



JENNIFER CALLAHAN

Project Scientist, Material Matters, Inc.

Position:
Project Scientist

Parent Firm:
Material Matters, Inc.

Years of Experience:
With Firm:<1
Total: 8

Education:
2004 M.S., Environmental Pollution Control, The Pennsylvania State University.
2002 B.S., Environmental Resource Management, The Pennsylvania State University.

Professional Affiliations:
Water Environment Federation

OVERVIEW

Responsible for managing biosolids, water treatment residuals, and nutrient management projects, including nutrient trading and beneficial use permitting. Also responsible for conducting natural resource investigations and preparing environmental permit applications, including Clean Water Act (CWA) Section 404 individual and general/nationwide, as well as State Program General Permit (SPGP) permit applications. Natural resource investigations include National Environmental Policy Act (NEPA) environmental assessments, Endangered Species Act Section 7 biological assessments, wetland delineations, stream classifications, natural community mapping, and protected species surveys.

Provide support for other projects involving data analysis and management (Material Manager™), technically based studies, and food processing residuals, as well as provide technical peer review.

PROJECT EXPERIENCE

NCDOT, NC 43 Connector, Individual Permit, New Bern, NC

Prepared the environmental permit applications for the 4.5-mile NC 43 Connector (NCDOT TIP # R-4463B) from NC 55 to US 17 in Craven County, NC. Environmental permits applied for and obtained include US Army Corps

of Engineers (USACE) Section 404 Individual Permit, NC Division of Water Quality (NCDWQ) Section 401 Individual Water Quality Certification, and the NC Division of Coastal Management (NCDQM) Coastal Area Management Act (CAMA) Consistency Certification. Participated in Merger 01 Process, including 4B and 4C meetings.

NCDOT, North Charlotte Outer Loop, Natural Resource Studies, Charlotte, NC

Coordinated and conducted natural resource surveys and evaluated additional areas for wetlands, streams, and protected species for the proposed 5.1-mile North Charlotte Outer Loop (NCDOT TIP# R-2248E) from West of NC 115 to West of I-85 in Mecklenburg and Union Counties, NC. Responsibilities included delineating and surveying (via GPS) wetlands and streams and coordinating verification by the USACE and NCDWQ. Conducted freshwater mussel (Carolina heelsplitter) surveys under direct supervision of permitted aquatic biologist and conducted smooth coneflower, Michaux's sumac and Schweinitz's sunflower surveys. A population of Schweinitz's sunflower was identified within the project study area.

Love's Travel Stops & Country Stores, Permit and Mitigation, Fancy Gap, VA

Coordinated the jurisdictional waters verification and pre-application meeting with USACE and Virginia Department of Environmental Quality (VADEQ) and prepared the joint permit application (VA Water Permit #4) for proposed unavoidable impacts associated with construction of this project on the approximately 30-acre project site located in Carroll County, VA. Wetland/stream riparian buffer preservation areas as well as two stream relocation sites were identified in the project study area to provide on-site mitigation. Prepared the conceptual mitigation plan and the final mitigation plan and managed monthly construction monitoring for this project.

NC Turnpike Authority, Monroe Connector/Bypass Biological Assessment (BA), Mecklenburg and Union Counties, NC

Prepared the Biological Assessment for this 20-mile project (NC STIP # R-3329/R-2559) in Mecklenburg and Union Counties, NC. Addressed potential direct, indirect, and cumulative effects to federally endangered Schweinitz's sunflower, Michaux's sumac, smooth coneflower, and the Carolina heelsplitter, a freshwater mussel, and its critical habitat. Researched environmental baseline and project / consultation history, evaluated potential effects, proposed conservation measures, and wrote the flora portions of the BA. Provided technical assistance for the Carolina heelsplitter and critical habitat portions of the BA. Coordinated project with NC Turnpike Authority, NC Department of Transportation, US Fish and Wildlife

Service, US Environmental Protection Agency, NC Division of Water Quality, NC Wildlife Resources Commission, Federal Highway Administration, and local/county stakeholders.

Eastern Band of Cherokee Indians (EBCI), Hyatt Cove Environmental Assessment (EA), Qualla Boundary (Jackson and Haywood Counties), NC

Investigated the environmental, natural, historical, cultural, public, and socioeconomic aspects of an approximately 40-acre site located within the Qualla Boundary (EBCI lands) proposed for subdivision development. Determined purpose and need and alternatives analysis, conducted field investigations, evaluated affected environments (i.e. topography, geology, soils, land use, resources/water quality, biological resources, cultural resources, etc.), and prepared other documentation necessary to develop the EA, including agency coordination. Assessed potential impacts of proposed site development, recommended avoidance and minimization measures, and prepared EA per NEPA regulations. Coordinated directly with EBCI staff and the Bureau of Indian Affairs (BIA).

Phase I Environmental Site Assessment (ESA) and Phase II Underground Storage Tank (UST) Removal, Allentown, PA

Performed a Phase I Environmental Site Assessment on a 6.8-acre commercial property in Lehigh County, PA, and identified recognized environmental conditions (RECs), including the potential for releases and/or environmental impacts associated with an abandoned 8,000-gallon #2 heating oil UST. Performed UST removal oversight and environmental documentation and field-screened excavated soil for indications of heating oil release using a photo-ionization detector. Following the removal of suspected contaminated soil, collected confirmatory post removal soil samples for laboratory analysis. Analyzed laboratory results, documented activities and reportable releases, concluded removal to be successful and submitted the documentation to appropriate agencies.

Research, National Phosphorus Research Project, University Park, PA

Conducted research in the area of nutrient management, particularly soil phosphorus (P) and runoff dynamics. Quantified phosphorus runoff losses in biosolids and manures and related them to characteristics of the P sources. Results showed that differences in solubility of P sources may impact P losses in runoff. Evaluated the relationship of water extractable P to total dissolved P in runoff, concluding that water extractable P is a good predictor of total dissolved P in runoff.

Exeter Township, Biosolids Marketing, Exeter, PA

Evaluated the WWTP processes, biosolids physical/chemical characteristics, local/regional options, and other factors to assist Exeter Township, PA in shifting from landfilling to beneficially using their wastewater biosolids. Researched all feasible end use options for the Township and conducted a marketing study with cost analysis which detailed several factors for each option, including revenue, energy generation, environmental effects, reliability, and necessary permits.

Shippensburg Water Treatment Plant, Water Treatment Residuals Land Application, Shippensburg, PA

Worked with the Borough of Shippensburg to modify the conditions of and obtain a PADEP WMGR permit for their future WTR beneficial use land application activities. Coordinated with PADEP to obtain a minor modification to the WMGR 017 permit.

PUBLICATIONS AND LECTURES

Logan (Callahan), Jennifer. 2004. Assessing phosphorus loss from surface applied biosolids and manures during simulated rainfall. 2004 SERA-17 Annual Meeting, New Bern, NC.

Logan (Callahan), Jennifer, and Robin C. Brandt. 2004. Biosolids and the P Index: An Update on Current Developments. 2004 PennTEC Water Environment Association Annual Meeting, State College, PA.