarized data for reports

Plymouth State University, Department of Biology, Graduate Research Assistant, Plymouth, NH. 2011–2013. Lead investigator for study "Assessing the influence of Wind Development on high elevation avian species in northern New Hampshire". As the project lead, hired, trained, and supervised five field technicians, and conducted and supervised all survey efforts in 2011and 2012, including: point counts for avian species, capture and radio tracking of Bicknell's thrush (*Catharus bicknelli*), and vegetation sampling.

USDA, Forest Service, Biological Science Technician, Idaho Panhandle National Forest, Sandpoint, ID. 2008–2010. Performed a variety of hydrologic and habitat related duties. As an inspector, evaluated best management practices of road decommissions and improvements, and road and culvert evaluations to determine watershed functionality and potential risks; and timber harvests to ensure practices were in accordance with contractual obligations and National Environmental Policy Act guidelines. Also carried out stream surveys in accordance with Rosgen protocol for physical characteristics and R1 /R4 protocol to determine fish habitat suitability for monitoring and to establish baseline data prior to timber sales.

Idaho Department of Fish and Game, Wildlife Technician, ID. 2006–2008. Worked on multiple projects including: 1) winter surveys for fisher (*Martes pennanti*) by snow tracking, remote camera trapping, and establishing hair snare stations., 2) and as technician for the Pend Orielle Wildlife Management Area, conducted pair and brood counts for various waterfowl species; maintained and serviced waterfowl nesting structures; quantified vegetative communities using Habitat Evaluation Protocol. and 3) spawning Kokanee salmon (*Oncorhynchus nerka*) at an in-stream fish trap and then transporting eggs to be reared in Cabinet Gorge Fish Hatchery.

USDA Forest Service, Biological Science Technician. R5 Porterville, CA. 2004–2005. Participated in long-term monitoring program in the Sierra Nevada Mountains for forest carnivores with fisher and marten (*Martes americana*) as the primary target species. Participated in with Pacific Southwest Research Station pilot study to determine effects of forest management (timber removal, controlled burns) on fisher distribution. Thorough vegetation sampling and study testing effectiveness and permeability of hair snare designs was part of responsibilities.

New England Institute of Landscape Ecology, Ecological Biological Technician, Cannan, NH. 2003. Assisted with a territoriality study of Canada warbler (*Wilsonia canadensis)* during breeding season, including mist-netting with use of playbacks, banding, daily monitoring of individual birds, nest searching/monitoring, habitat sampling, geographic information system mapping, and data entry.

Vermont Institute of Natural Science, NH Habitat Sampling, NY, VT. 2003. Conducted habitat sampling using transects in remote high-elevation locations compliment point counts for Mountain Bird Watch.

Student Conservation Association, Forest Ecology (Bio tech), Great Smoky Mountain National Park, TN. 2002. Conducted full survey of all vascular plant species, measured volume of coarse woody debris, and collected soil samples at long-term inventory sites as part of the Great Smoky Mountain National Park Forest Ecology Crew.

TETRA TECH

Tricia Pellerin, INCE

EXPERIENCE SUMMARY

Tricia Pellerin is a Senior Acoustic Engineer and Project Manager with the Boston office with a background in chemical and biochemical engineering. With more than 18 years of consulting experience, Tricia has been involved in the planning and permitting of many small and large-scale EISs. Tricia has extensive experience in assessing potential noise impacts, performing pre- and post-construction field studies, conducting acoustic modeling analyses, and performing regulatory compliance determinations for both conventional and renewable energy projects throughout the United States, Canada, and internationally. She has also been involved with conducting underwater acoustic modeling and impacts assessments with the purpose of assessing potential impacts on sensitive marine species.

EDUCATION

Environmental Science Graduate Program, 2005

MESc, Chemical and Biochemical Engineering, 2005

BESc, Chemical and Biochemical Engineering, 2002

TRAINING

Fundamentals of Engineering (EIT), MA, 2008

CadnaA Basic and Advanced Seminars

Noise Control Course for Buildings, Manufacturing Plants, Equipment and Products; 2006

Underwater Acoustics and Signal Processing; 2011

Irwin Carr Consulting, dBSea Underwater Noise Modeling Training, 2017

OFFICE

Boston, MA

YEARS OF EXPERIENCE

18

RELEVANT PROJECT EXPERIENCE

AES, Somerset Solar Project, NY

Somerset Solar, LLC, a subsidiary of AES, is proposing the construction and operation of the 125 MW AC solar facility in the Town of Somerset, Niagara County, New York. Ms. Pellerin participated in the detailed acoustic analysis required as part of the New York Section 94-c regulatory process. A baseline sound survey was completed. Both construction and operational noise impacts were evaluated including construction activities at laydown areas, HDD, and noise mitigation measures needed during operation. Both Exhibit 7 and its associated Acoustic Assessment appendix were prepared for submittal to ORES.

Innergex, Paeahu Solar Project, HI

Ms. Pellerin conducted the acoustic assessment for the Paeahu Solar Project, which is a 15 MW Solar PV facility of Maui. Ambient sound measurements were conducted, and a modeling analysis evaluated construction and operational sound sources including inverters and transformers. Compliance was assessed relative to the applicable Hawaii Administrative Rule, Title 11, Chapter 46, “Community Noise Control” (HAR § 11-46) regulations.

AEUG Union Solar, LLC, Union Solar Project, OH

Ms. Pellerin supported permitting of the Union Solar Project through conducting an acoustic assessment in accordance with Ohio Power Siting Board noise criteria. A baseline sound survey was completed to document existing conditions and noise generated during project construction and operation were considered. CadnaA was used to analyze potential impacts at noise sensitive receptors and compliance was assessed relative to the applicable requirements.

Hecate Energy Greene 1 LLC, Hecate Energy Greene 2 LLC, and Hecate Energy Greene County 3 LLC, Greene County Solar Facility, NY

Hecate is proposing to construct the Greene County Solar Facility, an approximately 50-megawatt photovoltaic solar facility in Greene County New York. Ms. Pellerin consulted with NYSDPS prepared the acoustic assessment for the project. Ambient sound monitoring was completed as well as acoustic modeling of the construction and operational sound sources. Ms. Pellerin also produced Exhibit 19 and its associated appendices such as the post-construction noise monitoring plan.

Hecate Energy Albany 1 LLC and Hecate Energy Albany 2 LLC, Coeymans Solar Farm, NY

Hecate is proposing to construct the Coeymans Solar Farm a 40-megawatt photovoltaic solar facility in Albany County, New York. Ms. Pellerin consulted with NYSDPS prepared the acoustic assessment for the project. Ambient sound monitoring was completed as well as acoustic modeling of the construction and operational sound

sources. Ms. Pellerin also produced Exhibit 19 and its associated appendices such as the post-construction noise monitoring plan.

One Energy, Goose Prairie Solar Project, WA.

One Energy proposes to construct and operate the Goose Prairie Solar Project, an 80 MW solar photovoltaic project with an optional battery storage system capable of storing up to 80 MW of energy located in Yakima County, Washington. Tetra Tech prepared an acoustic assessment, evaluating potential sound impacts relative to the applicable noise regulations prescribed in the Washington Administrative Code. Modeling was conducted for operations using CadnaA and construction noise was also assessed.

Clearway Energy, Daggett Solar Power Facility, CA.

The Facility is proposed on approximately 3,500 acres of land located approximately 0.5 mile east of the town of Daggett within the County of San Bernardino. The Facility will include a utility-scale, solar photovoltaic (PV) electricity generation and energy storage facility that would produce up to 650 megawatts (MW) of power and include up to 450 MW of battery storage capacity. Noise modeling was done using CadnaA to assess construction and operational conditions.

NextEra Energy Resources, Wheatridge Solar Project, OR

Tetra Tech supported the permitting of the Wheatridge Wind Energy Facility as well as the associated Wheatridge Solar Project in in Morrow and Umatilla counties, Oregon. Tetra Tech prepared Exhibit X for submittal to ODOE, evaluating the potential noise impacts associated with the project relative to the applicable OAR Chapter 340, Division 35. Equipment included inverters, transformers as well as battery storage.

Nestlewood Solar I LLC, Nestlewood Solar Project, OH

The solar project would be an 80 MW solar photovoltaic facility in Clermont and Brown Counties, Ohio. Tetra Tech completed a comprehensive acoustic assessment including a baseline sound survey and modeling analysis to assessment compliance versus the Ohio Power Siting Board noise criteria. Ms. Pellerin also supported the project through providing expert testimony during the Ohio Power Siting Board hearing.

DUTC bn, LLC, Dutchman Solar Project, WY

The Dutchman Solar Project is proposed in Converse County, WY. And includes approximately 1,190,488 solar modules and two battery energy storage systems (BESSs), two Project substations, two operations and maintenance (O&M) buildings, and 2.6 miles of overhead 230-kilovolt (kV) transmission line. Tetra Tech conducted a comprehensive acoustic modeling analysis, predicted offsite received sound levels at noise sensitive receptors. There were actually no numerical decibel limits applicable to the project so received sound levels were reported but not evaluated relative to an acoustic design goal.

Mountain Home Solar 1, LLC, Mountain Home Solar Project, ID

Ms. Pellerin completed an acoustic modeling analysis and compliance assessment for the Mountain Home Solar Project in Elmore County, Idaho. The Project is a ground-mounted single axis tracking photovoltaic system, with a nominal capacity of up to 20 megawatts alternating current. Elmore County Zoning specifies noise requirements, so the model analyzed the interconnect and pad-mounted transformers as well as the inverters and motors. Compliance was assessed relative to the requirements and the results were presented in a technical memo.

Hawkeye Solar II, LLC, Hawkeye Solar II Project, IA

The Hawkeye Solar II Project is a proposed 120-megawatt (MW) utility scale solar facility and 75-MW battery energy storage system located in Clinton County, Iowa. The Project will be sited in an approximately 1,230-acre Project area, including easements, in a rural area located adjacent to Hawkeye I and Hatchling Solar Projects in Clinton County. CadnaA was used to evaluate potential offsite noise impacts associated with the equipment sound sources including inverters, step-up transformers, battery energy storage units, substation transformers, and PCS inverters. Received sound levels were predicted at noise sensitive receptors and presented in an acoustic assessment produced in support of the project permit application.

Avangrid Renewables LLC, Lund Hill Solar Energy Project, WA.

The Lund Hill Solar Project is a 150-megawatt solar energy within Klickitat County, Washington. CadnaA was used to analyze potential noise impacts associated with the facility at nearby noise sensitive receptors. Results were evaluated relative to the Washington noise regulations. Construction noise was also assessed, and noise mitigation measures were recommended. The analysis was compiled into a section of the overall project EIS.

TETRA TECH

Kelly Waddle
Environmental Scientist and Planner

EXPERIENCE SUMMARY

Ms. Waddle is an environmental scientist with over 9 years of experience in environmental consulting in Maine and the Northeast. Since joining Tetra Tech in August 2020, Kelly had been an environmental planner and deputy project manager for multiple commercial-scale solar and wind development projects located in Maine, Connecticut, and New York. Project planning tasks have included assisting with permitting, survey planning, and financial/administrative compliance. Prior to her employment at Tetra Tech, Kelly served as project scientist, data manager, and scheduling coordinator at Stantec Consulting for 6 years. She has experience conducting diverse wildlife surveys and natural resource assessments to assist with the preparation of local, state, and federal permit applications. Her field work has primarily focused on avian and bat studies, including visual raptor surveys, nocturnal radar migration surveys, acoustic bat monitoring, bald eagle activity surveys, shorebird surveys, grassland bird surveys, and post-construction fatality monitoring. Kelly also has worked on projects involving phase I environmental site assessments, sediment sampling, lobster mitigation, Canada lynx presence/absence surveys, rare and invasive plant surveys, marine taxonomic statistical analysis, and wetland delineations. Ms. Waddle has strong technical writing and data analysis skills, which allow her to participate in preparing many different types of biological, natural resources, and environmental compliance reports and planning documentation.

RELEVANT EXPERIENCE

Confidential Client, Battery Energy Storage System (BESS) Site, Windham County, Connecticut (2023–present) –Project Manager for a field reconnaissance in Windham County Connecticut. The field reconnaissance focused on approximate extents of wetlands and other significant features. Tetra Tech prepared GIS deliverables and a representative photographic log.

Confidential Client, Battery Energy Storage System (BESS) Sites, Multiple Towns, Connecticut (2022–present) – Deputy Project Manager for a desktop constraints analysis of potential BESS sites in four townships across Connecticut. GIS team reviewed cultural resources, basic infrastructure constraints, wetland data, and biological resources, including Connecticut Department of Energy & Environmental Protection Natural Diversity Database (NDDB) and Core Forest areas. Assisted with project management and reviewing the results summaries of opportunities and constraints.

Confidential Clients, Solar Projects, Connecticut (2020–present) – Deputy Project Manager assisting with permitting support, reporting, and administrative tasks associated with four solar projects planned for development in eastern and central Connecticut. Project manager support is being provided to ensure the fast-paced schedule for securing the Connecticut Siting Council Application permits is met, including oversight and management of subcontractors. Technical services being provided by Tetra Tech have included wetland delineation, vernal pool, and various wildlife surveys. Assisted with preparation of Phase I ESA reports for multiple sites.

Confidential Client, Transmission Route, Maine (2022) – Deputy Project Manager assisting with a Critical Issues Analysis (CIA) for a large transmission route in Maine. Tetra Tech conducted a desktop analysis to identify possible environmental constraints, fatal flaws, or permitting issues that would impact the proposed transmission route. A

EDUCATION

B.A. Environmental Studies, Saint Michael's College, Colchester, VT 2014

AREAS OF EXPERTISE

- Avian and Bat Studies
- Biological Field Studies
- Data Management
- Federal, State, and Local Permitting
- Technical Writing and Reviews

TRAININGS AND CERTIFICATIONS

- Tetra Tech Project Management Training, Level 1, Certificate of Completion 2021
- First Aid CPR AED Certified, American Red Cross, 2022
- Offshore Personal Survival Techniques Training Certified, Maine Maritime Academy, 2017
- Secretary/Treasurer, Maine Chapter of the Wildlife Society, 2019–present
- Member, The Wildlife Society, Maine Chapter and National, 2016–present

OFFICE LOCATION

Portland, Maine

YEARS OF EXPERIENCE

9

YEARS WITH FIRM

3

web-based mapping application (StoryMap) was also used to identify project specific layers, publicly available constraint layers, and aerial imagery and other publicly available background layers.

Confidential Client, Solar Project, Somerset County, Maine (February 2021–present) – Deputy project manager of environmental services for a proposed solar project in western Maine. Assisting with project management, permitting support, reporting, and administrative tasks, including oversight and management of Tetra Tech field teams and subcontractors. Field studies being completed for the project include wetland delineation, vernal pool, RTE, soils, various wildlife surveys as well as cultural surveys, sound studies, and a visual impact analysis.

Western Maine Renewable Energy Project, Western Maine Renewables, LLC, Moscow, Maine (November 2020–present) – Deputy project manager for natural resource studies, civil design, and Federal, State, and local permitting for a proposed 58.8-megawatt wind project in western Maine. Assisting with project management, permitting support, reporting, and administrative tasks, including oversight and management of Tetra Tech field teams and subcontractors. Provided support to ensure the fast-paced schedule for securing the Maine Site Location of Development Act, Natural Resources Protection Act, United States Army Corps of Engineers, and other state and local permitting requirements were met. Assisted with Phase 1 ESA site visits and reporting.

Confidential Client, Solar Project, Somerset County, Maine (February 2021–present) – Deputy project manager of environmental services for a proposed solar project in western Maine. Assisting with project management, permitting support, reporting, and administrative tasks, including oversight and management of Tetra Tech field teams and subcontractors. Field studies being completed for the project include wetland delineation, vernal pool, RTE, soils, various wildlife surveys as well as cultural surveys, sound studies, and a visual impact analysis.

Confidential Client, Solar Project, Franklin County, Maine (April 2021–present) – Deputy project manager for spring vernal pool studies for a proposed solar project in western Maine. Assisting with reporting and administrative tasks, including oversight and management of field teams.

Confidential Clients, Solar Projects, Maine and New York (2019–2020) – Project scientist and data manager for multiple commercial-scale solar development projects located in Maine and New York. Responsibilities included preparing safety forms, survey planning/scheduling and conducting wintering bird surveys.

TETRA TECH

Matthew W. Moyen, PE

Senior Project Manager

EXPERIENCE SUMMARY

Mr. Moyen is a Senior Project Manager at Tetra Tech with 17 years of experience in planning, design, permitting, and construction as part of multidiscipline and multi-firm project teams who prides himself on building long-term, collaborative relationships and generating project-specific solutions that optimize client objectives. He leverages his diverse skill set and technical background to lead a range of commercial, industrial, and residential land development projects, renewable energy projects, and stormwater programs to successful completion for public agencies and private clients. Mr Moyen also provides peer review services of complex projects for municipal boards and state agencies.

RELEVANT EXPERIENCE

Solar Energy Facility Portfolio, ClearPath Energy, New York State, 2019 to Present. Project Manager for civil design and permitting services of 20 uniquely situated and challenging ground-mounted solar energy projects totaling over 120 megawatts across Broome, Chemung, Cortland, Herkimer, Lewis, Niagara, Oneida, Onondaga, and Tompkins Counties. Work includes conducting detailed due diligence reviews to determine the presence or absence of environmental resources, review local zoning bylaws, and identify local, state and federal permitting requirements; delineation of wetland resource areas; development of permitting and construction plans; preparation of local discretionary permit applications; visual assessments; environmental impact assessments under the State Environmental Quality Review Act (SEQR); development of Stormwater Pollution Prevention Plans (SWPPPs) for compliance with the State Pollutant Discharge Elimination System (SPDES) Construction General Permit; development of decommissioning plans; preparation of Department of Transportation access permit applications; development of a Net Conservation Benefit Plan in support of an Incidental Take Permit; preparation of Third-Party Occupation Agreement documents for work within a National Grid high transmission line easement; and leading public presentations as part of various permit approval processes.

Manktown Solar, Revision Energy, State of Maine, 2022. Civil Engineering Lead for site and stormwater design services on a 2-megawatt ground-mounted solar energy project in Lincoln County. Work included preparation of civil design plans and supplemental documentation that comply with applicable MDEP requirements in support of a Stormwater Management Permit by Rule and local Site Plan Review approvals.

Solar Energy Facility Portfolio, Omni Navitas Holdings (OYA Solar), New York State, 2020 to 2022. Project Manager/Civil Engineering Design Lead for civil design and environmental permitting services of 10 ground-mounted solar energy projects totaling over 50 megawatts across Chautauqua, Erie, Oneida, Oswego, and St. Lawrence Counties. Work included delineation of wetland

Education

BS, Civil Engineering Technology, Wentworth Institute of Technology, 2006

Area of Expertise

Civil Engineering & Permitting

Registrations/Affiliations

Professional Licensed Engineer:
Maine, No. 18213
Massachusetts, No. 58513
New Hampshire, No. 15755
New York, No. 108132
Rhode Island, No. 15061

American Society of Civil Engineers

Boston Society of Civil Engineers Section

Wentworth Institute of Technology, Civil Engineering Professional Advisory Committee Member

Training/Certifications

10-Hour OSHA Outreach Training for Construction

Office

Marlborough, MA

Years of Experience

17

Years within firm

17

resource areas, development of wetland and waterway delineation reports, topographic and boundary surveys, preliminary civil design for local discretionary approvals, preparation of Full Environmental Assessment Forms under SEQR, and local, state, and federal permit guidance and support.

Solar Energy Facility Portfolio, Borrego, Commonwealth of Massachusetts, 2019 to 2021. Project Manager/Civil Engineering Lead for civil design and permitting services as part of an Engineering, Procurement, and Construction (EPC) team tasked with construction of four challenging ground-mounted solar energy projects totaling over 25 megawatts in Franklin and Worcester County. Work included advancement of permitting plans to issue for construction documents; development of SWPPPs for compliance with the US Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) Construction General Permit; and construction administration services.

Solar Energy Facility Portfolio, Cypress Creek Renewables, Commonwealth of Massachusetts, 2018 to 2020. Project Manager/Civil Engineering Lead for civil design and permitting services of 12 potential ground-mounted solar energy projects totaling over 60 megawatts across central and western Massachusetts. Work included delineation of wetland resource areas, development of comprehensive wetland and waterway delineation reports, topographic and boundary surveys, preliminary civil design for discretionary approvals, preparation of local, state, and federal permit applications, and leading public presentations as part of the permit approval processes.

Solar Energy Facility Portfolio, Bright Lite Energy, Commonwealth of Massachusetts, 2017 to 2018. Project Manager/Civil Engineering Lead for civil design and permitting services of four uniquely situated and challenging ground-mounted solar energy projects totaling over 25 megawatts in Franklin and Worcester County. Work included conducting detailed due diligence reviews to determine the presence or absence of environmental resources, review local zoning bylaws, and identify local, state and federal permitting requirements; delineation of wetland resource areas; coordination of ALTA/NSPS Land Title Surveys; development of permitting plans including solar facility infrastructure and utility interconnection layout, grading and stormwater Best Management Practices design; preparation of local, state and federal permit applications; and leading public presentations as part of various permit approval processes.

Statewide Stormwater Consent Decree Compliance and Design Support Services, RIDOT, 2019 to Present. Managing an on-call contract to provide RIDOT with a range of stormwater compliance measures. Assignments under this contract have included the development and implementation of 13 Stormwater Controls Plans (SCPs) for impaired water body segments in the Towns of Bristol, Portsmouth, Warren and Tiverton, including a total of 22 RIDOT-owned roadways, feasibility studies to identify constructable Structural Treatment Units (STUs), as well as design and permitting of several STUs to enhance treatment of stormwater runoff. Work has also included Illicit Discharge Detection and Elimination (IDDE) and Rhode Island Pollutant Discharge Elimination System (RIPDES) permit compliance and reporting activities.

Statewide Impaired Waters Support Services, MassDOT Highway Division, 2013 to Present. Managing a multi-year contract to provide MassDOT with a range of wetland and stormwater compliance measures including the design and permitting of stormwater Best Management Practices (BMPs) under the Impaired Waters Program, National Pollutant Discharge Elimination System (NPDES) permit compliance and reporting activities, Illicit Discharge Detection and Elimination (IDDE), Construction Oversight and general Stormwater Consulting and Environmental Services. Assignments under this contract have included impaired waterbody assessments; recommendation, design and permitting of stormwater BMPs as part of MassDOT's Retrofit and Programmed Project initiatives; BMP and culvert inspections and training; peer review services; on-call construction services; evaluations to determine sources of runoff flowing to MassDOT's drainage system, conducting field surveys, discharge monitoring and sampling, and IDDE investigations of MassDOT outfalls; sediment accumulation studies; providing GIS mapping of MassDOT impervious cover, drainage infrastructure, stormwater BMPs, and contributing catchment areas; and technical support services for required MassDOT reporting activities.

Nicholas R. Korzec, EIT

Civil Engineer

EXPERIENCE SUMMARY

Mr. Korzec is a Civil Engineer in the Land Development Group at Tetra Tech. He supports a range of land development, renewable energy, and stormwater improvement projects for public agencies and private clients. His experience includes a focus on stormwater management design, hydrology, grading, utility, site layout and roadway design. Mr. Korzec is proficient with AutoCAD Civil 3D, Sanitary and Storm Analysis, HydroCAD, and AutoTurn.

RELEVANT EXPERIENCE

Solar Energy Facility Portfolio, ClearPath Energy, Multiple Counties, NY, 2019 to Present. Civil Engineer for design and permitting services of 20 uniquely situated and challenging ground-mounted solar energy projects totaling over 120 megawatts across Broome, Chemung, Cortland, Herkimer, Lewis, Niagara, Oneida, Onondaga, and Tompkins Counties. Work includes development of permitting and construction plans; environmental impact assessments under the State Environmental Quality Review Act (SEQR); development of Stormwater Pollution Prevention Plans (SWPPPs) for compliance with the State Pollutant Discharge Elimination System (SPDES) Construction General Permit; development of decommissioning plans; preparation of Department of Transportation access permit applications; and preparation of Third-Party Occupation Agreement documents for work within a National Grid high transmission line easement.

Manktown Solar, Revision Energy, State of Maine, 2022. Civil Engineer for site and stormwater design services on a 2-megawatt ground-mounted solar energy project in Lincoln County. Work included preparation of civil design plans and supplemental documentation that comply with applicable MDEP requirements in support of a Stormwater Management Permit by Rule and local Site Plan Review approvals.

Solar Energy Facility Portfolio, Omni Navitas Holdings (OYA Solar), New York State, 2020 to 2022. Civil Engineer for the design and environmental permitting services of 10 ground-mounted solar energy projects totaling over 50 megawatts across Chautauqua, Erie, Oneida, Oswego, and St. Lawrence Counties. Work included preliminary civil and stormwater design for local discretionary approvals as well as preparation of Full Environmental Assessment Forms under SEQR.

Solar Energy Facility Portfolio, Borrego, Commonwealth of Massachusetts, 2019 to 2021. Civil Engineer for design services as part of an Engineering, Procurement, and Construction (EPC) team tasked with construction of four challenging ground-mounted solar energy projects totaling over 25 megawatts in Franklin and Worcester County. Work included advancement of permitting plans to issue for construction documents and

Education

BS, Civil Engineering, Northeastern University, 2013

Area of Expertise

Land Development

Registrations/Affiliations

Engineer In Training, Massachusetts

American Society of Civil Engineers

Training/Certifications

10-Hour OSHA Outreach Training for Construction, 2017

Office

Marlborough, MA

Years of Experience

10

Years within firm

7

development of SWPPPs for compliance with the US Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) Construction General Permit.

Solar Energy Facility Portfolio, Cypress Creek Renewables, Commonwealth of Massachusetts, 2018 to 2020. Civil Engineer for design services of 12 potential ground-mounted solar energy projects totaling over 60 megawatts across central and western Massachusetts. Work included preliminary civil and stormwater design for discretionary approvals.

Solar Energy Facility Portfolio, Bright Lite Energy, Commonwealth of Massachusetts, 2017 to 2018. Civil Engineer for design and permitting services of four uniquely situated and challenging ground-mounted solar energy projects totaling over 25 megawatts in Franklin and Worcester County. Work included development of permitting plans including solar facility infrastructure and utility interconnection layout, grading and stormwater Best Management Practices design as well as preparation of Notice of Intent and Site Plan Review applications.

Statewide Stormwater Consent Decree Compliance and Design Support Services, RIDOT, 2019 to Present. Civil Engineer supporting an on-call contract to provide RIDOT with a range of stormwater compliance measures. Assignments under this contract have included the development of Stormwater Controls Plans (SCPs) for impaired water body segments in the Towns of Bristol, Portsmouth, Warren and Tiverton, including a total of 22 RIDOT-owned roadways. Work includes desktop and field review of the watershed, a review of roadway ownership, identification of existing Structural Treatment Units (STUs), catchment area delineations, and potential STU locations within RIDOT right-of-way. Work has included Illicit Discharge Detection and Elimination (IDDE) and Rhode Island Pollutant Discharge Elimination System (RIPDES) permit compliance.

Statewide Impaired Waters Support Services, MassDOT Highway Division, 2017 to Present. Civil Engineer for a multi-year contract to provide MassDOT with a range of wetland and stormwater compliance measures including the design and permitting of stormwater BMPs under the Impaired Waters Program, National Pollutant Discharge Elimination System (NPDES) permit compliance and reporting activities, Construction Oversight, and general Stormwater Consulting and Environmental Services. Responsible for assessing multiple impaired water bodies throughout Massachusetts and providing MassDOT with recommendations for Best Management Practices (BMPs). Upon MassDOT's acceptance of the recommendations, hydraulic and hydrologic analyses are performed in order to complete the design and permitting of the recommended stormwater BMPs.

Statewide Stormwater BMP Inspection Program, MassDOT Highway Division, 2017 to Present. Civil Engineer assisting MassDOT with ongoing statewide stormwater BMP inspections using an online web-map to populate inspection forms on the Collector Application for ArcGIS and provide maintenance and repair recommendations for stormwater BMPs found to be in a poor or failing condition.

Hastings Street Plaza, The Meehan Group, Mendon, MA, 2021 to Present. Civil Engineer for site layout, grading, and stormwater management design on a mixed-use smart growth development consisting of commercial and residentials uses on an 18-acre assemblage of land. The Project requires design and permitting of an on-site Public Water Supply and Wastewater Disposal System as well as off-site mitigation along a stretch of MassDOT-owned Route 16 at Millville Street**.** Work includes stormwater management and grading design with wetland, floodplain, and groundwater constraints.

Three-Rink Skating and Training Facility, The Skating Club of Boston, Norwood, MA, 2018 to 2020. Civil Engineer for site layout, grading, and stormwater management design at a site located within the Fowl Meadow and Ponkapoag Bog Area of Critical Environmental Concern and containing extensive wetland resource areas. Work consisted of a complex stormwater management and grading design with wetland, floodplain, and groundwater constraints, floodplain mitigation, stream crossing, and utility routing.

ELIZABETH SWAIN

SENIOR PROJECT MANAGER, STAKEHOLDER COMMUNICATIONS & PUBLIC INVOLVEMENT

YEARS OF EXPERIENCE
35

EDUCATION
> M.A., Forestry, Yale University, 1983
> B.A., Land Use Planning, Hampshire College, 1976

AREAS OF EXPERTISE
> Stakeholder engagement
> Communications
> Media relations
> Regulatory affairs
> Environmental permitting
> Community relations
> Land conservation
> Mediation and facilitation

LICENSING
> Registered Professional Forester: Maine License #1006

AFFILIATIONS
Board Affiliations Past and Present:
> Chair, Maine Land Use Regulation Commission
> Forest Society of Maine
> New England Forestry Foundation
> Friends of Casco Bay
> Maine Huts & Trails
> Vinalhaven Land Trust
> Sustainable Forestry Initiative-Verification Oversight Panel
> E2 Tech
> The Nature Conservancy, Corporate Conservation Council
> Maine Coast Heritage Trust, Conservation Limited Development Board
> Mainewatch Institute

EXPERIENCE SUMMARY

Ms. Swain specializes in strategic communications and environmental permitting and has extensive experience in managing complex public policy issues for an array of projects. As a registered professional forester and former four-term chair of Maine's quasi-judicial Land Use Regulation Commission she presided over months of multi-party hearings on projects ranging from hydropower development to low level waste siting.

For decades Ms. Swain has orchestrated stakeholder communication and local outreach for companies including Statoil (now Equinor), Central Maine Power, Emera, (now Versant Power) TransCanada, FPL Energy, Plum Creek, Nestle Waters, NextEra and Northern Utilities.

On numerous occasions, Ms. Swain has been called on to mediate disputes over siting issues. The town of Bar Harbor Maine (home to Acadia National Park) recruited her develop and manage a process for local stakeholders to resolve major planning and financial decisions affecting the future of the town. Emera Maine used her on several occasions to manage citizen advisory committees after the utility's transmission line and substation siting decisions were challenged in court. Successful outcomes, lauded by the parties, were the result in each case.

Central Maine Power

Communications Advisor and Outreach Coordinator on several teams to develop a winning strategy for competitive projects. Developed project messages, materials and outreach plans for multiple transmission line projects. Prepared all public-facing materials, managed stakeholder engagement and data bases, organized public meetings and supported land acquisition and permitting. Provided strategic direction on sensitive siting issues to satisfy environmental and landowner concerns.

National Grid

Public Involvement lead on multiple transmission line upgrades and new substations in Massachusetts. Managed communication materials, landowner notifications, door-to-door engagement, stakeholder data bases, open houses and media notifications.

AVANGRID New York

Public Involvement lead on a major program of system upgrades in New York and Maine. Responsible for overseeing the public outreach in both states,

which was complicated by frequent changes in the individual projects, necessitating regular landowner contacts.

Emera Maine (now Versant Power)

Served as facilitator for stalled substation and transmission line projects and public outreach lead for a 60-mile greenfield transmission line project.

Statoil, (now Equinor) **Hywind Maine**

Stakeholder Coordinator in Maine for the 9th largest oil and gas company in the world; helped the Hywind Maine offshore wind pilot project win public and regulatory approval. POWER managed stakeholder introductions, multiple public open houses, handled press inquiries, provided media statements, developed public information materials, recruited vendors, managed a large data base of contacts and supervised two Fisheries Liaison Officers.

Plum Creek, Moosehead Lake Concept Plan, Maine

Communications and Stakeholder Outreach Lead for the Moosehead Lake Concept Plan, a first of its kind effort by a private landowner to do a long-term comprehensive plan on over 400,000 acres. Extremely controversial, the planning and permitting process spanned over three years with 20 intervenor groups. Managed an ambitious stakeholder outreach effort, delivering supporters to public hearings which was a determining factor in the unanimous approval of the project by the review agency.

Nestle Waters North America, Poland Spring, Maine

Responsible for coordinating the campaign to counteract the impact of the anti-bottled water activists on the Poland Spring brand. Engaged by Nestle Waters to support environmental permitting, community outreach and media relations, during a period when the company permitted and built the third water bottling plant in Maine and four new satellite spring sites.

Portland Natural Gas Transmission System (PNGTS)

Developed all project branding and collateral materials and managed stakeholder engagement along the entire 200-mile natural gas pipeline route, throughout permitting and construction.

TransCanada, Kibby Windpower Project

Communications Lead and community liaison responsible for stakeholder and community relations for the largest windpower project in Maine at the time, which won unanimous approval from the Maine Land Use Regulation Commission. Provided strategic permitting guidance and advised the client team on witnesses, testimony and public engagement.

Verrill

Juliet T. Browne

Partner

jbrowne@verrill-law.com

Juliet excels in creative problem-solving and partnering with clients to develop and implement solutions to environmental challenges. Her holistic approach to energy and environmental law ensures that her clients not only have the legal answers to their questions, but are positioned to succeed in their overall business objectives.

Juliet's practice focuses on all aspects of environmental law, including public hearings, project permitting, and compliance under federal, state, and local laws. Juliet is especially known for her ability to manage large-scale, complex permitting and development matters involving areas with high natural resource values, a field that is becoming increasingly contentious with well-funded and organized opponents, with creative problem-solving. Juliet's approach to environmental permitting often involves connecting diverse interest groups to minimize opposition to projects, resulting in a smoother, more efficient process.

For companies requiring strategic and effective project management, Juliet manages large and midsize energy infrastructure projects, making sure that all regulatory and policy options are explored and pursued where appropriate. Her clients rely on her responsiveness, candor, and willingness to give honest advice.

Her representative matters include:

- The successful permitting of several of the largest wind power projects in the northeastern United States, often facing a number of complex contentious issues
- Supporting the expansion of interstate natural gas pipeline facilities
- The revolutionary proposal by a team of conservation groups and the Penobscot Indian Nation to remove several dams located on the Penobscot River in Maine
- Working with a leading provider of comprehensive waste and environmental services in North America on landfill permitting and compliance with state and federal regulations

Services/Industries

- Environmental & Land Use
- Energy
- Judicial Appeals—Energy
- Mergers & Acquisitions—Energy
- Natural Gas
- Solar
- Wind
- Coastal & Shoreland

- Successfully defending permits that are appealed to the Board of Environmental Protection, including a recent one by a broad group of opponents, including the town where the project was located

Juliet's years of experience have honed her judgment and deep understanding of the regulatory and political landscape. She joined Verrill in 1996 after practicing law at Skadden, Arps, Slate, Meagher & Flom in San Francisco and serving as Assistant Attorney General for the Republic of Palau, a former U.S. Trust Territory located in the Western Pacific. She has been called upon by regulators and stakeholder groups to develop, revise, and update environmental laws and regulations, and she served on the groundbreaking Governor's Wind Power Task Force in Maine.

Juliet serves as the Chapter Chair for the Maine Chapter of the Women Presidents' Organization, an organization that helps women entrepreneurs tackle strategic issues and grow their businesses through monthly business roundtables.

When not solving her clients' legal problems and working with successful entrepreneurs, Juliet enjoys hiking, skiing, and all forms of outdoor activities with her husband, daughter, and, if willing, her dog.

Education

- University of California, Boalt Hall School of Law (J.D.)
    - Articles Editor, California Law Review, 1989-1990
- University of Michigan (B.A.)

Public Service

- Chapter Chair, Women Presidents Organization
- Former Chair, Board of Trustees, Maine Chapter of The Nature Conservancy

Bar Admissions

- Maine

Memberships

- Maine State Bar Association
- Member, E2tech Program Committee

Honors

- Named the *Best Lawyers*® 2024 Administrative / Regulatory Law "Lawyer of the Year" in Portland, Maine
- Named the *Best Lawyers*© 2024 Environmental Law “Lawyer of the Year” in Portland, Maine

- Named the *Best Lawyers*© 2023 Energy Law “Lawyer of the Year” in Portland, Maine
- Named the *Best Lawyers*® 2022 Administrative / Regulatory Law "Lawyer of the Year" in Portland, Maine
- Recognized in *Chambers USA: America's Leading Lawyers for Business* under Environment (2005-Present)
- Named the *Best Lawyers*® 2020 Land Use and Zoning Law "Lawyer of the Year" in Portland, Maine
- Named the *Best Lawyers*® 2016 Environmental Law "Lawyer of the Year" in Portland, Maine
- Named the *Best Lawyers*® 2015 Litigation - Environmental "Lawyer of the Year" in Portland, Maine
- Listed in *The Best Lawyers in America*© for Administrative / Regulatory Law, Energy Law, Energy Regulatory Law, Environmental Law, Land Use and Zoning Law, Litigation – Environmental, Natural Resources Law in Portland, Maine
- Selected as one of the "Top 50 Women" by New England Super Lawyers©
- Selected by peers for inclusion in *New England Super Lawyers*© under Environmental, Energy & Natural Resources and Land Use/Zoning

To learn more about third-party ratings and rankings, and the selection processes used for inclusion, **click here.**

VIEWSHED

STEVE THOMPSON

Steve Thompson, PLA, is a landscape architect with nearly a decade of practice in visual impact assessment. Steve's work in visual impact assessment and scenic recource inventory includes remote fieldwork, photography and drone imagery collection, 3D modeling, mapping, written assessment, public engagement, and presentations before regulatory boards.

Steve's project experience includes assessment of multiple onshore and offshore wind projects, solar installations, transmission lines, mining, and aquaculture. He endeavors to find new cutting-edge methods of visualization and has a passion for telling an accurate visual story, allowing regulators and communities to make informed decisions about impacts to their landscapes and seascapes.

SELECT EXPERIENCE

Kitty Hawk South Wind SLVIA
Offshore North Carolina

Kitty Hawk North Wind SLVIA
Offshore North Carolina & Virginia

Ocean Wind SLVIA
Offshore New Jersey

New England Aqua Ventus VIA
Offshore Maine

Downeast Wind VIA
Maine

Weaver Wind VIA
Maine

Roxwind VIA
Maine

New York Transco VIA
New York

Western Maine Renewable Energy Wind VIA
Maine

Maine Power Reliability Program VIA
Maine

New England Clean Energy Connect VIA
Maine

Northern Pass Transmission VIA
New Hampshire

Argonaut Talc Mine VIA
Vermont

Maine LNG Storage Facility Visualizations
Maine

Canton Solar VIA
Maine

PROFESSIONAL AFFILIATIONS

Maine Licensed Landscape Architect
The American Society of Landscape Architecture (ASLA)
Remote Pilot's License

EDUCATION

University of Rhode Island
Bachelor of Landscape Architecture, Summa Cum Laude

EMPLOYMENT

Viewshed
Landscape Architect
Yarmouth, ME (2013 - present)

Parterre Garden Services
Fine Gardening
Cambridge, MA (2013)

AWARDS

Award for Outstanding Student Project, American Planning Association (2013)

PRESENTATIONS

Urban to Rural Renewal, University of Rhode Island Guest Lecturer (2021)

VIEWSHED

JUDY COLBY-GEORGE

Judy Colby-George, GISP, is the owner and principal of Viewshed. She has over 30 years of experience helping clients to implement GIS and engage in complex spatial issues. Judy has extensive experience with public participation GIS and working with clients to understand the spatial relationships of various policies and programs. Her work ranges from creating and updating GIS data sets, development of online mapping applications, cartography, visualizations, viewshed analyses, and providing detailed analysis to solve client problems.

Judy believes that GIS is a tool that can help engage the public in the messy problems that face our world today, and work with clients to tell their stories, represent data in an understandable format, and invite a variety of people to the decision-making process.

SELECT EXPERIENCE

Kitty Hawk South Wind SLVIA
Offshore North Carolina

Kitty Hawk North Wind SLVIA
Offshore North Carolina & Virginia

Ocean Wind SLVIA
Offshore New Jersey

New England Aqua Ventus VIA
Offshore Maine

New England Clean Energy Connect VIA
Maine

Northern Pass Transmission VIA
New Hampshire

Maine Power Reliability Program VIA
Maine

New York Transco VIA
New York

Bull Hill Wind VIA
Maine

Weaver Wind VIA
Maine

Western Maine Renewable Energy Wind VIA
Maine

Walden Renewables Solar Viewshed Analysis
New England

Monhegan Broadband Cell Phone Tower VIA
Maine

Maine LNG Storage Facility VIA
Maine

Downeast Wind VIA
Maine

PROFESSIONAL AFFILIATIONS

URISA Board of Directors, Secretary
Maine GIS Users Group
Maine Association of Planners
New England URISA
American Association of Geographers

EDUCATION

University of Maine
Master of Ecology and Environmental Science

University of Wisconsin-Madison
Master of Land Resources with focus on GIS & Coastal Planning

University of Wisconsin-Madison
Bachelor of Science in Geography & Certificate of Environmental Studies

EMPLOYMENT

Viewshed (Formerly Spatial Alternatives)
Principal / Owner (2001 - present)
Yarmouth, ME

Geo-Systems
GIS Specialist
Yarmouth, ME (1992 - 2001)

SELECT PRESENTATIONS

Building Community Using Geospatial Tools Workshop, GIS Pro, Boise, ID, 2022
Equity, Social Justice, and GIS, Maine Municipal Assoc. Tech Conference, 2019
Introduction to Public Participation GIS, Workshop presented at GIS Pro 2016
Municipal GIS Process and Policy, Panel Discussion NEARC 2017
What does GIS have to do with Resilient Communities? - Presentation Maine EPSCoR Conference, 2015

Broadwater Environmental, LLC

18 Grand St., South Portland, ME 04106

Ian N. Broadwater
Principal Scientist/Owner
207-653-8737
ian@broadwaterenvironmental.com

Experience

Mr. Broadwater has over 35 years of experience in environmental consulting. His areas of expertise include land use permitting and data collection. Mr. Broadwater provides services including wetland delineation and characterization, vernal pool surveys, high intensity soil maps and subsurface wastewater disposal system design. Mr. Broadwater also has experience evaluating and designing river and wetland restorations. Mr. Broadwater has experience managing the completion of complex projects and is responsible for the preparation of project-related documents, and monitoring scope, schedule, and budget.

Specialized skill areas include: • land use permitting • wetland delineation, assessment, and mitigation design • river and stream restoration • high intensity soil mapping • vernal pool surveys • site screening studies

Employment History

- 2016-Present-Principal/Owner; Broadwater Environmental, LLC
- 2008 to 2016-Principal Scientist; Normandeau Associates, Inc.
- 2005 to 2008-President/Owner Broadwater Environmental, Inc.
- 1985 to 2005-Senior Scientist; MACTEC (currently Wood)

Registration and Certification

Certified Soil Scientist – Maine No. 305
Licensed Site Evaluator (Subsurface Wastewater Disposal Designer)– Maine (Maine No. 230)

Education

B.S., Plant and Soil Sciences, University of Maine, 1984

Representative Projects

Wood Infrastructure and Environmental Solutions, Inc., Class B Soil Map and Report, Saco, Maine (2021). Broadwater Environmental, LLC was retained by Wood to complete a Class B soil map on a 40-acre parcel slated for development by the Maine Army National Guard as a training facility. Thirty-six test pits and numerous hand augers were completed to characterize soils at the site. A comprehensive report containing a Class B soil map, test pit logs and map unit interpretations was completed for the project.

Site Design Associates, Inc., Wetland and Vernal Pool Survey, Biddeford, Maine (2020). Broadwater Environmental, LLC conducted a wetland and vernal pool survey on a 25-acre parcel owned by a commercial entity. Eight natural vernal pools and four man-made vernal pools were identified during the survey. Boundaries of associated wetlands were also delineated and located with a GPS capable of submeter accuracy. A report detailing the finding of the surveys was written in support of permit applications for development of the parcel.

Sackett and Brake Survey, Inc., Wetland and Vernal Pool Survey, MSAD 54, Skowhegan, Maine (2020). Broadwater Environmental, LLC conducted a wetland and vernal pool survey on a 105-acre area on the MSAD 54 campus. Four natural vernal pools were observed during the survey. Several areas of wetland were also identified and associated boundaries were located with a GPS capable of submeter accuracy. A report detailing the finding of the surveys was written in support of potential permit applications for development of the area.

Ransom Consulting, LLC, Class B Soil Map and Report, Belfast, Maine (2019). Broadwater Environmental, LLC was retained by Ransom Consulting, LLC to complete a Class B soil map on a 50-acre parcel. A large commercial development was planned for the parcel. Twenty-six test pits and numerous hand augers were completed to characterize soils at the site. A comprehensive report containing a Class B soil map, test pit logs and map unit interpretations was completed for the project.

River and Wetland Permitting and Mitigation, AMEC Foster Wheeler, Windsor, Connecticut (2009-2021). Mr. Broadwater provided wetland and ecological support for a series of remediation projects at a property in Windsor, Connecticut. Mr. Broadwater coordinated the environmental permit applications for two remediation projects that projects were undertaken as part of the sites decommissioning that was mandated by the Nuclear Regulatory Commission.

The project required local Inland Watercourses and Wetlands Commission (IWWC) permits, CTDEEP 401 Permit and a Corps 404 Individual Permit. Mr. Broadwater completed many portions of the applications and provided testimony at the Windsor IWWC hearings on the projects. Remediation included a ½ mile stretch of stream and associated floodplains. Mr. Broadwater also coordinated a survey of the portions of the site for species of special concern that had been documented to occur in the vicinity of the site. Mr. Broadwater also provided on-site technical oversight of the restoration project and monitoring of the restoration sites. The Corps closed the permit in 2021.

Memberships

Maine Association of Professional Soil Scientists, Maine Association of Wetland Scientists, Maine Association of Site Evaluators, Soil Scientist Society of Southern New England, Connecticut Association of Wetland Scientists, Soil Scientist Society of Northern New England

Public Archaeology Laboratory

STEPHEN A. OLAUSEN

EXECUTIVE DIRECTOR/SENIOR ARCHITECTURAL HISTORIAN

EDUCATION

MA, University of South Carolina, Applied History and Historic Preservation, 1988

BA, Roanoke College, History, 1984

EXPERIENCE

Years with PAL: 26
Years Experience: 36

CERTIFICATIONS

Basic First Aid/BBP - American Heart Association

Adult CPR/AED - American Heart Association

OSHA 29 CFR 1910.120(e) 40-Hour Hazardous Waste/Emergency Response

OSHA 29 CFR 1910.120(e) 8-Hour Hazardous Waste/Emergency Response Supervisor

PROFESSIONAL DEVELOPMENT

Section 106: Working with the Revised Regulations

Workshop on the New 36 CFR Part 800: Highlights of Changes

Federal Energy Regulatory Commission Section 106 Compliance Seminar

MEMBERSHIPS

Society of Architectural Historians

National Council on Public History

National Trust for Historic Preservation

Old Slater Mill Association Board of Trustees

Olausen is the Executive Director of PAL and serves as a Senior Architectural Historian and Project Manager for cultural resource management (CRM) projects that require the identification, evaluation, and registration of historic architectural and landscape properties. Most of his projects are conducted to assist clients in complying with federal historic preservation laws, including the National Historic Preservation Act, National Environmental Policy Act, and Section 4(f) of the Department of Transportation Act, as well as the various state historic preservation laws in which PAL works. Olausen has completed hundreds of historic property identification and evaluation surveys, more than 200 successful National Register of Historic Places nominations, and a large number of HABS/HAER and state-level documentation projects. He specializes in assisting clients navigate the Section 106 consultation process fully meets the Secretary of Interior's Professional Qualification Standards for history and architectural history (36 CFR Part 61).

Olausen has conducted projects for numerous public agencies and private organizations and individuals. Federal agency clients have included the Army Corps of Engineers, Department of Agriculture, Department of the Army, Department of the Navy, Environmental Protection Agency, Federal Emergency Management Agency, Federal Highway Administration, Federal Railroad Administration, General Services Administration, National Oceanic and Atmospheric Administration, National Park Service, National Railroad Passenger Corporation (Amtrak), US Coast Guard, US Fish and Wildlife Service, and US Forest Service. He has managed historic architectural survey projects on on-call service contracts for the departments of transportation in Connecticut, Rhode Island, Massachusetts, and Maine. He has also conducted extensive work for prominent private energy clients, including National Grid, Eversource Energy, TransCanada, First Wind, and Spectra Energy.

Some examples of the variety of projects on which Olausen has served as project manager and senior architectural historian are Amtrak's Northeast Corridor - New Haven to Boston Electrification; New Bedford/Fall River Rail Restoration in Massachusetts; Stetson Wind I and II projects in Maine; I-95 Ramp Improvements and Providence Viaduct Replacement projects in Providence, Rhode Island; and the Manchester Airport Expansion and Northern Pass projects in New Hampshire. He has conducted hundreds of projects for cell towers, electrical transmission lines, solar and wind developments, and private developments that involve the assessment of visual effects on historic properties. Since 1998, Olausen has served as the lead CRM consultant for Great River Hydro's Deerfield and Connecticut River Hydroelectric Projects in Vermont, New Hampshire, and Massachusetts.

Olausen is an acknowledged expert in documenting and evaluating nationally significant historic properties. He has conducted more than 100 projects for the National Park Service at historical and natural parks within the National Park System. This work has included the preparation of National Register and National Historic Landmark nominations, Multiple Property Documentation Forms, and Determination of Eligibility reports, Historic Resource Studies, and Administrative Histories for some of the nation's most important historic places, including Statue of Liberty National Monument, Appalachian National Scenic Trail, Women's Rights National Historic Park, Sagamore Hill National Historic Site, Minuteman National Historical Park, Saratoga National Historical Park, Fredericksburg and Spotsylvania National Military Park, Great Smoky Mountains National Park, Acadia National Park, Colorado National Monument, and Gateway National Recreation Area.

John H. Allen, PLS

Director of Survey

John Allen joined James W. Sewall Company in 2008. He has more than 30 years' experience in mapping, drafting and land surveying. His duties have included supervision of field crews and survey department, project management and business development. Mr. Allen has significant experience working with town and state regulating agencies, GPS control surveying, subdivision design, road layout, boundary work, and deed research. In addition, he is familiar with Maine State, Land Use Regulatory Commission and Department of Environmental Protection regulations.

EDUCATION

- AS Drafting Technology, Northern Maine Vocational Technical Institute, Presque Isle, Maine
- Surveying core curriculum coursework, University of Maine, Orono and Wentworth Institute of Technology, Massachusetts

CERTIFICATION

Registered Professional Land Surveyor #2311 (ME)

RELEVANT EXPERIENCE

2008 – Present, James W. Sewall Company

Director of Survey

Responsible for supervision of survey field crews, project management, new equipment research, training & implementation, daily survey operations and business development.

Topographic and Transportation Projects

MEDOT. Performed a topographic corridor survey of approximately 5.74 miles of roadway along US Route 1 in Frenchville, Maine. Project corridor was 200 feet wide (approximately 140 acres) and included several structures and an urban area.

MEDOT. Performed a topographic corridor survey of approximately 1.91 miles of roadway along US Route 1 in Van Buren, Maine. Project corridor was 200 feet wide.

MEDOT. Performed a topographic corridor survey of approximately 4.66 miles of roadway along US Route 1 in Fort Kent, Maine. Project corridor was 200 feet wide.

Lincoln, Maine. Performed a topographic and right of way survey for approximately 1 mile of roadway along US Route 2 in Lincoln, Maine. Project corridor was 100 feet wide and included utility location and right of way analysis.

Orrington, Maine. Performed a topographic and right of way survey for a sidewalk reconstruction project in Orrington, Maine. Project area was approximately 1.1 miles long and included an 80-foot wide corridor.

Maine Army National Guard, Bangor, Maine. Project manager for a 40-acre topographic survey of the Maine Army National Guard Facility on Hayes Avenue in Bangor, Maine.

RSU #34, Old Town, Maine. Project Manager for two projects: a 15-acre topographic and utility survey and a 6 acre topographic and utility survey at the Old Town High School for a new science wing and athletic facilities.

Record Hill Wind LLC, Roxbury, Maine. Project Manager for a new transmission corridor and substation. Project included a topographic survey of the entire site along with boundary work, preparing plans for easements and construction staking.

Massachusetts Development Finance Agency. Responsible for establishing ground control.

MEDOT. Responsible for establishing ground control to meet National Map Accuracy Standards for site in Machias, Maine to produce 50-scale planimetric maps with 1-foot contour intervals.

City of Bangor, Maine. Responsible for client and project management duties as well as performing field work and document preparation for collection of 2,500 utility structures (sewer manholes, catch basins, fire hydrants, water valves) using GPS RTK survey and traditional surveying methods.

1991 - 2008, AMES A/E

Survey Supervisor

Responsible for supervision of survey field crews, project management, new equipment research, training & implementation, daily survey operations and business development.

Topographic and Transportation Projects

MEDOT Radio Tower Site Surveys, St. Francis, Veazie, Charleston, Priestly Mountain and Island Falls, Maine. Responsible for client and project management duties as well as performing research, field work and document preparation for parcels to be developed for use in upgrading the MEDOT and State of Maine communications network (ME CommNET).

MEDOT Wilson Street widening, Brewer, Maine. Responsible for GPS control and topographic surveying for approximately 0.5 miles of commercially developed highway along with utility coordination and locations.

MEDOT Etna Bridge Replacement, Etna, Maine. Project management, surveying & utility coordination duties on a bridge replacement project on Interstate 95 and Route 43 overpasses.

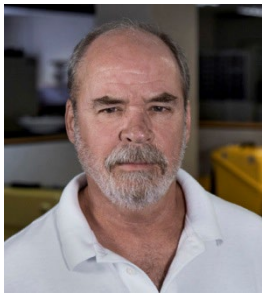
City of Bangor Waterfront Survey, Bangor, Maine. Topographic and boundary surveys for approximately 70 acres of land along the Penobscot River to be used in the City of Bangor's waterfront revitalization projects.

7.5 Mile Survey for MEDOT, Dedham, Maine. Topographic surveys for roadway reconstruction and realignment.

Major Intersection Hazard Elimination for MEDOT, Orono, Maine. Topographic surveys, property owner reports and right of way investigation for roadway realignment project in a hazardous intersection.

Stillwater Avenue Safety Improvements, Town of Orono, Maine. Topographic surveys, right of way determination, property owner reports and interviews for a roadway widening project.

Bangor Gas, Bangor, Maine. Responsible for surveying coordination and scheduling on several projects in Bangor and the surrounding communities for the development of a natural gas infrastructure. Performed as-built surveys with pipe and weld location and data for approximately 15 miles of transmission line in the greater Bangor area. Also, performed topographic surveys, boundary surveys and construction stake out for five regulator stations.



James W. Murray, PLS

Project Manager

James Murray joined the firm in 2002 as a Project Surveyor and has over 30 years' combined experience. Mr. Murray is experienced in all aspects of land surveying including cost estimation, scheduling and supervising field operations, boundary analysis, deed research and analysis, and plat preparation. He is also involved in all stages of GPS operations including project planning, data collection and post processing. Mr. Murray has provided research assistance and Expert Witness Testimony in boundary disputes and other legal issues. Past projects have included numerous standard boundary surveys of parcels up to 7,500 acres, layout of telephone easements throughout Maine, and design and layout of subdivisions from 20 to 50 acres in size. Additionally, Mr. Murray has managed the survey component related to large commercial wind farms in Maine.

EDUCATION

- Surveying core curriculum coursework, University of Maine, Orono
- Coursework in Architectural Engineering, Greenville Technical College, Greenville, SC
- Graduate in Architectural Drafting, Seible School of Drafting, Denver, CO

CERTIFICATION

Registered Professional Land Surveyor #2296 (ME)

RELEVANT EXPERIENCE

2002 – Present, James W. Sewall Company

Project Surveyor

South Central Connecticut Regional Water Authority, Connecticut - Provided oversight of GPS ground control for five town-wide/multiple town photogrammetric mapping projects for RWA.

Beverly, Massachusetts - Directed GPS ground control for photogrammetric surveys for Town-wide mapping project.

Mack Point, Searsport, Maine - Boundary and Planimetric Survey (160 acres). As project surveyor, completed a comprehensive boundary survey of the entire Mack Point terminal in Searsport, ME; the first to compile the numerous easements, leases, and ownership interests that affect the many coastal parcels that comprise this port facility. Prepared a land title survey showing the current ownership and site conditions.

Moose Island, Stonington, Maine - Coastal Boundary Survey. As project surveyor, conducted a boundary survey of a 15-acre portion of Moose Island in Stonington, ME. The survey included location of the high water line and analysis of local elevations and flood zones in preparation for the subdivision of the parcel.

Newry, Maine - Topographic & Hydrographic Survey of Barkers Brook (6 acres). As project surveyor, conducted a topographic and hydrographic survey of a portion of Barker Brook. Sewall produced a contour plan of the river bottom and upland areas extending 50' either side of the brook. This information was used by the client for wetland and stream restoration design.

Burnham, Maine - Topographic and Hydrographic Survey of Burnham Dam (15 acres). As project surveyor, conducted a topographic and hydrographic survey of the Burnham Dam and a portion of the Sebasticook River, downriver of the dam, for design of a fishway.

Dexter, Maine – Expert Witness Testimony. Provided survey support and Expert Witness Testimony in a case involving the location of a Right of Way.

Township 24, Middle Division, Maine – Expert Witness Testimony. Provided survey support and Expert Witness Testimony in a case involving a dispute related to uncertain boundaries of a large blueberry farming operation.

1998 - 2002, Murray Land Surveying Services

Owner and Professional Land Surveyor

1996 - 1998, Civil Engineering Services

Project Manager/Office Manager

1989 – 1996, Huntley Surveying and Engineering

Project Manager/Office Manager

1987 – 1989, Collins Surveying

Crew Chief/CAD Technician