Devine Tarbell & Associates, Inc.
Consulting Engineers, Scientists, & Regulatory Specialists

Brett M. Battaglia, PWS, CPESC
Environmental Scientist

Education

Bachelor of Science, Environmental Sciences,
University of Maine at Machias
Machias, Maine, 1992

Registrations and Professional Affiliations

Society of Wetland Scientists, Professional Wetland Scientist No. 1280
New Hampshire Certified Wetland Scientist No. 025
Certified Professional in Erosion and Sediment Control No. 2623
Maine Association of Wetland Scientists: Ethics Chair
New Hampshire Association of Natural Resource Scientists

SUMMARY OF EXPERIENCE

Mr. Battaglia has 10 years of professional experience specializing in wetlands, environmental permitting and agency consultation, wildlife and wetlands sciences, land use management and planning, and environmental impact review. He is a Professional Wetland Scientist (PWS, Society of Wetland Scientists) and also a Certified Wetland Scientist in New Hampshire. In addition, Mr. Battaglia is also a Certified Professional in Erosion and Sediment Control (CPESC), which is a certification program sponsored by the Soil and Water Conservation Society and the International Erosion Control Association. Mr. Battaglia's broad environmental background includes conducting and managing baseline studies, assessing impacts, identifying impact avoidance and minimization opportunities, and developing and implementing mitigation measures for proposed development projects in coastal, freshwater and terrestrial systems. Mr. Battaglia has performed state and federal environmental permitting on several multi-state energy development projects throughout the U.S. This includes the successful permitting of approximately 800 miles of natural gas pipeline in Massachusetts, New Hampshire, Maine, Vermont, Virginia, North Carolina, Tennessee, New York, and Pennsylvania. These projects required extensive agency consultation and coordination. Mr. Battaglia has significant construction related experience and has managed and coordinated field-based environmental survey projects.

Mr. Battaglia has overseen and conducted numerous wetland delineations and assessments of wetland functions and values and is proficient in current delineation methodologies. Mr. Battaglia has designed, implemented, and managed several wetland monitoring surveys to document wetland revegetation at 1, 2, and 3 years following pipeline construction activities. He has prepared numerous wetland monitoring reports for state and federal agencies in compliance with applicable permit conditions. Mr. Battaglia has performed over 500,000 acres of riparian area surveys to determine riparian area functioning condition. Mr. Battaglia has prepared erosion and sedimentation control plans and hydrostatic testing plans for several natural gas pipeline projects. He has performed rare, threatened and endangered species surveys on approximately 200 miles of natural gas pipeline right-of-way, and has developed rare, threatened and endangered species survey and mitigation reports. Areas of specialization include state and federal environmental permitting, wetland delineation and restoration, creation of seasonal pools for amphibian breeding, salt marsh restoration, and construction environmental inspection.

Mr. Battaglia has conducted and overseen numerous wetland delineation projects and is proficient in interpreting soil, hydrologic, and vegetative data for current wetland delineation procedures as well as assessing wetland functions and values using the professional judgement-based approaches such as the New England Highway Methodology. Mr. Battaglia also has experience using the Trimble PRO-XL and PRO-XR GPS units for data capture of wetland boundaries, rare, threatened and endangered species locations, and cover type mapping.

RELEVANT PROJECT EXPERIENCE

Patriot Extension Project, Tennessee, Virginia, North Carolina, East Tennessee Natural Gas **-** Member of environmental consulting team responsible for conducting environmental field investigations, preparing environmental study reports, and preparing federal and state permit applications for the project. The project is designed to serve growing natural gas demand in the southeast, provide supply competition, enhance the regional supply basin, and bring natural gas supply to areas that currently have none.

Specifically, the project will involve:

Mainline Expansion

- Construction of approximately 32 miles of pipeline along ETNG's mainline in Moore, Franklin, Marion, and Sullivan Counties, Tennessee;
- Testing of approximately 17 miles of pipeline along ETNG's mainline in Franklin, Grundy, Marion, Sequatchie, and Hamilton Counties, Tennessee;
- Construction of approximately 50 miles of pipeline along ETNG's mainline in Washington, Smyth and Wythe Counties, Virginia; and
- Installation of additional compression at ETNG's existing compressor stations in Smyth and Wythe Counties, Virginia.

Patriot Extension

- Construction of approximately 95 miles of new pipeline extending from ETNG's mainline near Wytheville in Wythe County, Virginia through Carroll, Floyd, Patrick, and Henry Counties, Virginia to Eden in Rockingham County, North Carolina.

Responsibilities included developing state and federal permit applications, assisting in developing project mitigation alternatives, and extensive consultation with resource agency staff. Field studies included conducting wetland delineations, conducting wildlife surveys and wildlife habitat evaluations, and searching for RTE plants and wildlife along the pipeline corridor and associated facilities. Results of these studies will subsequently be used in the development of an Environmental Impact Statement (EIS) or Environmental Assessment (EA) to fulfill NEPA requirements. Mr. Battaglia was also responsible for preparing text for inclusion in FERC resource reports, state and federal permit applications including Section 10/404 (U.S. Army Corps of Engineers) and other

Tennessee, Virginia, and North Carolina state applications.

Londonderry 20" Replacement Project, Tennessee Gas Pipeline Company **-** The Londonderry 20" Replacement Project consisted of approximately 19.3 miles of pipeline removal and installation through Middlesex County, Massachusetts, and Hillsboro and Rockingham counties, New Hampshire. The project consisted of removing an 8-inch diameter line along the Concord Lateral system and replacing the line with a 20-inch line to maintain current service to the LDC and provide transportation capacity for an AES facility. The project also consisted of installing additional measurement facilities adjacent to the existing Londonderry Meter Station and installing four new main line valves. Services provided to Tennessee Gas Pipeline by Mr. Battaglia, while working for another consulting company, consisted of: development and implementation of a comprehensive environmental inspection program, environmental inspection responsibilities, served as the lead environmental inspector, wetland delineation and mapping, local, state, and federal permitting, development of a comprehensive Hydrostatic Testing and Monitoring Plan, rare, threatened and endangered species surveys and mitigation, hydrostatic test dewater sampling, acting as a liaison between state and federal inspectors, detailed reporting, coordinating and participating in FERC inspections of the facilities, and completion of a comprehensive Final Project Completion Report. In addition, Mr. Battaglia managed a water quality turbidity monitoring program that assessed the effects of pipeline construction on in-stream turbidity and fishery resources. Mr. Battaglia managed staff that used automatic water samplers to monitor water quality at several stream crossings during construction of the project. Each water sample was analyzed for turbidity and total suspended solids (TSS). Field turbidity data was entered into a database; data were analyzed, compared with empirical TSS measurements, and used to calculate fishery impacts using a mathematical model.

Portland Natural Gas Transmission System Project; New Hampshire Alternative; and Joint Maritimes & Northeast/PNGTS Project, Vermont, Maine, New Hampshire, and Massachusetts, El Paso Energy Corporation/Tennessee Gas Pipeline Company **-** Mr.

Battaglia was involved in performing comprehensive planning and permitting services in support of development of the project, which consisted of approximately 250 miles of pipeline construction in Vermont, Maine, New Hampshire, and Massachusetts; a 73-mile pipeline alternative in New Hampshire and Vermont; and 100 miles of pipeline in Maine, New Hampshire, and Massachusetts. Services for the 250-mile pipeline project included: coordination of environmental surveys and agency walkovers along the route, evaluation of re-routes, preparation of environmental permits for local, state, and federal agencies, and preparation/review of FERC Environmental Reports. In addition, Mr. Battaglia performed several environmental surveys, mapped resources using GPS technology, and prepared resource lists. In addition, Mr. Battaglia performed agency liaison services, assisted agencies in field inspections/walkovers, and coordinated avoidance and mitigation procedures with agency personnel. Environmental permitting services performed by Mr. Battaglia consisted of participation in the FERC 7(c) Certificate filing, New Hampshire Energy Facility Certificate application, Army Corps permit application, and state Water Quality Certification applications. Lastly, Mr. Battaglia participated in design and implementation of an environmental training program and provided environmental inspection services, coordinated and managed a winter monitoring and right-of-way stabilization program for approximately 1500 wetlands and 900 waterbodies during winter and spring seasons following construction.

Market Link Expansion Project, Transcontinental Gas Pipeline Corporation - Mr. Battaglia participated in portions of the environmental permitting services for over 130 miles of natural gas pipeline looping and replacement projects involving construction of 10 pipeline loops and upgrading of seven compressor stations in 15 counties located throughout Pennsylvania and New Jersey. Services provided to Transcontinental Gas Pipeline Corporation by Mr. Battaglia consisted of: environmental field surveys, local, state, and federal permitting, identification and survey of contractor pipeyards, warehouses and extra work space areas, and coordination with Pennsylvania Fish and Boat Commission regarding approval and implementation of a Timber Rattlesnake Survey and Mitigation Plan.

Eliot Meter Station Project, Granite State Gas Transmission, Inc. - Mr. Battaglia conducted wetland surveys/investigations, and participated in preparing federal, state, and local environmental permits to allow construction of a natural gas metering and regulation station, a delivery tap, a segment of connecting pipeline, and a permanent access road in Eliot, Maine.

South River Ecosystem Restoration Project, U.S. Army Corps of Engineers, North Atlantic Division and New York District - This project involves the development of five ecosystem restoration alternatives designed to significantly improve the diversity and function of degraded areas along an 8.3-mile stretch of the South River in populated northeastern New Jersey. These alternatives were developed by performing baseline biological surveys of existing habitat conditions and were designed to attain several objectives including especially: habitat diversification, creation of under represented habitat, creation of habitat for rare or special interest wildlife, and increasing tidal flushing. Preferred restoration alternatives were selected according to their potential for maximizing the stated objectives and included: creation of low emergent marsh, creation of tidal creek ecosystems, creation of intertidal mudflat habitat, creation of forest/scrub-shrub habitat for migratory bird use, and creation of tidal ponds. Each of these five developed restoration alternatives included conceptual implementation costs, a list of preferred sites for implementation, a list of site-specific advantages and disadvantages, and a restoration monitoring plan. Services provided by Mr. Battaglia included: performing detailed habitat mapping and comprehensive baseline studies of terrestrial and aquatic wildlife, hydrology, and vegetation in an extensive tidal *Phragmites* wetland proposed as a USACE Ecosystem Restoration Site.

Union Beach Flood Control and Shore Protection Project, U.S. Army Corps of Engineers, North Atlantic Division and New York District - This project consisted of conducting biological investigations of the project area to characterize and evaluate the ecological impacts associated with implementation of the USACE's Union Beach Project in Monmouth County, New Jersey. The project consisted of development of a mitigation plan that would be used to offset impacts to wildlife and wetland habitat. The USFWS Habitat Evaluation Procedure (HEP) was used to quantitatively assess the relative value of wildlife habitats within the project area. Mr. Battaglia performed various terrestrial and wetland biological investigations, participated in obtaining applicable data for the HEP, and assisted in preparation of a preliminary mitigation plan.

Mississippi 500-Line Expansion Project, Tennessee Gas Pipeline Company - The project consisted of approximately 30.6 miles of pipeline expansion and new compression and metering facilities. Mr. Battaglia

managed field surveys for the project, prepared sections of the FERC Environmental Report, and assisted with state environmental permitting.

New York Rehabilitation Project, ***Tennessee Gas Pipeline Company*** **-** The Tennessee Gas Pipeline Company New York Rehabilitation Project consisted of rehabilitation of approximately 60 miles of the existing 24-inch 300-1 Line. Activities of the project included anomaly identification through analysis of intelligent pig runs, repair of identified anomalies, cut-out and installation of pipe class upgrade areas, installation of above ground appurtenances at the West Winfield compressor station, and installation of new main line valves. Mr. Battaglia's involvement in the project consisted of: wetland identification and delineation, state and local permitting, environmental inspection, and acting as a liaison for the Tennessee Gas Pipeline Company during agency inspections.

Riparian Functional Analyses, Bureau of Land Management **-** Performed inventories of riparian areas for functioning condition, noted channel width/depth ratios, entrenchment, sinuosity, slope and bed material as well as vegetative cover, estimated surface bank protection and bank erosion potential, conducted riparian wildlife species surveys, and identified the percentage of wetland plants within each surveyed riparian area. In addition, vegetative transects were performed for hydrological and vegetative mensurations, identified the Rosgen Channel Type using entrenchment, width:depth ratios, sinuosity, and slope and bed material, and determined stream discharge of flowing perennial streams throughout the 500,000 acre study area.

Pennsylvania Rehabilitation Project, ***Tennessee Gas Pipeline Company*** **-** The Tennessee Gas Pipeline Company Pennsylvania Rehabilitation Project consisted of rehabilitation of approximately 100 miles of the existing 24-inch 300-1 Line. Activities of the project included anomaly identification through analysis of intelligent pig runs, repair of identified anomalies, cut-out and installation of pipe class upgrade areas, and installation of new main line valves. Mr. Battaglia's involvement in the project consisted of: wetland identification and delineation, state and local permitting, environmental inspection, and acting as a liaison for Tennessee Gas Pipeline Company during agency inspections.

Eastern Box Turtle Field Survey and Literature Review, Baker Hill Trust **-** Mr. Battaglia performed field surveys and literature review for Eastern box turtle (*Terrapene carolina*) in an area proposed for development in southern Massachusetts. Mr. Battaglia designed field survey methodologies and described habitat suitability throughout the parcel; performed a survey of literature for occurrences of, and survey efforts for, this threatened species in Massachusetts, and summarized relevant literature and expert knowledge concerning the distribution, status, endangerment factors, life history, and habitat preferences of the species in Massachusetts.

Plaza West Project, JDR Trust II **-** The project represents the final phase of the Oak Hill Plaza Complex, located along route 114, in the Town of Scarborough, Cumberland County, Maine. The proposed project will involve the construction of approximately 205,000 square feet of office and retail space that will be designed to carefully integrate into the existing natural setting of the area. Mr. Battaglia performed a wetland determination and delineation of the project location and prepared wetland cover type maps of the site. Mr. Battaglia also coordinated with the client regarding mitigation alternatives to offset project impacts.

Great Lakes Hydro-Electric & Bangor Hydro Electric Company Proposed 115 kV Chester-Millinocket Tie Line Project **-** Environmental scientist responsible for preparing Maine Department of Environmental Protection Site Location of Development and Natural Resource Protection Act permit applications for the project. In addition, Mr. Battaglia was responsible for preparing the Maine Department of Transportation, Utility Location Permit application for the project. Performed extensive consultation with resource agency staff, conducted field studies, including: wetland investigations, wildlife surveys and evaluations, and performed construction inspection.

The Nature Conservancy, Cold Spring Harbor, New York **-** Wildlife technician responsible for monitoring nesting locations of endangered and threatened bird species. Performed extensive field data collection, migratory bird surveys, and coordinated and trained volunteers monitoring least tern (*Sterna antillarum*) nesting colonies. Installed wire-mesh predator exclosures around specific piping plover (*Charadrius melodus*) nest sites.

Saltwater Incorporated, Anchorage, Alaska **-** Worked with National Marine Fisheries Service collecting pertinent field data on commercial fishing vessels in the Bering Sea and within processing plants in Kodiak and Dutch Harbor, Alaska. Collected diversified species samples, and performed field observations of marine mammals. Worked as liaison between National Marine

Fisheries Service and fish boat captains.

World Center for Birds of Prey, Boise, Idaho - Wildlife technician responsible for recording significant field data to study hacking behavior of peregrine falcons (*Falco peregrinus*) in Mackay, Idaho. Observations performed during fledging and post-fledging periods. Observed daily habits of falcons within the hack box and recorded feeding habits. Prepared and organized final written report documenting project.

Newfound Harbor Marine Institute, Big Pine Key, Florida - Responsible for coordinating, supervising, and instructing school groups in marine science. Teaching techniques concentrated in coral ecology, near shore communities, and mangrove islands. Developed lesson plans to stimulate environmental interests and awareness within school groups. Certified as a skin diving instructor and performed skin diving instruction to hundreds of participants. Prepared and developed laboratory investigation for students, including dissections and coral species identification. Conducted shorebird identification workshops to students and general public.

Specialized Training and Certifications

- Professional Wetland Scientist (PWS) No. 1280 - Society of Wetland Scientists.
- New Hampshire Certified Wetland Scientist No. 025 - New Hampshire Association of Natural Resource Scientists.
- Certified Professional in Erosion and Sediment Control No. 2623 - Soil and Water Conservation Society and the International Erosion Control Association.
- Confined Space Entry, Fall Protection and Walking/Working Surfaces - OSHA 8-Hour Training.
- Wetland Delineation Training for U.S. Army Corps of Engineers 1987 Wetland Delineation Manual - Office of Professional Development, University of Maine.

Technical Papers

Battaglia, B.M., and R.J. Trettel. 2002. A rapid approach to required post-construction wetland vegetation monitoring after pipeline construction. 7th International Symposium on Environmental Concerns in Rights -of-Way Management.

Lare, S.J., B.M. Battaglia, and R.J. Trettel. 2002. Summary of the mitigation program for rare, threatened, and endangered plant populations along the Portland Natural Gas Transmission System and PNGTS/Maritimes and Northeast Joint Facilities Projects. 7th International Symposium on Environmental Concerns in Rights -of-Way Management.

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