

Geologic Resources Advisory Committee Meeting

October 17, 2022

Present committee members: Dennis Albaugh (Lithometrics), Ken Gallager (Office of Planning and Development), Gary Johnson (Dartmouth), Lesley Johnson (public member), David Krause (DNCR), Jo Laird (UNH), Jennifer Lambert (Nobis), Jeffrey Marts (NHDES – Hazardous Waste Remediation Bureau), Patrick Moran (USFS), Krystle Pelham (NH DOT, Chair), Stephen Roy (NHDES – Drinking Water and Groundwater), Peter Whitcomb (NRCS)

Absent committee members: Bill Chaisson, Ryan Crosbie (CRH)

New Hampshire Geological Survey staff in attendance: Shane Csiki (State Geologist-NHGS), Brian Hauschild (NHGS), Mike Howley (NHGS), Josh Keeley (NHGS), Rebecca LeCain (NHGS)

MEETING MINUTES

- I. The Geologic Resources Advisory Committee (GRAC) meeting was called to order by Krystle Pelham at **1:00 PM**
 - a. Introductions from committee members and NHGS staff
- II. Discussion and approval of the minutes from August 15, 2022
 - a. Jeff Marts motioned to approve minutes as amended (two spelling and title changes)
 - b. Lesley Johnson seconded the motion
- III. Update on the legal requirements as outlined in RSA 91-A (Right to Know Law) as they pertain to GRAC
 - a. Because this is no longer an ad hoc group, the committee is not able to communicate through email or online exchange forums, as this would be considered a non-public meeting
 - i. NHGS will send emails to the committee rather than the Chair
 - b. NHGS will serve as the repository for meeting materials and work with the Public Information Office to make them publicly available
- IV. Consideration and Acceptance of Geologic Mapping Proposal for 2022
 - a. Shane Csiki provided the proposal prior to the meeting
 - b. He summarized the committee's consensus from the August meeting
 - i. Committee had expressed a desire to retain existing mappers
 - ii. Committee had also recommended a shift toward bedrock mapping in areas that would directly benefit the state

- c. It was mentioned that Charlie Kerwin, who has mapped for the NHGS previously, is willing to map the Manchester South bedrock quadrangle
 - i. He has relevant interests in this quad (Massabesic Gneiss)
 - ii. Charlie Kerwin will focus on lithology, and Mike Howley will focus on fracture fabric analysis and lineament within the quadrangle
- d. Shane Csiki outlined the intentions for the size of the proposal and the likelihood of receiving a partial award
- e. Patrick Moran asked about the goal of completing surficial and bedrock geologic mapping within the state
 - i. There are plans to rely more on GIS and LiDAR data sets for surficial mapping to quicken the pace, but NHGS is cautious about sacrificing quality for speed
 - 1. USGS has explored mapping using machine learning
 - ii. Bedrock mapping necessitates field mapping
- f. It was noted that USGS would allow for occasional amendment of maps for fracture fabric analysis
- g. Ken Gallagher moved to approve the STATEMAP 2023 Mapping Proposal for GRAC
- h. Gary Johnson seconded the motion
- i. The committee voted unanimously to approve the STATEMAP 2023 Mapping Proposal for GRAC

V. Statutory Process for GRAC

- a. Language from the original constitution was primarily used for the draft statute with some minor adjustments, as noted below:
 - i. Individuals from state agencies would not need a governor appointment process; they shall be appointed by the director of their agency
 - ii. Stipulation that a majority of the membership of the committee shall constitute a quorum
 - iii. Stipulation that no person who receives income directly or indirectly from the geologic mapping activities governed by this subdivision shall be a member of the committee
- b. Krystle Pelham opened discussion of the draft statute to the committee members
 - i. Lesley Johnson noted that the New Hampshire Association of Conservation Commissions (NHACC) would like to have a member sit on the committee
 - ii. Because it is highly recommended that the committee have an odd number of members, there was discussion about adding or removing a designated member
 - iii. It was decided that there shall be a member from the NHACC and an additional representative from a geotechnical, water resources, or geological consulting firm
 - iv. Gary Johnson asked about relations between EDMAP and GRAC
 - 1. It was mentioned that Dartmouth College had recently been awarded EDMAP grant and the lack of collaboration between applicants of EDMAP, STATEMAP, and FEDMAP
 - 2. Some barriers to collaboration are being resolved, but there will need to be continued work on the USGS side

- v. Stephen Roy raised concerns about the use of the word “indirectly” in stipulation VII, which will be discussed with the department attorney

VI. Future Mapping Priorities

- a. Shane Csiki gave an overview of the new opportunities for STATEMAP (which are not required)
 - i. Geoheritage sites, 3D modeling development, and ongoing GeMS capabilities
 - ii. Status maps of State 2D and 3D seamless GIS-formatted geoframework coverage
 - iii. Inter-state activities and opportunities for parallel proposals with multiple neighboring states through Regional Working Groups
 - 1. Could include stratigraphic reconciliation, 2D and 3D mapping, and 1:250K – 1:500K scale GIS compilation across state borders
- b. He recommended funding a bedrock map of the Kearsarge South quadrangle for a mapper nearing retirement
- c. There have been recent discussions with Larry Ward (UNH) to integrate existing surficial geologic maps in SE NH with surficial material characterizations in the ocean produced by the Center for Coastal & Ocean Mapping (CCOM)
 - i. CCOM would need funding from STATEMAP to participate in this project
 - ii. Stephen Roy asked about NHGS staff capabilities and if this project would take away from current mapping priorities
 - iii. Josh Keeley stated that there is a potentially seamless data set, but Mike Howley and Shane Csiki noted the limitations for staff time and financial hurdles
 - iv. Krystle Pelham reiterated that this would be a shift in mapping priorities
- d. Gary Johnson stated that surficial maps should be prioritized for compilation at 1:250K scale
 - i. Jeff Marts and Krystle Pelham voiced support for focusing on raw data collection which is immediately useful to map users
- e. Stephen Roy suggested that stratigraphic correlation between neighboring states should be shepherded by the USGS rather than initiated by state surveys
- f. Jo Laird and Josh Keeley noted the presence of mapping activity on Maine and Vermont borders with less activity on the Massachusetts border

VII. Good and Welfare

- a. Shane Csiki stated that the Mapper’s Workshop will likely be hybrid in the auditorium with a potential focus on methods
- b. Gary Johnson mentioned a recent geologic investigation in Lebanon that may have found an extremely productive source of groundwater
- c. The Geologic Resources Advisory Committee meeting was adjourned at **2:52 PM**