



**Connecticut
Light & Power**

A Northeast Utilities Company

107 Selden Street, Berlin CT 06037

Northeast Utilities Service Company
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September 9, 2013

Robert Stein, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

**Re: Docket No. 424, Interstate Reliability Project
Decision and Order Condition #8**

Dear Chairman Stein:

Pursuant to condition 8 of the Connecticut Siting Council's ("Council's") Decision and Order dated December 27, 2012, The Connecticut Light and Power Company requests the Council's approval of BSC Group from Glastonbury, CT as the independent environmental inspector for the construction of the Interstate Reliability Project facilities. Ms. Diana Walden will be the Project Manager with support from Paul Knapik. Francis Vacca and David Cowell will be the field inspectors from BSC Group. These BSC Group representatives work under BSC's Principal-in-Charge Ingeborg Hegemann, and they will be supported by other BSC Group resources. A copy of the qualifications of Ms. Walden, Mr. Knapik, Mr. Vacca, Mr. Cowell and Ms. Hegemann is enclosed.

Sincerely,

John Morissette
Project Manager, Siting

cc: Service List, w/enclosure
Joyce Okunuk, First Selectman, Town of Lebanon w/enclosure
Carmen Vance, First Selectman, Town of Columbia w/enclosure
Elizabeth Woolf, Coventry Town Council Chairman w/enclosure
Elizabeth C. Paterson, Mayor, Town of Mansfield w/enclosure
William H. Rose IV, First Selectman, Town of Chaplin w/enclosure
Allan Cahill, First Selectman, Town of Hampton w/enclosure
Austin Tanner, First Selectman, Town of Brooklyn w/enclosure
Maureen Nicholson, First Selectman, Town of Pomfret w/enclosure
Dennis Alemian, Killingly Town Council Chairman w/enclosure
Peter Place, Mayor, Town of Putnam w/enclosure
Lawrence K. Groh, Jr., First Selectman, Town of Thompson w/enclosure



Ingeborg Hegemann, PWS, NHCWS

Vice President and Principal-in-Charge

EDUCATION

MRP, Regional Planning
University of Pennsylvania

BA, Geology
Skidmore College

Adjunct Professor
University of Massachusetts
Wetland Ecology

AFFILIATIONS

**Massachusetts Association of
Conservation Commissions**
President (2004-2005),
Board Member

**Society for Ecological
Restoration**, Board Member

**Society of Wetland Scientists
Professional Certification
Program** - Certification Review
Panelist, Board Member

CERTIFICATIONS

**Society of Wetland Scientists
Professional Wetland Scientist**

**State of New Hampshire Certified
Wetland Scientist**

**10-hour OSHA Construction Site
Safety Certified**

MA DEP ADVISORY COMMITTEES

Stormwater Advisory Committee

Wetlands Advisory Committee

Water Quality Certification

PEER REVIEW TEAM

**Interim Regional Supplement to
the Corps of Engineers Wetland
Delineation Manual:
Northcentral and Northeast
Region 2008**

BACKGROUND

Ms. Hegemann is vice president and principal of BSC's Ecological Sciences Group, responsible for project direction and quality control. She has 30 years of consulting experience in environmental planning, wetlands assessment and impact analysis, regulatory permitting, and public participation. Her expertise in wetlands science and regulations assists both public and private sector clients in project impact analysis and permit issuance at the local, state, and federal levels. She conducts MEPA impact analyses; local, state and federal wetland evaluations and impact analyses; and municipal regulatory analysis, such as zoning and open space planning.

Ms. Hegemann also is experienced in institutional and policy analysis relative to Massachusetts statewide policy development and local regulations implementation. An expert in the field, she is active in teaching environmental impact analysis and regulation courses to state agencies and local and regional environmental interests. She is currently a member of the DEP Wetland Advisory Committee. She served on the Massachusetts Department of Environmental Protection (DEP) Advisory Committee that reviewed proposed changes to Water Quality Certification Process under the Clean Water Act's 401 regulations, as well as the DEP's Small Docks and Piers Waterways Advisory Committee. Most recently, Ms. Hegemann served as an alternate on the DEP's River Protection Act Advisory Committee, working on determining intermittent versus perennial stream characteristics for application with the Rivers Protection Act. She is an adjunct professor teaching Wetland Ecology at the University of Massachusetts/Lowell.

PROJECT EXPERIENCE

Northeast Utilities Independent Inspector Services, Bethel to Norwalk, CT; Middletown to Norwalk, CT; and Bethel to Danbury, CT

Principal-In-Charge for the Connecticut Siting Council for construction of a 345 kV electric transmission lines and reconstruction of 115 kV electric inspection lines for Connecticut Light and Power's energy projects. Ms. Hegemann assisted the BSC project manager in acting as a liaison between the Connecticut Siting Council, Northeast Utilities, and the contractors. The inspection ensured that the contractors followed the approved Development and Management Plans for all of the phases of work and included observations on erosion control, removal of vegetation, stormwater management, stabilization, dewatering, and presence of rare species.

National Grid, New England East-West Solutions Project (NEEWS), Interstate Reliability Project, Massachusetts Components

Principal-in-Charge, Assists project manager with environmental permitting aspects of approximately 17 miles of new 345 kV transmission line from Millbury, Massachusetts to the Massachusetts/Rhode Island border. The project requires

wetland delineation, rare species investigations and mitigation plans, vernal pool studies and a number of related environmental permits. Anticipated permits include approval from the Massachusetts Energy Facility Siting Board, Individual USACE permit under Section 404 of the Federal Clean Water Act, Individual 401 Water Quality Certificate, Orders of Conditions from 5 different Conservation Commissions, coordination with Massachusetts Natural Heritage and Endangered Species Program, authorization under NPDES Construction General Permit, Chapter 91 Waterways approval, and a MEPA Certificate.

National Grid, Berry Street Substation Design/Construction, Plainville, MA Principal-in-Charge. Assisted in design approach, stormwater management, and local, state and federal permitting for new substation that is part of the NEEWS project. Assisted in development of Storm Water Pollution Prevention Plan (SWPPP), and construction oversight.

National Grid Electric Line Upgrade, Uxbridge and Northbridge, MA Principal-In-Charge. Assisted in local, state and federal permitting strategy for electric line upgrade. Oversaw wetland resource area identification and delineation, survey data collection, and preparation of permit applications.

On-Call Environmental Services for Massachusetts Department of Transportation, Highway Division, Construction Division, Locations throughout Massachusetts

Project Director for as-needed wetland, rare species, water quality, storm water management, permitting and construction monitoring services to assist several major roadway projects throughout Massachusetts. Services include permitting assistance, design of impact mitigation measures and wetland replication, and construction monitoring for permit compliance.

El Paso Energy, Northeast Fiber Optics Project, MA, CT, NY and RI

Principal-in-Charge of the identification, sequencing and scheduling of local, state and federal permit requirements and preparation of permit applications for the 230 miles +/- of light guide fiber optic cable along its Tennessee Gas Pipeline Company Northeast pipeline system. Services include delineation of boundaries of state and federal wetlands as defined by the Massachusetts Wetlands Protection Act and Regulations, the Rhode Island Freshwater Wetlands and Watercourses Act, the New York Environmental Conservation Law and Regulations and the Federal Clean Water Act, identification of construction operation and maintenance constraints and the selection of a preliminary centerline alignment within the existing rights-of-way.

Route 146 Construction Oversight for Massachusetts Department of Transportation, Highway Division, Millbury to Worcester MA

Principal-in-Charge, for construction oversight for a segment of Route 146 in Worcester and Millbury. Construction activities included roadway and pedestrian bridges over the Blackstone River, impact to wetland resource areas, construction of wetland replication areas, and construction of storm water basins. Monitoring was conducted twice a month, or more frequently, as weather or construction activities dictated. Specific issues that required attention, in addition to erosion and sedimentation controls, included construction of abutments and piers in and adjacent to the river.



Diana L. Walden

Project Manager

BACKGROUND

Ms. Walden is an Environmental Scientist with the Ecological Sciences Group in BSC's Worcester, MA office. Her skills include wetland ecology and delineation; wildlife conservation and habitat evaluations, and assessment of instream habitat and aquatic communities. Her foremost project work and experience has been gained through utility clients, and she regularly provides services involving environmental compliance inspection of construction, stormwater issues, and sediment and erosion control best management practices. Ms. Walden has extensive project experience assisting clients with the wetland and protected species permitting and regulatory processes at the state and local levels in Massachusetts, New Hampshire and Connecticut. Work at the federal level has included coordination with the US Army Corps of Engineers, US EPA and US FWS. Her field work regularly demonstrates her abilities in wetland delineation, wildlife habitat assessments, vernal pool characterization, vegetation community mapping, surveys for protected species (particularly reptiles and amphibians) and identification of their habitat characteristics. Ms. Walden's technical background includes ecology, conservation biology, wildlife physiology, environmental and water pollution issues, instream physical habitat models, and reference fish communities. She has also presented and published papers for both the 8th and 9th International Symposiums for Environmental Concerns in Rights-of-Way Management.

EDUCATION

B.S., Environmental Studies and Biology
St. Lawrence University

M.S., Wildlife and Fisheries Conservation
University of Massachusetts Amherst

AFFILIATIONS

Association of Massachusetts Wetlands Scientists – Wildlife Chair

CERTIFICATES

Electrical Safety Certified

10-hour OSHA Construction Site Safety Certified

PROJECT EXPERIENCE

Northeast Utilities Independent Environmental Inspector Services, CT
Lead Independent Environmental Inspector for the Connecticut Siting Council (CSC) for new construction, reconstruction, and/or upgrades of multiple electric transmission line projects ranging from 3-5 miles (Bethel-Norwalk) to 70 miles (Middletown to Norwalk), and currently serving as Project Manager for this role in the CT portion of Greater Springfield Reliability Project. The projects included inspection of underground and overhead line installation, construction of transition and switching stations and expansion of substations. Major responsibilities include coordinating the efforts of a team of inspectors, distributing a series of weekly inspection reports, and acting as a liaison between all parties.

Western Massachusetts Electric Co. for Northeast Utilities, Pittsfield Greenfield Area Solution Projects. Multiple Municipalities, Western MA
Scientist and Permitting Specialist supporting the Project Management Team for multiple maintenance and upgrade projects in Western Massachusetts. Responsibilities include contributing to the development of project execution plans, work scopes, schedules, permitting assessments, due diligence, and initial resource assessments. The PM Team is contracted to obtain all local, state and federal approvals/permits and manage the work through construction.

National Grid, New England East-West Solutions (NEEWS) Interstate Reliability Project (IRP), Millbury, MA-West Farnum (N. Smithfield), RI Wetland/Wildlife Scientist contributed to wetland delineation and vernal pool investigations on portions of a 15+ mile section of cross country ROW. IRP project activities include the construction of a 345-kV transmission line from Millbury, MA to West Farnum, RI. Contributions were made to the extensive alternatives analysis sections of the Energy Facility Siting Board Petition. Additional areas of contribution include mitigation alternatives and language, draft Notices of Intent (NOI) for five towns, wildlife habitat evaluation, the Conservation and Management Permit application, including an in-depth construction phase wood turtle protection plan and restoration plan.

National Grid, Q143/R144 Clearance Improvement Project, Millbury, MA to MA/RI State Line

Ecological Scientist contributed to compliance with National Grid's Operation and Maintenance (O&M) Plan with NHESP by assisting with wood turtle training for National Grid and their contractors. Project activities include ground clearance improvements and structure replacements/repairs on two existing 115 kV transmission lines through identified state-listed habitat.

Tennessee Gas Pipeline (TGP), Multiple Central and Northern MA

Municipalities. Environmental Scientist and Wildlife Inspector responsible for preparing mitigation plans for various state-listed (or formerly listed) species including Spotted, Wood, Blanding's and Eastern box turtles, and Blue-spotted and Four-toed Salamanders. The various projects involved coordination with the NHESP in order to obtain clearance for necessary maintenance activities along the existing pipeline system. Later projects involved compliance with a NHESP approved Operation and Maintenance Plan. Responsibilities also included obtaining Scientific Collecting Permits for each project location to handle and relocate the state listed species. As part of the proposed mitigation plans and the NHESP's conditions, work areas were enclosed in wildlife barriers and regularly surveyed for the listed turtle and salamander species.

National Grid, Cooks Pond Substation, Vernon St. Substation, Webster St. Substation, Worcester, MA

Environmental Scientist contributed to NOI and Construction Stormwater Pollution Prevention Plan (SWPPP) preparation and obtaining permits for upgrades to several existing Substations. Served as the environmental inspector for weekly compliance monitoring at Vernon St. and Cooks Pond.

Uxbridge High School Design, Uxbridge, MA

Environmental Scientist for resource area evaluation and permitting for a new high school. A new population of a state listed species (wood turtle) was discovered on site and coordination with NHESP was proactive and productive. Developed the permitting strategy and provided guidance for the design in order to minimize impacts to resource areas. Obtained the Conservation and Management Permit (CMP) with NHESP, which included a detailed vegetation management plan, a construction phase protection plan, and an agreement for a Conservation Restriction on a portion of the site. Provided SWPPP and turtle training to the contractor and provided oversight on SWPPP inspections.



Paul M. Knapik

Deputy Project Manager

BACKGROUND

Mr. Knapik has over 22 years of wetland related experience including wetland delineation and mapping, wetland function & value assessments, qualitative and quantitative vegetation sampling, hydric soils analysis and identification, compensatory wetland mitigation/restoration site identification and design, permitting and agency coordination, and environmental compliance inspection.

Mr. Knapik has permitted numerous complex and time-sensitive utility, highway, transportation and land development projects throughout Massachusetts, Rhode Island and Connecticut. He has extensive experience with federal and state environmental regulations including NEPA, MEPA, the MA Wetlands Protection Act, Section 401 of the Clean Water Act, the Army Corps of Engineers' Section 404/10 regulations, MA Coastal Zone Management regulations, Section 106 of the National Historic Preservation Act and the Connecticut Inland Wetlands and Watercourses Act.

He has extensive experience in electric utility and natural gas transmission inspection for new lines and maintenance projects throughout Massachusetts, Rhode Island and Connecticut.

EDUCATION

**B.S., Natural Resources
Science**
University of Rhode Island

AFFILIATIONS

Metacomet Land Trust
Board of Directors

CERTIFICATES

**40 hr OSHA HAZWOPER
Training**
**10 hr Construction Safety
and Health**

RELEVANT EXPERIENCE

Greater Springfield Reliability Project – Massachusetts and Connecticut - Northeast Utilities.

Project Manager/Senior Wetland Scientist. Coordinated and led the U.S. Army Corps of Engineers (Corps) Section 404, Section 401 Water Quality Certification, Massachusetts Environmental Policy Act (MEPA) and MA Wetlands Protection Act permitting effort for the installation of new 345-kilovolt (kV) transmission lines, including expansion of existing substations and rebuilds of existing 115-kV transmission lines along 35 miles of right-of way (ROW) in Massachusetts and Connecticut. He developed the compensatory wetland mitigation plan for the project that included over eight acres of new wetland creation at two off-ROW sites in Massachusetts and Connecticut, over 20 acres of wetland enhancements through invasive species control, replanting and monitoring, and the development of an invasive species control plan for the project ROW. The plan was developed in close coordination with the U.S. Army Corps of Engineers, the Connecticut and Massachusetts DEP and local regulatory authorities to satisfy the respective jurisdictions. At a prior firm, Mr. Knapik developed the protocol for and managed three field crews to conduct a comprehensive constructability field review of the preliminary project design utilizing Trimble ® GeoXT GPS with Pathfinder office software to locate and characterize existing and new construction access roads, determine appropriate site-specific locations for structure crane pads to avoid wetlands and sensitive cultural features and develop GIS-based mapping to refine line engineering.

National Grid, H-160 115 kV Transmission Line Project, Southborough, Marlborough and Hudson, MA –

Project Manager/Senior Wetland Scientist Mr. Knapik was involved in all phases of this new 5 mile, 115 kV transmission line project, from community outreach meetings, preliminary route alternatives analysis, design and pole siting, wetland delineation, regulatory agency coordination meetings, preparation of environmental applications, public hearing presentations and construction inspection. His intimate knowledge of the ROW and the issues surrounding the project proved invaluable during construction when conducting regular site inspections of sensitive areas of the ROW with resource agencies and construction personnel.

Narragansett Electric Company, Rhode Island Electrical Supply Study – Newport to Jamestown, RI

Project Manager/Senior Wetland Scientist Mr. Knapik was responsible for the alternative route analysis, permitting and construction oversight of a new electric distribution submarine cable across the East Passage of Narragansett Bay from Fort Adams in Newport to Fort Wetherill in Jamestown, Rhode Island to provide electric service to the Town of Jamestown. He analyzed several alternative routes and mapped the limits of sensitive eelgrass (*Zostera marina*) beds along the shoreline to determine the most appropriate route and landing sites. He also coordinated the use of ground penetrating radar at each of the historically-significant landing sites in lieu of soil disturbing activities to determine subsurface conditions for cable vault design and installation. He served as the primary environmental compliance inspector for the installation of the land portion of the underground cable and vault construction.

Narragansett Electric Company - Kent County to Old Baptist Road 115 kV Transmission Line – North Kingstown, East Greenwich and Warwick, RI –

Project Manager/Senior Wetland Scientist Mr. Knapik provided environmental permitting and construction inspection services for the Narragansett Electric Company to construct a new 5.3 mile, 115?kV transmission line from the Kent County substation in Warwick to the Old Baptist Road tap in North Kingstown. The environmental permitting for this project was complex and required authorization pursuant to a number of federal, state, and local regulations. Federal authorization included obtaining a Corps of Engineers Nationwide Permit. State authorizations included the preparation of an Environmental Report for submission to the Energy Facility Siting Board, the preparation of a Formal Permit Application to alter Freshwater Wetlands pursuant to RIDEM Wetlands Regulations, a Water Quality Certification and a General Permit Authorization from the RIDEM's Division of Water Resources pursuant to the Rhode Island Pollutant Discharge Elimination System. Mr. Knapik was instrumental in reducing construction-related impacts to sensitive wetland and archaeological areas by investigating alternatives to mechanized clearing and choosing overhead cable forwarding as the preferred method of tree removal in wetlands and newly discovered archaeological sites.

Algonquin Gas Transmission Company - Environmental Compliance Inspection for Natural Gas Pipeline Construction – Various locations in MA, RI and CT–

Senior Wetland Scientist In addition to preparing the necessary FERC permit applications as well as state and local approvals, Mr. Knapik served as Environmental Monitor for several new natural gas pipeline projects for Algonquin Gas Transmission Company throughout the southern New England states.



David Cowell

Independent Inspector - East

EDUCATION

M.S., Environmental Management

University of San Francisco

B.S., Wildlife and Fisheries Conservation

University of Massachusetts

CERTIFICATES

FERC Regulatory Overview and Guidance Training

FERC Environmental Compliance Training

Certified Associate Wildlife Biologist, The Wildlife Society

BACKGROUND

Mr. Cowell has over nine years of professional experience providing environmental consulting in support of development projects nationwide in both the private and public sectors. His experience includes working on projects in the land development, energy, transportation, communication, and military industries. Mr. Cowell has experience performing rare plant and animal surveys, wetland delineations, avian surveys, mitigation planning and monitoring, ecological site evaluations and characterizations, vernal pool studies, habitat inventories and conservation plans, ecological restoration, environmental compliance monitoring, environmental permitting, and water quality sampling and analysis. Mr. Cowell has experience in permitting and compliance with state and federal environmental laws such as NEPA, CWA, and ESA (Federal); CEQA (California); SEQR (New York); and MEPA, MWPA, and MESA (Massachusetts).

PROJECT EXPERIENCE

National Grid, Millbury Reconductoring Project, Millbury, MA

Wetland Scientist. Field delineated wetlands within a 2-mile electric transmission right-of-way corridor in accordance with the Massachusetts Department of Environmental Protection standards and prepared a Request for Determination of Applicability permit application for the replacement of existing shield wires within jurisdictional wetlands and buffer zones in accordance with the Massachusetts Wetlands Protection Act. Obtained an Individual Permit in accordance with Section 404 of the Federal Clean Water Act for the temporary placement of swamp mats within waters of the United States. Performed weekly environmental compliance inspections and prepared monitoring reports throughout duration of the project.

National Grid, Optical Ground Wire Replacement Project, Multiple Towns, MA and RI

Wetland Scientist. Prepared Request for Determination of Applicability and Notice of Intent permit applications in accordance with the Massachusetts Wetlands Protection Act and various town wetland bylaws in Massachusetts for the replacement of an existing shield wire with an optical ground wire along two transmission lines in southeastern Massachusetts. Obtained an Individual Permit in accordance with Section 404 of the Federal Clean Water Act for the temporary placement of swamp mats within waters of the United States. Performed weekly environmental compliance monitoring and prepared monitoring reports throughout duration of the project.

National Grid, STORMS Projects, Multiple Towns, MA

Wetland Scientist. Performed on call environmental permitting assessments for over 60 small electric distribution and transmission maintenance projects throughout central and southeastern Massachusetts. Prepared Request for Determination of Applicability and Notice of Intent permit applications in accordance with the

Massachusetts Wetlands Protection Act and local town wetland bylaws and represented projects at public hearings before town Conservation Commission to obtain permits to perform work within jurisdictional wetlands and buffer zones. Requested and obtained Certificates of Compliance upon completion of projects as required.

National Grid, Interstate Reliability Project, Multiple Towns, MA

Wetland Scientist. Field delineated wetlands within a 13-mile electric transmission line right-of-way corridor in accordance with the Massachusetts Department of Environmental Protection standards. Performed vernal pool investigations for the seasonal detection of vernal pool obligate species to characterize and mitigate potential impacts to suitable vernal pool breeding habitat within the right-of-way. Assisted in the preparation of Notice of Intent permit applications for development of new transmission lines in accordance with the Massachusetts Wetlands Protection Act and local town wetland protection bylaws.

Rockies Express Pipeline East, Missouri, Illinois, Indiana, and Ohio

FERC Environmental Compliance Monitor. Performed environmental compliance monitoring as a FERC third-party representative on the REX East Pipeline Project. Duties entailed monitoring construction activities for compliance with conditions outlined in environmental permits, report writing, landowner complaint resolution, review and approval or denial of level 1 variance requests, and coordination with environmental inspectors, land agents, and agricultural inspectors to ensure that environmental best management practices were utilized.

Rockies Express Pipeline West, Kansas, Missouri, Colorado, and New Mexico

FERC Environmental Compliance Monitor. Performed environmental compliance monitoring as a FERC third-party representative on the REX West Pipeline Project, which consists of roughly 713 miles of 42-inch mainline pipeline, four compressor stations, and associated pipeline appurtenances. Duties entailed monitoring construction activities for compliance with conditions outlined in environmental permits, report writing, landowner complaint resolution, review and approval or denial of level 1 variance requests, and coordination with environmental inspectors, land agents, and agricultural inspectors to ensure that environmental best management practices were utilized. Responsibilities also entailed performing environmental inspections at three project associated compressor stations which were about to enter service.

Cove Point Pipeline Expansion Project, Pennsylvania

FERC Environmental Compliance Monitor. Performed environmental compliance monitoring as a FERC third-party representative on the Dominion Transmission, PL-1 Extension 2 Pipeline in Pennsylvania. Duties entailed monitoring construction activities for compliance with conditions outlined in environmental permits, report writing, review and approval or denial of level 1 variance requests, and coordination with environmental inspectors, land agents, and agricultural inspectors to ensure that environmental best management practices were utilized.



Matthew A. Waldrip, CESSWI

Independent Inspector - East

EDUCATION

**B.S., Regional Planning,
Environmental Science**
Westfield State University

ASSOCIATIONS

**International Erosion
Control Association**

**Society of Wetland
Scientists**

Chair of Publications
Committee

**Massachusetts
Association of
Conservation
Commissions**

**Society of Ecological
Restoration**

Executive Board Member

CERTIFICATES

**10-hour OSHA
Construction Site
Safety Certified**

**MACC- Wetland
Delineation Certificate**

**MACC-Hydric Soil
Identification,
Documentation, &
Delineation Certificate**

**Certified Erosion
Sediment and Storm
Water Inspector**

BACKGROUND

Matthew Waldrip is an Environmental Scientist in BSC's Worcester office. Mr. Waldrip has experience providing environmental permitting for complex and time-sensitive utility and site development projects throughout Massachusetts and Rhode Island. Mr. Waldrip regularly conducts construction inspections to ensure that construction activities are held in compliance with permit conditions. His detailed monitoring reports are utilized by numerous clients and regulatory agencies. Additionally, Mr. Waldrip teaches a class on Wetland Plant Identification at the Eternal River School. He is enrolled in the Invasive Plant Management Certificate Program at UMASS Extension. Mr. Waldrip is a Certified Erosion, Sediment, and Storm Water Inspector (EnviroCert. License 3231), and therefore meets the federal requirements to perform inspections, and the Environmental Protection Agency's definition of "Qualified Personnel."

PROJECT EXPERIENCE

**New England East-West Solutions (NEEWS) Interstate Reliability Project (IRP),
National Grid, Millbury, MA- North Smithfield, RI**

Environmental Scientist for the construction of a 345-kV transmission line from Millbury, MA to North Smithfield, RI. Construction activities will occur within multiple wetland resource areas and buffer zones. Provided technical support including wetland delineation, GIS mapping, and field surveys for vernal pools. Worked with MEPA General Purpose Plans to help National Grid mitigate impacts on wetlands and preservation areas along their off right-of-way access. Mr. Waldrip's GIS mapping included mapping of National Grid's fee parcels, compensatory flood storage areas, and wetland replication areas.

**National Grid , A1/B2 Chestnut Hill Taps Refurbishment Project Athol &
Royalston, MA**

Environmental Scientist/GIS Analyst. Performed numerous wetland delineations along the utility corridor and off right-of-way access roads. Collected botanical, hydrological, geological, and GPS data. Post-processed the data using Terra Sync's Trimble Pathfinder software. Created final wetland delineation reports, project alignment maps, site location maps and stormwater pollution prevention plan maps using GIS. Collected information and notified abutting land owners of the scheduled work. Mr. Waldrip also performed weekly SWPPP (Storm Water Pollution Prevention Plan) inspections to ensure work was held in compliance with the SWPPP.

National Grid, Optical Ground Wire Replacement, Plainville, MA to RI

Environmental Scientist, providing wetland delineation and assisting in coordinating with local Conservation Commissions regarding MA Wetland

Protection Act, maintenance exemptions, and any necessary local filings to maintain compliance with National Grid's Operation and Maintenance Plan.

National Grid, Worcester Cable Project, Worcester, Millbury, and Shrewsbury, MA

SWPPP (Storm Water Pollution Prevention Plan) Inspector for activities associated with the construction of a 115-kV underground cable in the city of Worcester. Mr. Waldrip conducted construction inspections for electrical substations and underground trenching to support the installation of new circuit breakers in Millbury and Shrewsbury. Ensured construction activities were in compliance with permit conditions relative to erosion and sedimentation controls. Prepared monitoring reports and associated photo pages for submission to National Grid. Additionally, he coordinated with contractors of National Grid and local Conservation Commissions.

National Grid, Meadowbrook Reconductoring Project, Ayer, Littleton, Westford, Chelmsford, Billerica, and Tewksbury, MA

Wetland Scientist. Provided wetland delineation and assisted in coordinating with local Conservation Commissions regarding MA Wetland Protection Act, maintenance exemptions, and any necessary local filings to maintain compliance with National Grid's Operation and Maintenance Plan.

National Grid, Pratts Junction Substation, Sterling, MA

Environmental Scientist. Prepared Notices of Intent and Storm Water Pollution Prevention Plans (SWPPPs). Conducted weekly compliance inspections; and coordinating with the local Conservation Commission.

National Grid, Cooks Pond Substation, Vernon Hill Substation, and Webster Street Substation Improvements, Worcester, MA

Environmental Scientist, responsible for environmental monitoring for improvements within existing substation yards in Worcester, MA. Project included preparing Notices of Intent and Storm Water Pollution Prevention Plans (SWPPPs); conducting weekly compliance inspections, and coordinating with the Conservation Commission.

National Grid, Electric Cross Country Maintenance Projects: Attleboro Taps 1 & 2, Attleboro, MA

Environmental Scientist, responsible for preparation of the permitting package to obtain coverage under National Grid's U.S. Army Corps of Engineers Individual Permit for the General Use of Swamp Mats ("IP"); coordination with local Conservation Commissions regarding MA Wetland Protection Act maintenance exemptions and any necessary local filings; and coordination with MA National Heritage and Endangered Species Program to maintain compliance with National Grid's Operation and Maintenance Plan.

National Grid, Electric Distribution Line Maintenance and Improvements, Hanson, MA

Environmental Scientist , responsible for preparation of the permitting package and assisting with coordination with local Conservation Commissions regarding WPA maintenance exemptions, and coordination with NHESP to maintain compliance with National Grid's Operation and Maintenance Plan.



Francis Vacca, EIT
Environmental Inspector

EDUCATION

B.S., Civil Engineering
University of Connecticut

REGISTRATIONS

Engineer In Training -
CT

BACKGROUND

Mr. Vacca is a civil engineer with five years of experience providing design for land development projects, including stormwater management, conceptual site layout, and hydrologic analysis.

PROJECT EXPERIENCE

University of Connecticut, Telecommunications Facilities Upgrade, Farmington, CT

Civil Engineer for the civil design of three telecommunications duct banks to support improvements in the reliability of communications network loops on the University campus. Working closely with the University's Information Technology Services, BSC refined the optimal routing for each of the three projects, then prepared plans and specifications defining the requirements for installation of the new duct banks, and restoration of affected areas.

University of Connecticut Northwoods Apartment Complex, Storrs, CT

Project Engineer for integrated design services for site enhancements and stormwater management upgrades at a University residential complex. Working with the University and their Office of Environmental Policy, BSC provided technical design of site improvements to enhance the visual nature and functionality of the site and to create low-impact stormwater management facilities, including pervious pavement and rain gardens. During construction, BSC conducted site inspections to monitor compliance with the construction documents, including the project's erosion and sedimentation control plan.

Environmental and Cultural Magnet School, Windham, CT

Civil Engineer for design and permitting of a new 600 student magnet school serving grades pre-K through 8. BSC provided civil engineering for site evaluation and selection, and is now a team member for design of the new school facility. Design includes site layout planning, the design of new utilities, site circulation and parking facilities, athletic fields, and stormwater management systems. The new school facility will incorporate significant LID components, and will be targeted for LEED certification. The project will be permitted through the Town of Windham, and reviewed through the Bureau of School Facilities.

M.D. Fox Middle School, Hartford, CT

Civil Engineer for design and permitting of extensive renovations to one of Hartford's original high schools, constructed in 1924. The BSC team is providing civil engineering, traffic, and landscape architecture services for a complete reconstruction of the school's site. This includes a facility condition assessment, site layout planning, phasing, design of new utilities, site access/circulation, parking facilities, playgrounds, and stormwater management systems. The project will be permitted through the City of Hartford, and reviewed through the Bureau of School Facilities.

Front Street District Redevelopment, Hartford, CT

Civil Engineer for civil engineering and landscape architecture services for the Front Street District, which is the final phase of the Adriaen's Landing project in downtown Hartford, CT. The development includes approximately 63,000 sf of retail / entertainment space, a 325-space parking garage, and 70-spaces of surface parking. Working with the developer, the State Office of Policy and Management (OPM), and the program architect, BSC is providing integrated civil engineering, design, landscape architecture, and survey services for this seven-acre, mixed-use development.

Burris Refrigerated Logistics, Rocky Hill, CT

Civil Engineer for the redevelopment of a 90-acre agricultural parcel. The proposed reuse includes a commercial distribution and supply facility. Coordinated with integrated project team of professional engineers, developers, landscape architects and surveyors throughout design. Prepared a full existing site hydrologic analysis and engineering report to determine necessary stormwater management devices and possible Best Management Practices to be employed in the proposed design. Prepared a full proposed site stormwater management system, including subsurface piping, water quality swales, water quality forbays and stormwater detention basins. Prepared construction phasing plans for temporary erosion and sedimentation control during various stages of construction, as well as the final site erosion and sedimentation control operations and maintenance schedule.

The Learning Center, Cromwell, CT

Design Engineer for the proposed development of a two-acre commercial parcel. Proposed use includes a commercial development containing "The Learning Center" child care and education center, as well as commercial office space. Participated in initial conceptual layout design based on existing site and proposed tenant needs and prepared preliminary conceptual layout models. Prepared final design layout, including grading, parking and utility design. Prepared existing and proposed hydrologic analysis and design, including stormwater management.

Portland Town Place, Portland, CT

Civil Engineer for the redevelopment of a nine-acre commercial parcel. Proposed reuse involves mixed-use revitalization including retail, commercial, and residential space. Coordinated with integrated project team of professional engineers, town engineers, town planners, and developers. Conducted research and analysis of existing site utilities. Prepared existing hydrologic analysis to be used in the design of a large underground stormwater detention chamber system. Conducted analysis of existing state drainage system times of concentration to assess impact of development on eventual discharge flow to Connecticut River.

West Springfield USACE Dike System, West Springfield, MA

Civil Engineer for the analysis and revitalization of over 8,000 feet of USACE Dike flood protection system. Prepared plans analyzing status of dike underdrain, toe drain, and relief well seepwater management system. Prepared plans representing overall performance along the entire dike profile throughout its existence.



John Corbo

Alternate Independent Inspector - West

BACKGROUND

Mr. Corbo is a recent graduate from the University of Connecticut (UConn) with a bachelor of Science degree in Civil Engineering. During his time at UConn, he worked closely with faculty assisting with research on the impact of off-street parking in major cities across the United States. He participated in an internship with a private engineering firm where he evaluated and inspected sediment and erosion control measures for active construction sites, conducted and reported ground water monitoring and soil testing results, and prepared site feasibility studies for evaluation of development potential. He also participated in an internship with the Town of Mansfield public works department where he assisted with field surveying and the development of a three-dimensional topography model in support of new town sewer infrastructure.

PROJECT EXPERIENCE

Career Academy High School, Waterbury, CT

Field Engineer during development of a new high school in the City of Waterbury. The BSC team designed storm drainage, sanitary sewers, domestic/fire protection water services, gas utilities, and erosion/sedimentation control measures. Mr. Corbo is providing field inspections for erosion and sedimentation control measures during construction.

Bowen Field at Beaver Ponds Park, New Haven, CT

Civil Design Engineer for design of improvements to Bowen Field in New Haven. The project includes a new synthetic turf field with overlapping soccer and football, and a 400 meter running track, renovated grandstands, new athletic field lights and other appurtenances. Mr. Corbo participated in the design of new water supply and sanitary sewer systems for the facility.

Town of Ellington Crystal Lake School, Ellington, CT

Civil Design Engineer for integrated site design services in support of a renovation/expansion project comprised of a 30,000 square-foot renovation and a 20,000 square-foot addition. The BSC team designed improvements to the 16 acre site including revised grading, new access drives, parking, and bus loading/unloading areas, new athletic fields, and new playground areas. Mr. Corbo participated in the design of stormwater management systems, traffic/parking, and design of new athletic fields.

Town of Ellington Windermere School, Ellington, CT

Civil Design Engineer for site design services in support of a school renovation project. Mr. Corbo participated in the design of reconfiguration of parking facilities and associated drainage systems.

EDUCATION

B.S., Civil Engineering
University of
Connecticut

AFFILIATIONS

American Society of
Civil Engineers

