

## Robert Wildey, PE, CPESC

Water Resources Engineer



### Education

MS, Civil Engineering, Water Resources, University of New Hampshire, 2006

BA, Environmental Science, New College of University of South Florida, 1997

### Training

Applied Fluvial Geomorphology, Dave Rosgen, P.H., PhD, Wildland Hydrology, 2013

River Morphology and Applications, Dave Rosgen, P.H., PhD, Wildland Hydrology, 2015

### Registrations/Certifications

Certified Professional in Erosion and Sediment Control, 2009

Professional Engineer, VT, 2018

### Affiliations/Memberships

American Water Resources Association, 2006  
Vermont Society of Engineers

Robert is experienced in hydraulic analysis, stream restoration, and stormwater management, having worked on numerous water resources and stormwater-related projects for both public and private-sector clients. His key focus is the interface between natural streams and the built environment, from bridges and culverts that carry transportation infrastructure to stormwater treatment practices that manage runoff from impervious areas and convey flows to surface waters. He regularly performs construction oversight and EPSC inspections in sensitive resource areas and works closely with state and federal regulators in developing permit applications for complex projects.

### *17 years of professional experience*

#### **Mount Snow Resort, Cold Brook Stream Restoration, Wilmington, VT**

Due to the unpermitted gravel mining operations of a former landowner, Cold Brook has been captured by two borrow pit ponds. The stream is a cold-water fishery that was negatively affected by the resulting thermal impacts to the stream. In conjunction with Mount Snow's West Lake Reservoir construction project, the larger of the ponds was filled and the reach was restored using natural channel design principles. Robert conducted hydrologic analysis of the contributing drainage area, performed stream geomorphic assessments of the upstream and downstream reference reaches, designed the proposed stream channel restoration, and oversaw construction and post-construction monitoring.

#### **U.S. Forest Service, Kelley Stand Road, Sunderland, Vermont**

In the aftermath of Tropical Storm Irene, four miles of Kelley Stand Road was severely damaged by flooding from the adjacent Roaring Brook. Working on behalf of the Forest Service and the Town of Sunderland, Robert completed a H&H analysis of the Brook and developed stream restoration details that were used where the road and stream were in conflict. The use of cross vanes and rock weirs helped to restore step pool habitat through the reach and direct flow away from the streambank and provides a degree of protection for the road during future flood events.

#### **USDA Forest Service, AOP Culvert Replacements, Vermont**

For the U.S. Department of Agriculture's (USDA) Forest Service (FS), Robert is responsible for designing stream simulation culverts for ongoing indefinite delivery/indefinite quantity (IDIQ) contract with the Forest Service for projects in Addison and Rutland counties. The scope of work includes improvements to existing and repair of damaged water crossings, with a particular focus on providing Aquatic Organism Passage (AOP). Natural bottom and open bottom arch culverts were chosen and designed in accordance with the Forest Service's Stream Simulation Manual. Robert is responsible for analyzing the hydrology of the contributing watersheds, the hydraulic requirements of the replacement structures, and the stream simulation design to ensure stream continuity between the upstream and downstream reaches at multiple stream crossings.

**Transmission Developers Incorporated, New England Clean Power Link, Vermont**

The New England Clean Power Link (NECPL) project involves the proposed construction of a 1,000 MW high-voltage direct current (HVDC) transmission cable from the Canadian border at Alburgh, Vermont to an existing VELCO electrical substation in Ludlow, Vermont. The project will involve 100 miles of cable laid along the bottom of Lake Champlain and 50 miles of overland construction in existing public roadway rights-of-way. Robert examined stream and floodplain crossings and prepared applications for the Project's Vermont Stream Alteration Permit and the Vermont Flood Hazard and River Corridor Permit, which led to the successful issuance of these permits.

**Jay Peak Resort, Jay Branch Water Quality Remediation Plan Implementation, Jay, VT**

Jay Peak Resort is a four-season resort in northern Vermont. Runoff from the Resort drains to Jay Branch and South Mountain Branch streams, both of which are tributary to the Mississquoi River. Because the aquatic biota in the streams have been found to be impacted by sediment released as the result of construction and operations at the Resort, a Water Quality Remediation Plan (WQRP) has been developed that addresses annual monitoring requirements, sediment remediation activities. Robert has been the point person overseeing the monitoring and assessment efforts on behalf of the Resort and was instrumental in obtaining a settlement agreement when several of the Resort's stormwater permits was appealed by an outside interest group.

**City of South Burlington, Potash Brook Stormwater Improvement Project and Culvert Replacement, South Burlington, VT**

Robert oversaw design of stormwater basin retrofit and roadway culvert replacement that were the key pieces of a stormwater improvement project designed to improve water quality in Tributary3 to Potash Brook, a stormwater-impaired tributary to Lake Champlain. This project was originally a joint effort between the City and the U.S. Army Corps of Engineers (USACE), New York District. The City assumed full responsibility for the project in 2016, and anticipates constructing both components in the summer of 2017.

**Green Mountain Power, Kingdom Community Wind, Assessment & Repairs for Flood-Related Damage, Lowell, VT**

As the result of an extreme storm event, an off-site impoundment failed and damaged road and stormwater infrastructure at the Kingdom Community Wind (KCW) project site. Robert evaluated sediment deposition in adjacent stream channels and wetlands following this event and drafted a restoration plan that was approved by state and federal regulators. He provided field services to direct removal of excess sediment, restoration of natural stream channel, and stabilization of a potential headcut through the stream terrace.