



# Association of Engineering Geologists Newsletter

May 2010

New England Section

Thursday May 13<sup>th</sup>, 2010 Meeting

**Note the early meeting date!!**

**Topic: Bombs Away in Snowy New England - Profiling of Lacustrine Stratigraphy with Embedded Targets**

**Speaker: Steven Arcone U.S. Army ERDC-Cold Regions Research and Engineering Laboratory Hanover, NH**

Joe English Pond is a small lake on the New Boston Air Force Station, in New Boston, NH. It served as a constant practice bombing range from 1942–1958. It is mandated to be cleaned and turned over to civilian use in the indefinite future. Although mostly unarmed practice bombs were used, many craters and live 100 pound bombs have been found throughout the 2800 acre base, particularly near the pond. In addition, shrapnel from much larger munitions have been found near the shores, and citizens were often warned when particularly loud explosions were going to occur. During 2006 I conducted several ground-penetrating radar surveys of the lake subbottom to find evidence of bottom and subbottom munitions and to profile the subbottom stratigraphy. The surveys revealed thousands of returns from distinct metal munitions and their depths, but not their type or, directly, their size. My objective therefore, was to find any obliterated or disturbed strata as evidence of the use of high explosive munitions. The main basin and all sloping deposits bordering the pond surprisingly show no evidence of disturbance, while shelf deposits near all shores show very local disturbances as evidence of penetration by practice bombs. The findings are consistent with the lack of TNT byproducts, usually associated with detonations, within many subbottom samples. I compare the profiles with others I recorded on Squam Lake and also discuss the nature of the subbottom sediments and why penetration of up to 10 m depth within them occurred. I conclude that very few if any large munitions were ever exploded in Joe English Pond

and if they do exist, they have remained unexploded.

Steven Arcone received the BS and MEE degrees from Cornell University in 1965 and 1966, and the PhD degree from Dartmouth College in 1977. He has been employed since 1973 at the US Army ERDC Cold Regions Laboratory in Hanover, NH, where he conducts research into the propagation of radio waves in dispersive media, and the genesis of stratigraphy within snow, ice, permafrost and sediments using ground-penetrating radar. He was an editor for the journal Geophysics for 10 years. He is an adjunct professor at the University of Connecticut and a member of the Research Faculty at the University of Maine. He has authored and coauthored 53 journal articles in subsurface exploration using geophysical methods, and has received several grants for glaciological research in Antarctica and Alaska from the NSF.

## **AEG Field Trip – First Announcement**

On Saturday, June 5<sup>th</sup>, AEG is planning a field trip along the 495 belt to look at interesting and unique geologic features that were incorporated into the new bedrock geologic maps created as part of the Office of the Massachusetts State Geologist STATEMAP program. Joe Kopera of the OMSG will be leading the trip, which will span locations from Shirley down to Milford.

We will meet at the Johnny Appleseed Rest Stop on Route 2, which will also serve as the first stop, then proceed in mini-vans for the rest of the trip. Lunch Stop (and ice cream) will be at Kimball's Farm and will be BYOM (bring your own money).

Cost for the field trip will be approximately \$45 per person. To make a reservation, please contact **Steve Potts, GEI Consultants, Inc., 400 Unicorn Park Drive, Woburn, MA 01801**. You can email him at [spotts@geiconsultants.com](mailto:spotts@geiconsultants.com) or call him at 781-721-4111. SPACE WILL BE LIMITED.

Final costs and a detailed itinerary will be sent to AEG NE members later this month.

## Contacts & Updates

To update your mailing information or submit input for this newsletter, contact Andrew Koenigsberg at 508-836-8844 or e-mail him at [amk32@cornell.edu](mailto:amk32@cornell.edu). Mail all checks for dues or meeting reservations to **Steve Potts, GEI Consultants, Inc., 400 Unicorn Park Drive, Woburn, MA 01801**. You can email him at [spotts@geiconsultants.com](mailto:spotts@geiconsultants.com) or call him at 781-721-4111.

## National Newsletter Contributions

Send Brad Miller Section news items for the national AEG Newsletter. Please contact him at (617) 863-6237 or [bradford.a.miller@gmail.com](mailto:bradford.a.miller@gmail.com). People can send him content anytime, and he can help expand on the subject if necessary.

## Newsletter Distribution by E-mail

If you are not on our e-mail list but would like to be, please e-mail Andy at [amk32@cornell.edu](mailto:amk32@cornell.edu) so we can add your name to our growing list. Please print this e-mail and post it at work for your peers to see, or forward it to those you think may be interested.

## AEG on the Web

**National Web Site** <http://www.aegweb.org/>

**Chapter Web Site** <http://www.aegne.org>

## Announcements from National

**2010 Annual Meeting in Charleston, South Carolina;** September 20-25. The registration forms will be available on or around February 1st, 2010 on AEG's website ([www.aegweb.org](http://www.aegweb.org)). Also, the deadline for submittal of abstracts is April 1st, 2010.

**E-publishing update.** The Journal of Environmental & Engineering Geoscience will be available to Members electronically soon. Look for more details in the coming months. Also, the Editors of the Journal want your technical papers and peer-reviewed articles for publication! Please contact Abdul Shakoor if you need more information or go to <http://eeg.allentrack.net/cgi-bin/main.plex>.

**Student Members.** The Student and Young Professional Support Committee has developed numerous programs to help you with everything from starting a student chapter, the Visiting Professionals Program and writing your resume – just visit AEG's website and navigate through the Students tab. You can follow the Committee on Facebook at New

Geologist. Also, if you are an AEG Student Member who recently graduated or are about to graduate, you are eligible to receive Full Member benefits FREE for one year after graduation. Just contact AEG HQ for more details.

**Living With Unstable Ground**, the publication that the AEG helped to sponsor publication of, is available to AEG Members for only \$5.00 plus shipping, just contact AEG Headquarters.

## Important Note for New Hampshire P.G. Licensees

Every time you attend a monthly AEG meeting, you earn one (1) CEU towards continuing education for the NH PG renewal. In addition, the regulations state that *“Active participation in professional or technical societies shall equal one continuing education hour per year and shall require that the licensee serve as an officer and/or actively participate in a committee of the organization.”*

**Meeting Details:**

Thursday, May 13<sup>th</sup>, 2010, Hilton Hotel, Woburn MA, (781) 932-0999

**Reservations:** Please do your best to phone in or email in ALL reservations by Monday, May 10<sup>th</sup>. We can take a limited number of walk-in attendees; however, for planning purposes, we would prefer that you make a reservation. Payment in advance of the meeting is preferred or you can pay at the door for an extra \$2.00. If you are a no-show, we will bill you for the cost of the meal. To pay in advance, send a check payable to AEG, New England Section, to **Steve Potts, GEI Consultants, Inc., 400 Unicorn Park Drive, Woburn, MA 01801**. You can call Steve at (781) 721-4111 or email him at [spotts@geiconsultants.com](mailto:spotts@geiconsultants.com)

The dinner menu consist of a buffet including Vegetarian Lasagna, Chicken Picatta, vegetables, salad and the usual deserts with the caloric content of the rest of the meal put together.

<b>Schedule:</b>	Board of Directors Meeting	5:00-5:30 PM
	Social Hour	5:30-6:30 PM
	Cash Bar	5:00-7:30 PM
	Dinner	6:30-7:30 PM
	Talk	7:30-8:30 PM

**Cost:** AEG National Members and Northeast Section Subscribers: \$36  
 Students: \$10

**Directions:** Directions - Take Route 128 (a.k.a. I-95) to Exit 36 (Washington St.). Proceed south on Washington St. to the second traffic light and get in the left hand turn lane. Turn left onto Cedar St. then take the right fork onto Forbes Road. The hotel should be directly in front of you.



Name(s)	Email Address	Membership Status:				Amount Enclosed
		National	NE - Section	Student	Non-Member	
<b>Day Phone #:</b>		<b>Total # Attending:</b>				
		<b>Total \$ Amount:</b>				