



# Granite State Geologist

The Newsletter of the Geological Society of New Hampshire  
Winter 2004-2005 Issue No. 47

[www.gsnhonline.org](http://www.gsnhonline.org)

## GSNH

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### *Newsletter*

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Keene, New Hampshire  
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## **2004 GSNH Annual Meeting**

A capacity crowd met at the Cat n' Fiddle Restaurant in Concord, NH for the 2004 Annual Meeting of the Geological Society of New Hampshire. The proposed slate of candidates was elected. Congratulations to all the lucky winners (see sidebar). Voter turnout was modest and no lawsuits have yet been filed to challenge voting procedures. After dinner, our own Rich Moore (USGS) gave us an update on “New England SPARROW: Application of the National Hydrography Dataset for Watershed Water-Quality Nutrient Modeling”, a model which Rich and his colleagues have assembled for every reach of every river and significant stream in New England. The amount of river flow and contaminant information now available via the click of a mouse is staggering, especially to those of us from the pre-computer age. Thank you, Rich!

## **GSNH Directory**

All members paid up through January 15th, 2005 will be in the GSNH 2005 Membership Directory. So, if you forgot to renew your membership, you can send it in now, or pay at the January 13, 2005 Dinner Meeting in Boscawen and still be included!

### ***Please note!***

GSNH has a new venue for dinner meetings.  
The January 13, 2005 Dinner Meeting  
will be held at:

**Alan's Restaurant, Boscawen, NH**  
(6 miles north of Concord on Route 3).

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## **NHGS Groundwater Level Monitoring for September through November 2004**

Derek Bennett, NHGS

NHGS staff member Kelley Kugel collected water level measurements September 27th-30th. Water levels increased relative to last month, as well as compared to September 2003, although slightly. On average, water levels rose 0.05 feet above August 2004, and 0.09 feet from last year at this time. The greatest increase from last month was observed in Hooksett (HTW-5) with a water-level rise of 0.87 feet. HTW-5 is the only bedrock well in the network. The most significant decline, 0.75 feet, was observed by volunteer David Chappell in Colebrook at CTW-73. Overall, the monitoring network is showing water levels in the normal or above normal ranges statewide with the exception of ENW-30 in Enfield, which continues to run below normal.

NHGS staff collected water level measurements October 25th-27th. On average water levels declined statewide relative to last month and as well as October 2004. Water levels dropped 0.34 feet below September 2004 and 0.72 feet from last year at this time. Water levels measured higher in three wells however, increasing in Franklin (FKW-01), Concord (Airport CVW-02) and Colebrook (CTW-73) by 0.04 feet, 0.23 feet and 0.01 feet respectively.

The November round of groundwater level measurements was conducted by NHGS staff member Derek Bennett from November 24th – November 29th, 2004. Overall, water levels showed only a slight decrease from last month. On the average, levels were down 0.10 feet when compared to October 2004. However, when compared to the same time last year, water levels decreased an average of 1.50 feet. This annual average is not representative of the entire population of wells as the New London and Enfield monitoring wells skewed the average lower with changes of - 6.76 feet and - 6.90 feet, respectively. The New London well is a shallow (21 ft) roadside dug well that has historically showed a considerable range (over 16 feet) in water levels changes. The Enfield well is located at the southern end of Mascoma Lake and may be affected by lake drawdown.

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### **New Hampshire Geological Survey Update**

Compiled by Lee Wilder, David Wunsch, and Derek Bennett, NHGS.

#### *NH Geological Survey's Winter 2005 Lunch Time Lecture Series*

NHGS Lunch Time Lecture Series will resume this winter at the New Hampshire department of Environmental Services (NHDES). State Geologist, Dr. David Wunsch will open the series with a presentation titled: "Methane: from the Ocean Floor to Your Back Door". David will cover methane hydrates, pressure/temperature sensitive, icy compounds found in abundance in ocean shelf sediments that, once technological hurdles are overcome, could be a tremendous source of natural gas. As a Congressional Fellow, David was the congressional staffer who worked closely on the Methane Hydrate Research Act of 1998. For the "back door" segment of the presentation, David will present recent research on the origin of methane discovered in deep bedrock water wells in southern New Hampshire. This Lunch Time Lecture will be held Wednesday, January 12, 2005 from 12 to 1PM in the Auditorium at the NHDES, 29 Hazen Drive, Concord, NH. This lecture will count as one (1.0) hour of continuing education. Certificates will be available for those seeking to complete their Professional Geologist license continuing education requirement. Pre-registration is not necessary. If you need further information, contact the NH Geological Survey at: [geology@des.state.nh.us](mailto:geology@des.state.nh.us)

## New Hampshire Geological Survey Update continued

### New NH Surficial Maps

The NH Geological Survey has received open file copies of four NH Surficial Maps at 1:24,000. The quadrangles mapped are: Tile (91) Hanover; Tile (112) West Alton; Tile (139) Parker Mountain; and Tile (153) Northwood. Copies are available from the NHDES Public Information Center, at 603-271-3503.

Three other quadrangles are scheduled to be mapped in the summer of 2005: Tile (114) Sanbornville; Tile (115) Great East Lake; and Tile (128) Milton.



Forehead Block of Old Man, May 2004

### Old Man of the Mountain Poster

The Old Man Educational Task Force has submitted a Request for Proposals (RFP) from parties interested in creation of a poster about the Old Man of the Mountain for NH schools. The poster is to include an interdisciplinary lesson regarding the geology, history, and other facets of the Old Man of the Mountain. The RFP requires that the poster be completed and distributed by the 2005 anniversary of the collapse of the Old Man. The posters will be made available to every school in NH, and will be geared for grades 4-8. State Geologist David Wunsch is a member of the education task force.

### Digitized Maps for the I-93 Corridor

The NH Geological Survey has received funding to digitize the surficial geology map quadrangles along the existing I-93 corridor from the MA border to Concord, NH. Having these quadrangles available in digital form will add to the Survey's growing data base of digital surficial geology coverage.



Old Man in Winter, unforgettable view

### **Edutrip 2005**

The Mount Washington Observatory is offering a two-day with one overnight Edutrip to nine (9) NH Teachers on Thursday and Friday, January 6-7, 2005. Participants will be transported to the summit in the Observatory's snow-cat and spend Thursday and Friday exploring and learning in the "World's Worst Weather." Trip price includes all transportation, accommodations and meals. For reservations and/or questions, contact Peter Crane at the MWO: [pcrane@mountwashington.org](mailto:pcrane@mountwashington.org) . A great Christmas present for your favorite NH educator!



## Deep Wells in New Hampshire

Rick Schofield, P.G., NHDES Water Well Program Manager

On January 1, 1984 the NH Water Well Board was created by law to license water well contractors and pump installers, and to collect records of all new well construction. After over 20 years of reporting, the New Hampshire Well Inventory, managed by the NH Geological Survey, has nearly 100,000 well records. Of particular interest, and the subject of this short article, are the increasing numbers of deep bedrock wells constructed in the last 10 plus years. Of the 91,980 bedrock wells constructed since reporting began, 1,002 wells were drilled to a depth of between 1,000 and 2,000 feet, and 2 wells were drilled to a depth greater than 2,000 feet. About 75 % of these wells were drilled within the last 10 years. The deepest well reported was constructed in Derry, NH and was drilled to 2,120 feet with a reported yield of 2 gallons per minute (gpm), after “blasting”! [Ed. *This is the answer to the trivia question posed in the last issue.*]

The majority of the deep wells were drilled in southern New Hampshire towns including Bedford, Brookline, Derry, Pelham, and Windham, all of which had more than 40 wells with depths equal to 1,000 feet or greater. The only exception is Moultonborough, which has its fair share of deep wells, 45 with depth equal to 1,000 feet or more. The deep well jackpot is located in Windham, NH where there are 114 wells with depths ranging from 1,000 to 2,020 feet. Interestingly, 10 of those wells have reported yields between 50 and 100 gpm, and one 1,506 foot well has a reported yield of 200 gpm!!! I guess there is water way down there if you have the deep pockets to look for it.

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## Rock and Mineral “Talk boxes”

To make it even easier to give a geological presentation, Lee Wilder (GSNH Past-President) has assembled two “Talk Boxes” containing NH rocks and minerals.

*The Mineral Talk Box*: has all you need to give an interesting, hands-on presentation and includes 20 interesting common minerals. The box contains posters, activities, nice hand specimens, specimens for use with the participants, as well as background information to help the presenter feel "comfortable" with the material.

*The Rock Talk Box*: has all you need to give an interesting, hands-on presentation on the three rock types. This box contains 20 interesting rock samples, with an emphasis on NH Bedrock samples, where appropriate. The box also contains posters, activities, nice hand specimens, specimens for use with the participants, as well as background information to help the presenter feel "comfortable" with the material.

Both of the Talk Boxes are located at the office of the NH State Geologist, at NH DES, in Concord, NH. To schedule the use of one of them, contact Lee Wilder at 603-271-1976, or [geology@des.state.nh.us](mailto:geology@des.state.nh.us) .

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BIA/NHDES  
2004 N.H. Air & Water Seminar  
December 14, 2004 8 am—4 pm  
Grappone Conference Center  
Concord, NH

GSNH is a member of the NH Business & Industry Association.  
GSNH members qualify for the discounted BIA member registration fee of \$95, a \$30 discount.



# Geological Society of New Hampshire

Winter Dinner Meeting 2005

**Speaker: Steve Kahl**

*Center for the Environment, Plymouth State University*

**Topic:** *“Determining Sources of Salt Contamination in Groundwater”*

**When: Thursday, January 13, 2005**

**\*\*\*\*\*Where: Alan's Restaurant\*\*\*\*\***

**Boscawen, NH (6 mi north of Concord on Rte 3)**

6:00 pm Social Hour

7:00 pm Dinner

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**GSNH Annual Meeting, Thursday January 13, 2005**

Dinner will be a buffet.

Reservations: \_\_\_\_\_ members @ \$18.00 \_\_\_\_\_ non-members @ \$20.00 (in advance)

*Half-price for students (must show student ID card)*

*Reservations will be taken until Monday afternoon, January 10, 2005*

*\*\*There will be a \$2.00 surcharge for those paying at the door without reservations\*\**

Make checks payable to: Geological Society of New Hampshire

Mail to: Dave Wyman, 31 Columbus Ave., Concord, NH 03301

phone: 603-224-9031 or [davew@buoytec.com](mailto:davew@buoytec.com) for information

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone and/or Email: \_\_\_\_\_

Half the cost of the dinner may be tax-deductible as a business expense.

**The lecture part of the program counts as 1.5 hours of CEU contact hour credit.**



## Dates to Remember!

- GSNH Winter Dinner Meeting  
Thursday January 13, 2005

NOTE New Location!

**Alan's Restaurant, Boscawen, NH**  
(6 miles north of Concord on route 3)

- 2004 N.H. Air & Water Seminar  
December 14, 2004, 8 am—4 pm  
Grappone Conference Center, Concord, NH

**Geological Society of NH**  
**PMB 133, 26 South Main Street**  
**Concord, NH 03301**



Your membership status is listed on the mailing label.