

March 2005

The Green Mountain Civil Report

Newsletter of the Vermont Section of the American Society of Civil Engineers
Website <http://sections.asce.org/vermont>

2004/2005 Meeting Schedule

Three meetings remain in the 2004/2005 year.

March 16, 2005, Northfield Waste Water Treatment Plant Tour and Technical Presentation
Speaker: Charles Goodling and Russ Rohloff, Dubois and King, Inc.

March 30, 2005, Day under the Dome, Montpelier, VT State House.

April 27, 2005
Norwich & VTC Senior Project Presentations

May 18, 2005, Meeting & Field Trip
Alburl / Swanton Bridge Tour – Missisquoi Bay Bridge Project, Meeting in St. Albans

March Meeting Agenda

Schedule: Technical Tour of the Northfield WWTF:
3:30 to 4:30 p.m.
Social Hour: 5:00 to 6:00 p.m.
Dinner: 6:00 p.m.
Dessert and Speaker: 7:00 p.m.
Cost: Members: \$30
Students: \$15

Food: Dinner at the Three Stallion Inn in Randolph, VT with an appetizer and buffet menu including:

- ◆ VT International Cheese Board
- ◆ Spanokopita
- ◆ Tossed Garden Salad
- ◆ Selection of Potato or Pasta Salad
- ◆ Baked Cod with a Sherrie herb crumb Crust
- ◆ Chicken Marsals
- ◆ Vegetable Rice Pilaf
- ◆ Chef's Choice of Vegetable
- ◆ Dessert will be an assorted choice of cookies, bars with a fresh fruit and berries.

A cash bar will be available from 5 to 8 pm.

RSVP to: Chantal Beliveau by March 14, 2004.

chantalb@engineeringventures.com

Directions:

Northfield WWTF:

The Northfield Waste Water Treatment Facility located on Dog River Dr. directly across from the shopping plaza just north of Northfield on Route 12. From the South, take Exit 5 off I-89 and travel west on Route 64. Take a right onto Route 12 north. Travel through town to Dog River Drive. From the North, either take Exit 5 off I-89 and follow the directions above or travel south on Route 12 from Montpelier (Exit 8 off I-89).

Three Stallion Inn:

The Three Stallion Inn is located on Stock Farm Road in Randolph. From Northfield, travel south on Route 12 to Route 66. Turn left onto Route 66, Stock Farm Rd. will be on your right after turning onto Route 66. The Three Stallion Inn is less than one mile on your right. If you not attending the tour but want to attend the dinner only; either from the North or South take Exit 4 off I-89 and travel west on Route 66. The Stock Farm Road is at the bottom of the hill on your left.

SPEAKER: Charles K. Goodling, P.E., and Russ Rohloff, P.E., Dubois and King, Inc.

DINNER TOPIC:

The Northfield Wastewater Treatment Facility was originally designed and constructed 40 years ago for 1.63 million gallons per day, treating the waste steam from the Village, which included the woolen mills that were prevalent at that time. The facility used a trickling filter as the biological treatment process. As time passed and the mills closed, the facility became hydraulically oversized and the trickling filter provided operators with limited process control. Several problems began to occur with the facility, including effluent violations, inadequate solids storage and handling, and difficult cold weather operations. In the late 1990's the Village was required to achieve compliance with new discharge limitations on phosphorous.

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The solution was a demonstration of current state-of-the-art wastewater treatment unit process systems including an influent screen with a screenings washer/compactor/bagger, aerated grit chamber, variable speed influent pumps, a Sequencing Batch Reactor (SBR) with retrievable aeration system, aerated sludge holding tanks, and a centrifuge sludge dewatering system. This project is the first application of an SBR retrievable aeration system in the State of Vermont.

The Town has graciously opened their doors at the treatment facility and invited us in to see it in action from 3:30 to 4:30 prior to our March meeting on the 16th. Mr. Goodling and Rohloff will be on hand to comment on the design and operation as well as answer questions. Upon completion of the tour, we will move to the Three Stallion for dinner and the formal presentation.

Younger Member Forum News

If you are 35 years of age or younger then we are automatically part of the VT ASCE Younger Member Forum. The board members of VT ASCE YMF would like to announce a number of different activities that younger members of ASCE are welcome to attend. Historically, younger member ASCE sections all over the country have been described as "fun" "young" and "active" civil engineers. Here in VT, there is no exception!

MARCH 12TH SNOWSHOEING!

Either Stowe Pinnacle (blue square on the skiing scale) or Nebraska Valley (green circle with a slight black diamond at the end)! Stowe Pinnacle is about 3-4 hrs round trip, but if folks want to sled down that might speed things up a bit. It's pretty consistent up for most of the way and as long as we aren't in a big hurry then everyone should do fine. Nebraska Valley Tour starts just past the Mansfield Trout Club and is about 2 hrs round trip with a waterfall toward the end that is a bit technical for the last 1/4 mile. We can go as far as we like. Bring a lunch! No Cotton. No snowshoes? Umiak Outfitters rents in Stowe \$15/day with

poles (recommended) or AJ's for \$10/day. Let me know who is interested and what you are interested in hiking. We can figure out the details once we get a consensus! Email to RSVP. We can meet in Stowe at AJ's or Umiak Outfitters around 10am!

Bill Farley, V.P. VT ASCE YMF
william.farley@state.vt.us 802-828-3417

MISSISQUOI TREE PLANTING IN ENOSBURG

Bring a shovel! Help plant trees to restore the floodplain of the Missisquoi River System. Saturday April 30th and May 14th. Contact Bill or Stephanie for more details.

JOINT HIKE IN WHITE MOUNTAINS

Second Annual Hike with Younger Members from ME, NH, MA and VT. Gorgeous views and great exercise. Bring lunch, plenty of water and warm clothing for the top. This year's hike is led by Abby Lisius from Trudell Consulting Engineers in Williston, VT. Saturday, June 11th with rain date on the 18th. We will be conquering one of New Hampshire's fine peaks, specific location TBD. E-mail with suggestions - details to follow.

Abby Lisius, Outdoor Events Chair, VT ASCE YMF
abby@trudellconsulting.com 802-879-6331

Other ASCE News

ASCE POLICY 465- ADOPTED OCTOBER, 2004

Professor James D. Nelson of the University of Western Michigan gave a summary of the current version of ASCE Policy 465 at a retreat of the UVM Department of Civil and Environmental Engineering. Prior versions were adopted in October, 1998 and October, 2001, but the uproar that it caused amongst the engineering community was such that it no longer stipulates a master's degree as

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the minimum requirement for professional registration. It now reads, "The ASCE supports the attainment of a Body of Knowledge for entry into the practice of civil engineering at a professional level".

This Body of Knowledge contains the eleven outcomes (see attached slides from Prof. Nelson's presentation) currently used in the accreditation of engineering programs and adds four others, a specialized discipline, project management aspects, business and public and leadership. The levels of competence may be obtained through a combination of practical experience and formal education, including the possibility of master's degree. Further, further competences after formal licensure through lifelong learning are envisioned

The evolution of this document is due in part to the fact that whereas many professional degrees once required three or four years of formal education, engineering has remained at four years, whereas law, medicine, pharmacy, etc. have expanded education requirements beyond the traditional four years. ASCE is taking the lead among engineering societies to raise the bar. This is seen as a long term project with implementation targeted for 2020 perhaps when civil engineers would need to attain varying competency levels in order to be licensed. Fifteen public and private universities and/or colleges have participated in designing appropriate curricula. ASCE has made the report of the committee available for free on line, at www.asce.org/raisethebar.

For more information please contact: Jean-Guy Béliveau, P.E., Ph.D. Chairman, Department of Civil and Environmental Engineering, University of Vermont

UPDATE YOUR CONTACT INFORMATION

The Vermont Section of ASCE depends on its membership to update their member information with ASCE National. Shawn Kelley, our secretary, has access to the ASCE member database for Vermont, from which he is able to compile our electronic newsletter distribution

list. Members who wish to be included in the electronic newsletter distribution, but who do not want to give their e-mail address to ASCE National or members who would like to receive a paper copy of the newsletter by mail should contact Shawn; see address in footer.

ANNOUNCEMENT FOR PLANNED SUMMER TOUR OF VORTECHNICS

Vermont Section ASCE is planning a summer tour of the Vortechincs facility in Scarborough, Maine (<http://www.vortechincs.com>). Founded in 1988 and based in Scarborough, Maine, Vortechincs has built its business on the development of industry-leading stormwater treatment products used on municipal, industrial and commercial sites in the U.S. and Canada.

We are still selecting a date for the trip, but we are planning for a Friday in June or late July. Tentative costs will be approximately \$50 per person, including lunch with Maine fare, bus transportation, and 2 PDHs. If we are able to fill the bus, costs will decrease. Members interested in RSVPing to get on the reservation list early should contact Chantal Beliveau, chantalb@engineering-ventures.com. More details will follow as they are available.



Photo of Vortechincs in Scarborough from website.

Message from the Editor

The Green Mountain Civil Report, Newsletter of the Vermont Section of the American Society of Engineers
To submit an article for publication, please mail it to Shawn Kelley c/o GeoDesign, Inc. P.O. Box 699 Windsor, VT 05089 or
E-mail skelley@geodesign.net

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The Green Mountain Civil Report is the newsletter of the Vermont Section of the American Society of Civil Engineers. This newsletter intends to keep you up-to-date on the activities of civil engineers around our state.

Did you or your firm recently complete an interesting project that others would enjoy reading about? Does your firm have an engineering position open? Are you an ASCE member looking for a new position? Do you know of an upcoming engineering seminar or conference? If so, please send in a brief note to the Green Mountain Civil Engineering Report.

Please feel free to contact us with your announcements. We will work hard to get them included in the newsletter. The newsletter is typically distributed via email, however if you would like a hard copy or if you are not receiving the E-Newsletter and would like to please contact Shawn Kelley (Secretary and Newsletter Editor) at skelley@geodesign.net or any of the officers listed below.

2004/2005 ASCE Vermont Section Officers

Past President: Lynnette Whitney, P.E.
(lwhitney@dirsteel.com)

President: Shawn Patenaude, E.I.
(SPatenaude@Dubois-King.com)

President Elect: Vacant

Treasurer: Chantal Beliveau, P.E.
(ChantalB@EngineeringVentures.com)

Secretary: Shawn Kelley, E.I., Ph.D.
(skelley@geodesign.net)

Director: Sherward Farnsworth, P.E.
(Sherward.Farnsworth@state.vt.us)

Director: Jean-Guy Beliveau, P.E., Ph.D.
(beliveau@emba.uvm.edu)

Younger Member Forum President: Stephanie Zehler, E.I. (szehler@dufresne-henry.com)