



MEMORANDUM

To: Don Giecek, Apex Clean Energy

From: Chad Evenhouse
Kimley-Horn and Associates, Inc.

Date: March 30, 2015

Subject: Expert statement regarding Section 404 permitting for potential development projects in Chowan County, North Carolina

I, Chad Evenhouse, have worked for Kimley-Horn and Associates, Inc. since 1998 providing environmental consulting services in support and preparation of Section 404 permit applications for private and public sector clients in the Coastal Plain region of North Carolina. Large scale projects that I have managed requiring environmental services for 404 permitting include transportation, mining, and renewable energy development projects.

I am a wetland scientist, and have been registered as a Professional Wetland Scientist with the Society of Wetland Scientists since 2003 and am currently in the renewal process. I have a Bachelor of Science degree in Geology from Calvin College, and a Master of Natural Resources degree from North Carolina State University.

In order to develop a utility-scale wind farm facility in Chowan County, a prospective applicant would need to satisfy North Carolina Department of Environment and Natural Resources (NCDENR), Wind Facility Siting Permit (HB 484) requirements. Under the NCDENR permit process, the following aspects will be considered:

- Risks to civilian or military air navigation routes, air traffic control areas, military training routes, special use air space, radar, or other affected military operations.
- Risks to natural resources and uses, including species of concern or their habitats

Further, with respect to natural resources, the NCDENR permit will not be issued if the Department finds that there are significant adverse impacts to ecological systems, natural resources, cultural sites, recreation areas, or historic sites of more than local significance; including national or State parks or forests, wilderness areas, historic sites, recreation areas, segments of the natural and scenic rivers system, wildlife refuges, preserves and management areas, areas that provide habitat for threatened or endangered species, primary nursery areas designated by the Marine Fisheries Commission, and the Wildlife Resource Commission, and critical fisheries habitat identified pursuant to the Coastal Habitat Protection Plan.

The U.S. Army Corps of Engineers, (USACE) administers the day-to-day operations of Section 404 of the Clean Water Act (CWA) with delegated authority from the U.S. Environmental Protection Agency (USEPA). Considering the landscape and natural communities typical of Chowan County, it is likely that a project of the size of a utility-scale wind farm facility would require a CWA Section 404 Individual Permit from the USACE for the placement of dredged or fill material into waters of the U.S., including wetlands.

The basic premise of the Section 404 permit is that a permit will not be approved if there is a practicable alternative that is less damaging to the aquatic environment, or the Nation's waters would be significantly degraded. To obtain a Section 404 permit, the applicant must demonstrate that they have taken steps to avoid and minimize impacts to wetlands/waters and to provide mitigation for unavoidable impacts. Through their review of the Section 404 permit application, the USACE will seek comment from the U.S. Fish and Wildlife Service and National Marine Fisheries for evaluation of potential effects to fish and wildlife. The State will also review a Section 404 Individual Permit application and certify that the project meets water quality standards, and that the permit is consistent with coastal zone management requirements.

Therefore, a Section 404 Individual Permit application for a typical project in Chowan would likely include the following documentation:

- Project Overview/Description
- Project Location
- Existing Site Conditions
 - Land Use
 - Topography
 - Jurisdictional Features
 - Soils
 - Vegetation
 - Coastal Area Management Act (CAMA) Areas of Environmental Concern
 - Protected Species and Habitat
 - Historic/Archaeological Sites
 - Regulated Floodplain
 - Zoning
- Project Description
 - Land Owner Agreements
 - Construction Sequence
 - Proposed Impacts
 - Temporary Impacts
 - Permanent Impacts
 - Stormwater Quality Controls
 - Project Decommissioning
- Project Purpose and Need
- Scope of Analysis
- Other Federal, State, and Local Authorizations Obtained or Required and Pending

- State Water Quality (401) Certification (NCDWR)
- State Stormwater Permit (NCDWR)
- Sedimentation and Erosion Control Plan (NCDLR)
- North Carolina Utilities Commission Certificate
- Conditional Use Permit
- Building Permit
- Coastal Zone Consistency (NCDCM)
- Project Alternatives Considered
 - Avoidance
 - No-Action Alternative
 - Off-Site Alternatives
- Preferred Alternative
 - Minimization (modified project designs)
 - On-Site Alternatives
 - On-Site Minimization of Unavoidable Impacts
- Conclusion of Alternatives
- Mitigation
- Indirect and Cumulative Impacts

In summary, impacts to the natural environment from a proposed wind facility will be thoroughly reviewed through the NCDENR Wind Facility Siting Permit and the CWA Section 404 Individual Permit processes.



Chad Evenhouse

CHAD W. EVENHOUSE, PWS

Environmental Scientist

PROFESSIONAL CREDENTIALS

Master of Natural Resources;
Minor, Bio-Agricultural
Engineering, North Carolina State
University, 2002

Bachelor of Science, Geology,
Calvin College, 1994

Professional Wetland Scientist in
North Carolina (No. 1417)

NC Wetland Assessment
Methodology, Pilot View, 2009

Introduction to the Taxonomy and
Pollution Ecology of Aquatic
Insects, North Carolina State
University, 2005

Tar-Pamlico Buffer Rules Training
Seminar, NCDENR Division of
Water Quality, 2000

Wetland Delineation Training
Course, North Carolina State,
University, 1997

Rosgen Levels I-IV

Society of Wetland Scientists

Chad Evenhouse has 16 years of experience as an environmental scientist and project manager with Kimley-Horn. As a Professional Wetland Scientist with a strong background in soils and hydrology, he has developed a specialty in planning and environmental sciences for large scale wetland/stream delineation and mitigation projects. His skills as a scientist and wetland hydrologist have been particularly evident on coastal area delineations and mitigation projects, including watershed based site searches, feasibility/site investigations, wetland and vegetation design, construction management, and post-construction monitoring. He has provided these services for NC EEP, state DOTs, municipalities, and private clients throughout the Carolinas. He has performed numerous jurisdictional wetland/stream delineations and Section 404/401 permitting for our large projects and currently is the lead wetland scientist for Kimley-Horn's southeast mitigation program. Chad also has implemented the North Carolina Wetland Assessment Method (NCWAM) on public and private sector projects, including negotiating wetland functional values with the USACE on problematic wetland sites.

PROJECT EXPERIENCE

Chad served as Project Manager, Project Coordinator, Task Manager, or Environmental Scientist on the following projects:

- Martin Marietta Materials, Raleigh-Durham Quarry, Wake County, NC
- Martin Marietta Materials, Lemon Springs Quarry, Lee County, NC
- Martin Marietta Materials, Rocky Point Quarry, Pender County, NC
- Martin Marietta Materials, Selma Quarry, Johnston County, NC
- Martin Marietta Materials, Vanceboro Quarry, Beaufort and Craven Counties, NC
- Martin Marietta Materials, Onslow Quarry, Onslow County, NC
- Martin Marietta Materials, East Alamance Quarry, Alamance County, NC
- Martin Marietta Materials, Castle Hayne Quarry, New Hanover County, NC
- Martin Marietta Materials, Clarks Quarry, Craven County, NC
- Martin Marietta Materials, Franklin Quarry, Franklin County, NC
- Martin Marietta Materials, Cumberland Quarry, Cumberland County, NC
- Martin Marietta Materials, North Columbia Quarry, Richland County, SC
- Martin Marietta Materials, Leland Railyard, Brunswick County, NC
- North Carolina DOT, Natural Environment Studies and Services Statewide (2002-2014), statewide, NC
- North Carolina DENR EEP, On-Call Environmental Services Contract, Raleigh, NC
- North Carolina DENR EEP Valley Fields Farm Site, Davidson County, NC
- North Carolina DENR, County Line Creek Stream Restoration, Henderson County, NC
- North Carolina DENR, Purllear Creek Stream Restoration, Wilkes County, NC
- North Carolina DENR, Suck Creek Stream and Riparian Buffer Restoration, Moore County, NC
- North Carolina DENR, Jumping Run Stream Restoration at Payne Dairy Farm, Alexander County, NC
- West Virginia DOT, Lochgelly Road/US 19 Interchange, Fayette County, WV
- North Carolina DOT, Winston-Salem Bypass, Winston-Salem, NC
- West Virginia DOT, US 52 Wetland Mitigation and Stream Restoration Design, Wayne and Mingo Counties, WV
- West Virginia DOT, US 35 Wetland Mitigation Design, Mason and Putnam Counties, WV

- R.E. Goodson Borrow Pits, various locations, NC
- Gold Hill Mine Stormwater Improvement/Retrofit, Salisbury, NC
- Georgia DOT, Savannah River Basin Mitigation Initiative and Statewide Umbrella Mitigation Bank (GUMBI), Savannah River Basin, GA
- Tennessee Stream Mitigation Program, North Fork Mud Creek Stream Mitigation, Carroll County, TN
- Stoney Creek Greenway Trail and Park System Improvement and Stream Restoration, Goldsboro, NC
- Tennessee Stream Mitigation Program, West Harpeth River Restoration, Franklin, TN
- Edwards Branch Stormwater Management and Stream Restoration Repair, Charlotte, NC
- South Buffalo Creek Water Quality and Habitat Improvement Project, Greensboro, NC
- North Carolina DOT, Tar-Pamlico River/Randolph Park Prospectus Report (Stream Restoration/Mitigation), Enfield, NC
- North Carolina DOT, Greensboro Stream Mitigation, Greensboro, NC
- North Carolina DOT, Grove Creek Stream and Wetland Mitigation, Duplin County, NC
- North Carolina DOT, Upper Tar-Pamlico River Basin Mitigation Site Search, eastern counties, NC
- Asbury Avenue Mitigation Feasibility Study and Watershed Restoration, Charlotte, NC
- North Carolina DOT, West Macedonia Stream Restoration Feasibility Study, High Point, NC
- North Carolina DENR, Reedy Creek Stream Restoration Feasibility Report at Umstead State Park, Raleigh, NC
- South Carolina DOT, SC 97 Bridge Replacement over Rocky Creek, Chester County, SC
- South Carolina DOT, On-Call General Engineering Services, Georgetown County, SC
- North Carolina DOT, Greensboro Eastern/Northern Urban Loop, Greensboro, NC
- North Carolina DOT, R-3830 NRTR, NC 42 Widening, Sanford, NC
- North Carolina DOT PDEA, R-5311, US 13/NC 11, Ahoskie, NC
- North Carolina DOT, R-2574 NRTR Supplement, Camden and Currituck Counties, NC
- North Carolina DOT PDEA, U-4700, US 321 Improvements, Burke, Catawba, and Caldwell Counties, NC
- North Carolina DOT, U-3810, Piney Green Road Widening, Jacksonville, NC
- Bass Lake Outfall Greenway, Holly Springs, NC
- Sumter County Sales Tax Transportation Improvement Projects, Sumter, SC
- Boundary Street Corridor Improvements, Beaufort, SC
- Main Street Extension (U-5318), Holly Springs, NC
- US 21/SC 802 Bypass, Beaufort, SC
- Southwest Judd Parkway Extension, Phase 2, Fuquay-Varina, NC
- Northwest Judd Parkway (U-5317), Fuquay-Varina, NC
- Lufkin Road Realignment (U-5118AB), Apex, NC
- Friendship Site Selection and Friendship Road/US 1 Interchange Environmental Screening and Conceptual Roadway Design, Holly Springs, NC
- South Carolina DOT, Safe Routes to Schools (SRTS) Projects, Berkeley and Georgetown Counties, SC
- Gable Ridge Drainage Basin Stormwater Improvements, Holly Springs, NC
- Parkwood Regional Lift Station and Western Trunk Sewer Assessment, Planning and Design Services, Jacksonville, NC
- Haw River 42-Inch Parallel Interceptor Rehab/Replacement, Burlington, NC
- Project Sugar Biofuel Facility, Osceola County, FL
- Element Power Solar Site, Union County, NC
- Element Power Solar Site, Beaufort County, NC
- Element Power Wind Farm Preliminary Environmental Studies, Carteret County, NC
- juwi Wind, Wind Farm Environmental Screening, Eastern NC
- Iberdrola Wind Farm, Desert Wind Environmental Permitting, Perquimans and Pasquotank Counties, NC
- Titan America Cement Manufacturing Facility, New Hanover County, NC
- Duke Energy Progress, Ramsey Road Stream Relocation, Onslow County, NC