



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

June 6, 2023

Daniel J. Tinkham
Emery & Garrett Groundwater Investigations
P.O. Box 1578
Meredith, NH 03253

transmitted via email to Daniel.Tinkham@gza.com

**RE: Preliminary Large Well Siting/Large Groundwater Withdrawal Permit Application
CWS Exeter; PWS ID 0801010; DR005398
Proposed SG1-TPW, GPW4
Town of Exeter**

Dear Mr. Tinkham:

The New Hampshire Department of Environmental Services (NHDES) has reviewed the preliminary community well siting and large groundwater withdrawal permit application (Preliminary Application) titled "Large Groundwater Withdrawal Application Test Production Well SG1-TPW Exeter, New Hampshire" prepared by Emery & Garrett Groundwater Investigations (EEGI) on behalf of the Town of Exeter, dated December 29, 2022. In summary, the Town of Exeter is seeking a large groundwater withdrawal permit and community well siting approval for one new gravel packed production well, called SG1-TPW [GPW4], located on Philips Exeter Academy-owned property west of Drinkwater Road, East of the Exeter River, and northwest of Judes Pond. The proposed permitted production volume of the SG1-TPW Well is 576,000 gallons per day or approximately 400 gallons per minute (gpm).

NHDES has reviewed the Preliminary Application in accordance with: RSA 485-C:21, Approval for Large Groundwater Withdrawals; New Hampshire Administrative Rules Env-Wq 403, Large Groundwater Withdrawals; and New Hampshire Administrative Rules Env-Dw 302, Large Production Wells for Community Water Systems. NHDES cannot approve the Preliminary Application at this time. In order to obtain approval of the Preliminary Application, please respond to the following items:

1. Provide a general description of the current use and 50-year history of the property containing the proposed well, SG1-TPW in accordance with Env-Dw 302.08(a).
2. Per Env-Dw 302.08(c), provide documentation to demonstrate that the sanitary protective area is or will be under the direct legal control of the applicant and will be maintained as required by Env-Dw 302.10. In order to receive final approval of this water source, the applicant will have to provide an easement agreement to demonstrate the sanitary protective areas is controlled directly by the water system.
3. A description of the hydrologic cycle and a water budget calculation for the potential impact area to include all items described under Env-Wq 403.09(i).

4. Provide a description of the groundwater flow regime in accordance with Env-Wq 403.09(j) relative to the confined aquifer incorporating hydrologic data from the preliminary pumping test and known water bodies in the area.
5. The NHB DataCheck Results Letter indicates the presence of endangered and threatened wildlife and plant species within the preliminary zone of influence (PZOI) of the proposed well. If the withdrawal has any observable impacts to surface water levels or wetlands during the withdrawal test, the applicant shall consult with an aquatic biologist to evaluate the potential impacts the withdrawal may cause to any wildlife or plant species habits within the zone of influence. Provide a copy of the aquatic biologist's response as part of the final report.
6. NHDES recommends that the applicant select an alternative ambient well in the town of Kensington due to concerns discussed at the public hearing in Kensington. The NHDES records identified shallow overburden monitoring wells on the Unutil property on Drinkwater Road in Kensington that may be suitable for an ambient location.
7. Provide a copy of the "water well questionnaire" letter to NHDES for review prior to sending out to confirm all referenced information is correct.
8. Once NHDES has approved the letter in condition #7, send a water well questionnaire to all developed parcels within the area that includes the 1000-ft buffer on the preliminary zone of influence (see figures 13 and 17). The mailing shall go to all lots that may have a private well and are not associated with the Exeter Water Department water system. Include the Large Groundwater Withdrawal Program contact information in the questionnaire. For any questions, the program can be reached at 603-271-8866 or by email at largegw@des.nh.gov. The purpose of the questionnaire is to compile a more comprehensive inventory of all water users in vicinity of the withdrawal and determine if the water user would give permission to the applicant to have their well monitored during the withdrawal test.
9. Note that NHDES well records are not complete and there are more private wells in this area than well logs available in NHDES records. In addition to the water well inventory GIS layer, EGGI shall query the OneStop Water Well database for well reports in Exeter and Kensington in the vicinity of the preliminary zone of influence plus 1000 feet. The database provides street names and lot/parcel that may help locate the wells. Directions to query the well report database are [here](#). Developed lots not on Exeter Water System shall be considered to have a private well.
10. Provide NHDES with an updated inventory of private water supply wells within the 1000-foot buffer of the PZOI (Appendix B and Table 7) that includes the results of the inventory of water users from items #8 and #9 above. The table shall include the properties that were sent requests to monitor, any well information obtained, the date of contact, the status of the response, whether permission for access the well for monitoring was granted or denied, and whether EGGI proposes to monitor the well as part of the withdrawal test.
11. Based on this submittal of a revised water well inventory (item #10 above), NHDES will approve the proposed private well monitoring network or make a determination regarding the need for further efforts

or modification of the monitoring network. Additional wells may be requested in order to establish an adequate monitoring network to characterize the extent of the zone of influence of the well.

12. The pumping test description, Section 4 of the Preliminary Application, does not provide sufficient details and shall provide information as listed in Env-Dw 302.14(c) items (5), (7), (9) and (10). Specifically:
 - a. Water level sampling intervals or methods for the proposed monitoring locations as required by Env-Dw 302.14(f) and (g). Provide NHDES with additional details on the proposed water level monitoring program during the withdrawal test, including type of measuring equipment and sampling rate.
 - b. Water level and flow rate monitoring schedule for Exeter's existing production wells.
 - c. Information on the construction of the surface water level staff gauges per Env-Dw 302.14(c)(7).
 - d. Additionally, provide information on how the flow rate from the production well will be measured in accordance with Env-Dw 302.14(e).
13. The water quality testing proposed for the final sample is incomplete and doesn't meet the requirements of Env-Dw 302.15(d). A full listing of the parameters required for the SDWA analysis can be found in Appendix A – Water Quality Sampling Requirements in this [document](#). On the last day, include E.coli and full synthetic organic compound (SOC) testing of the sample. For the PFAS analytical requirements, the sample shall be analyzed for the full list of PFAS compounds available from the laboratory used for the analysis, including but not limited to the precursor PFAS compounds, and shall include at least 25 PFAS compounds or more. Note that for this water sample, the laboratory does not need to use water method 537.
14. Submit a draft water conservation plan to the NHDES Water Conservation Program in accordance with rule Env-Wq 4032.06(3). Note that in accordance with administrative rules Env-Dw 302.30(d)(7), the final well siting approval cannot be issued until after the applicant obtains an approved Water Conservation Plan. NHDES wants to ensure that Town of Exeter will be able to comply with the requirements of the program at this time. A guidance document for preparing a water conservation plan is available through the NHDES Water Conservation Program website under the *Plan Development* section [\[link\]](#).

If you have any questions about this letter or any other groundwater permitting issues, please contact me at (603) 271-8866 or largegw@des.nh.gov.

Sincerely,



David Hisz
Drinking Water and Groundwater Bureau

cc: Steve Dalton; Exeter Water Department
Russell Dean; Town Manager, Town of Exeter
Town Administrator, Town of Kensington
Mark Leighton; Phillips Exeter Academy
Stephen Roy, Jennifer Mates, Kelsey Vaughn; NHDES

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