



**Jeffrey A. Nelson,  
CPESC, CPSWQ**

Director, Environmental Services

#### **City Center Project, South Burlington, VT**

The forty-acre City Center site in the heart of South Burlington, Vermont is one of the most promising yet environmentally challenging infill development sites in northern New England. With Mr. Nelson as Principal in Charge, VHB Pioneer was retained by the City to manage a complex natural resource classification, inventory, design and permitting process aimed at securing wetland, stormwater, and Section 404 permits for a mixed-use development of over 1 million square feet along with new roadways and extensive water quality enhancements. VHB Pioneer's services have included hydrologic modeling of sediment loading and stormwater impacts during both construction and operational phases of the project, advisory and design services on wetland impacts and permitting, and design of exciting state-of-the-art stormwater treatment systems throughout the development area.

#### **VELCO, East Avenue Loop (EAL) Project 115 kV Line, Essex to Burlington, Vermont**

With Mr. Nelson as Principal in Charge, VHB Pioneer provided rights-of-way and off rights-of-way wetland and stream delineations for a 4.8 mile 115 kV utility project in Chittenden County, Vermont. Following VHB Pioneer's completion of the natural resources assessments, Mr. Nelson worked collaboratively with the project team to submit a petition to the Vermont Public Service Board for a Certificate of Public Good for the Project, as well as for review by VT DEC under the Vermont Wetland Rules and the US Army Corps of Engineers for Section 404 permitting. Preparation of erosion prevention and control plans and application for review and approval under the NPDES construction stormwater program administered by VT DEC.

#### **First Wind (formerly UPC Wind Management) Wind Farm Project, Sheffield Vermont**

With Mr. Nelson as Principal-in-Charge, VHB Pioneer is providing assistance for construction and operational phase stormwater permitting to First Wind (formerly UPC Wind Management, LLC), for the proposed wind farm project in Sheffield, Vermont, consisting of 16 turbines with a project capacity of 40 MW. As the applicant has modified the project through the course of Section 248 review, VHB Pioneer has evaluated changes in potential project impacts to meet Vermont Department of Environmental Conservation permitting requirements. VHB Pioneer completed a detailed field reconnaissance and initial watershed resources assessment, utilizing existing information and available GIS mapping to prepare an extensive resource base map. Based on the results of these studies, Mr. Nelson prepared pre-filed testimony which has been filed with the Public Service Board as evidence in the Section 248 review of the project. In August 2007, a Certificate of Public Good (CPG) was issued approving the project.

#### **Vermont Public Power Supply Authority (VPPSA)-Project 10, Swanton, Vermont**

With Mr. Nelson as Principal in Charge, VHB Pioneer conducted wetland and stream delineations, as well as detailed wildlife assessments for the Project 10 site in Swanton, Vermont, a proposed gas turbine power generating station. State and federal wetland permits have been submitted to respective agencies, and permit approval from the United States Army Corps of Engineers and State of Vermont Agency of Natural

Mr. Nelson is director of environmental services and manager of VHB's office in North Ferrisburgh, VT. Mr. Nelson provides overall management and strategic planning for projects that the firm conducts. Mr. Nelson has designed and implemented a large number of projects in Vermont and the northeastern United States involving water resources assessment, planning, impact analysis, permitting, and monitoring.

26 years of professional experience

Resources has been received. Mr. Nelson also prepared expert witness pre-filed testimony for the Project and is currently participating in Section 248 proceedings for a Certificate of Public Good, as filed with the Vermont Public Service Board.

#### **Lake Champlain Basin Wetland Restoration Plan**

This Wetland Restoration Plan presented a basin-wide plan for reducing phosphorus (P) loading in Lake Champlain through restoration or conversion of land into wetland areas that had the greatest potential for P removal. This project consisted of the identification of degraded riparian wetlands within the study area; ranking and prioritization of the identified wetlands as candidates for restoration based on the potential for improving quality of downstream waters, and ultimately Lake Champlain; determination of the feasibility of restoration at selected sites and the development of template wetland restoration plans.

#### **Lowe's of Essex, Essex, Vermont**

In charge of Lowe's voluntary supplemental water quality improvement project identified, designed and permitted by VHB Pioneer. The project involves restoration of a segment of the Sunderland Brook floodplain, riparian wetland, and streambank. The restoration project includes removal of the existing stormdrain infrastructure, concrete structures, and fill material historically placed in the floodplain, along with the restoration of natural geometry of riparian corridor. Native plantings included in project design to complete restoration of natural forested floodplain wetland.

Stratton Mountain Resort Water Quality Remediation Plan, Stratton Mountain, Vermont  
Project Role: Project Manager / Principal in Charge

#### **Mount Snow Resort Water Quality Remediation Plan, West Dover**

Responsible for developing a water quality remediation plan to address stormwater impaired watershed in lieu of TMDL development. In addition to management of stormwater runoff from existing parking lots and other base area facilities, the plan will include a long term approach to restoration of a 1300 foot segment of the North Branch of the Deerfield River, through the removal of Snow Lake, an onstream pond constructed during the 1960s.

#### **Stratton Mountain Resort Water Quality Remediation Plan, Stratton Mountain, Vermont**

Responsible for the preparation of a water quality remediation plan in 1998 and subsequent annual performance reports through 2008. Included in the plan are ongoing monitoring for water chemistry, temperature, sediment aquatic biota, habitat, and stream geomorphology.

#### **Sugarbush Ski Resort, Lincoln Peak Base Area Redevelopment, Warren, Vermont**

Provided stormwater treatment and control design for base area redevelopment in impaired watersheds to meet Vermont Water Quality Standards and enable water quality restoration. Project included restoration of Hotel Brook through daylighting, stream channel construction, and riparian buffer creation.

#### **Sugarbush Ski Resort, Hotel Brook Channel Restoration, Warren, Vermont Project Role:**

Project manager for aquatic biological monitoring, water quality evaluation, hydrologic analysis, and design of water withdrawal system modifications that are conducted to ensure compliance with permit conditions and restore water quality and conservation flows in two impaired streams (2006-current)..

**Stowe Mountain Resort Snowmaking Reservoirs, Stowe, VT**

Provided State and Federal permitting services to GeoDesign, Inc. for two new snowmaking storage reservoirs and improvements to an existing snowmaking water reservoir.

**Municipal Wastewater System, Mad River Planning District, VT**

Provided site evaluation and permitting services to Phelps Engineering for design of a new community wastewater system for the Mad River Planning District. Worked with the planning district and the Towns of Waitsfield and Warren, Vermont in the development of a community wastewater disposal system to accommodate wastewater flows from village areas within each of the towns. Work has included site evaluation for both in-ground and spray irrigation wastewater disposal, the completion of large-scale hydraulic conductivity testing, site mapping for wetlands and other potential constraints, groundwater flow direction monitoring and evaluation, and stream chemistry evaluation and biomonitoring.

**Municipal Water System, Waitsfield, VT**

Provided wetlands delineation and permitting services to Phelps Engineering, Inc. for design of a new municipal water system for the Town of Waitsfield. Conducted an aquifer mapping project for the Town of Waitsfield that culminated in the installation of a highly productive bedrock well that has a long-term safe yield of over 260 gallons per minute. Performed source testing, interference monitoring, data evaluation, geologic mapping, and delineation of the recharge area for this unusually prolific bedrock well, which is proposed for use as a new municipal water supply source.

**VTrans - Chittenden County Circumferential Highway and U.S. Route 7 Shelburne Road, Chittenden County, Vermont**

Mr. Nelson has worked as a consultant to VTrans to provide technical analyses and expert testimony regarding pollutant loading with respect to appeals of Stormwater Discharge Permits issued for the CCCH Segment A/B and U.S. Route 7/Shelburne Road projects.

**2002 Vermont Stormwater Manual**

Mr. Nelson participated actively on behalf of the regulated community in the Collaborative Process convened by the Vermont Agency of Natural Resources that resulted in the development of the 2002 Vermont Stormwater Manual, which represents a state-of-the-art approach to stormwater treatment and control.

**Education**

M.S. Civil Engineering, University of Vermont, Burlington, Vermont, May 1992

B.S. magna cum laude, Geology, University of Vermont, Burlington, Vermont, October 1982

**Presentations/  
Conferences**

Panelist in Vermont Bar Association Continuing Legal Education (CLE) symposium regarding "The Interplay Between State and Federal Environmental Regulation" and "Effective Presentation of Environmental Evidence", Burlington, Vermont. November 16, 2007.

Presentation of geomorphology-themed poster titled, "In-stream Pond Removal - An Effective Water Quality Management Tool" at NEAEB 37<sup>th</sup> annual meeting, held at Mount Snow Resort. March 15, 2007.

Speaker with presentation at "Local Water Quality Protection" workshop, Vermont League of Cities & Towns, Montpelier, Vermont January 25, 2007.

Speaker/Instructor at the Environmental Permit Training Program, Primmer Piper Eggleston & Cramer PC, held at the VELCO Board Room, Rutland. February 13, 2006.

Speaker at the "Storm Water Regulation Seminar", Lorman Education Services. Burlington, VT. June 17, 2005.

Panelist in Symposium "The Current Controversy Regarding TMDLs: Contemporary Perspectives" held at Vermont Law School. South Royalton, VT March 2002.

IECA, Review of Basic Geomorphic Principles (August 2007)

Stormwater in Cold Climates Conference, Portland, ME (November 2003)

Recent Developments in Stormwater Regulation in Vermont, Montpelier, VT (May 2003)

International Erosion Control Association, 33rd Annual Conference, Orlando, FL (February 2002)

Participant in "The Stormwater and Sprawl Connection - Designing Water-Smart Towns in the Lake Champlain Basin", Shelburne, VT (May 2001)

TMDL Science Issues Conference, St. Louis, MO (2001)

Participant in "Northeast Training Workshop-Stream Restoration: Natural Channel Design", Fairlee, VT (May 2000)

Speaker at New England Interstate Water Pollution Control Commission's 10th Annual Nonpoint Source Meeting. "Getting Practical about NPS TMDLs in the Northeast". Woodstock, VT. May 1999."

EPA Public Forum on TMDL Regulations in New England, Woodstock, VT (1999)

**Professional  
Registrations/  
Certifications**

Certified Professional in Erosion and Sediment Control 2000  
Certified Professional in Storm Water Quality 2002  
VT Transco, LLC. (VELCO) Environmental Training Certification  
(September 2006)  
VT Transco, LLC. (VELCO) Safety Training Certification  
(September 2006)

**Affiliations/  
Memberships**

American Society of Civil Engineers  
Environment & Water Resources Institute  
Green Mountain Water Environment Association  
International Erosion Control Association  
National Groundwater Association  
Vermont Rural Water Association-Associate Member  
Renewable Energy Vermont  
River Management Society – Northeast Chapter  
Soil and Water Conservation Society  
Vermont Environmental Consortium  
Vermont Rural Water Association  
Water Environment Federation