



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



February 13, 2020

Harold Morse
Hampstead Area Water Company
54 Sawyer Ave
Atkinson, NH 03811

transmitted via email to Harold@LewisBuilders.com

**RE: Large Well Siting Approval/Large Groundwater Withdrawal Permit LGWP-2020-0003
Hampstead Area Water Company, Hampstead Area Water, PWS ID 1031010
Angle Pond Wells
Hampstead, New Hampshire**

Dear Mr. Morse:

The New Hampshire Department of Environmental Services (NHDES) is conditionally issuing to the Hampstead Area Water Company (HAWC) the following: 1) an approval of one new large community production well, Angle Pond Well 3 (APW3), in accordance with New Hampshire Administrative Rules Env-Dw 302, *Large Production Wells and Wells for Large Community Water Systems*; and 2) a large groundwater withdrawal permit, LGWP-2020-0003, for the combined withdrawal from the existing Angle Pond Wells 1 and 2, and 3 in accordance with RSA 485-C:21, *Approval for Large Groundwater Withdrawals* and New Hampshire Administrative Rules Env-Wq 403, *Large Groundwater Withdrawals*. The approval and permit are based on information prepared for HAWC by Emery & Garrett Groundwater Investigations, a division of GZA (EGGI).

NHDES approves the bedrock well APW3 at a production rate of 164,160 gallons per day (gpd), or 114 gallons per minute (gpm) over a 24-hour period. Angle Pond Well 3 is located east of the Angle Pond Pump house in the Angle Pond Woods development in East Hampstead. The purpose of developing Angle Pond Well 3 is to supply drinking water to existing HAWC core water system in Hampstead and Atkinson. Note that this approval letter also serves to reduce the permitted production volume of Angle Pond wells 1 and 2 which were previously approved by NHDES in 2003.

CONDITIONAL APPROVAL

This decision to conditionally approve APW3 is based on information contained in the following documents and public comments submitted to NHDES:

1. A preliminary application report titled "Preliminary Hydrogeologic Investigation, Groundwater Development, Angle Pond Production Well 3" (Preliminary Application) prepared for HAWC by EGGI, dated August 13, 2018.
2. A supplemental submittal titled "Response to New Hampshire Department of Environmental Services Comments on the Preliminary Large Well/Large Groundwater Withdrawal Permitting Application" prepared for HAWC by EGGI, dated January 22, 2019.

3. A final report titled "Final Hydrogeologic Investigation, Groundwater Development, Angle Pond Production Well 3" (Final Report) prepared for HAWC by EGGI, dated May 15, 2019.
4. A supplemental submittal titled "Response to New Hampshire Department of Environmental Services Comments Regarding the Final Report for Large Well Siting/Large Groundwater Withdrawal Permitting Application" prepared for HAWC by EGGI, dated November 13, 2019.

The following requirements are associated with the approval of the APW3 for use as a large production well for a community water system and shall be complied with as a condition of approval:

- 1) HAWC must maintain a Wellhead Protection Program (WHPP) for the Wellhead Protection Area (WHPA) of APW3, in accordance with Env-Dw 302.25. The WHPP shall include:
 - a. Updating the potential contaminant source inventories required by Env-Dw 302.23 at intervals no greater than three years as required by Env-Dw 302.25(a)(1) starting in June 2021;
 - b. Completing written notification requirements to the owner of each known and potential contamination source listed in the inventories at intervals no greater than three years as required by Env-Dw 302.25(a)(2) starting in June 2021; and
 - c. Submitting a request to conduct site visits to survey all potential contamination sources (except for pesticide application and agricultural operations) located within the WHPA to ascertain compliance with best management practices (BMPs) for preventing groundwater contamination (Env-Wq 401, *Best Management Practices for Groundwater Protection*) at intervals no greater than three years, starting in June 2021.

Sample WHPP materials for large community water systems are available on NHDES' website at http://des.nh.gov/organization/divisions/water/dwgb/dwspp/well_siting/index.htm under "Technical Assistance."

- 2) NHDES approves the Sanitary Protective Area (SPA) waiver request provided in the Final Report of rule Env-Dw 302.10(d) for the small portion of the SPA that contains the adjacent condominium building. Note that no other unapproved activities, including the application of fertilizers or pesticides, shall occur within the SPA. Note that the paved pedestrian pathway within the SPA is used to access the well and salt application shall be kept to a minimum, as feasible.
- 3) HAWC shall implement and adhere to the conditions of Large Groundwater Withdrawal Permit No. LGWP-2020-0003, which is attached to this document.
- 4) HAWC shall continue to implement the approved Water Conservation Plan dated May 8, 2008, in accordance with Env-Wq 2101 and NHDES' approval dated June 5, 2008.
- 5) Approval for APW3 shall lapse 6 years from the date of this letter if the well is not connected to the water system within that time, in accordance with Env-Dw 302.31(a), unless an extension is granted by NHDES. If approval lapses, HAWC must satisfy the requirements of Env-Dw 302.31(b) to regain approval.

SOURCE SPECIFICATIONS

Table 1, below, summarizes specifications for APW3. The Permitted Production Volume is the maximum volume of groundwater allowed by NHDES to be pumped from the water supply production well in any 24-hour period. The Sanitary Protective Area is a circle, centered on the well, with the radius listed in Table 1. The location of the well and the WHPA delineated for the well are illustrated on the attached map titled "Figure 20 Revised, Angle Pond Production Well #3, Wellhead Protection Area (WHPA), and Potential Contaminant Inventory" included in EGGI's November 2019 Supplement to the Final Report.

Table 1

Source	Well Status	Permitted Production Volume	Sanitary Protective Area Radius	Wellhead Protection Area	Source Description
Angle Pond Well 3 (-033)	New	164,160 gallons per 24-hour period	400 feet	As shown on Figure 20	BRW33 / APW3 / 1,070' ENE of ANGLE POND PH
Angle Pond Well 1 (-015)	Active Well, modified PPV	10,700 gallons per 24-hour period	200 feet	As shown on Figure 20	BRW13 /310' SW OF ANGLE POND PH
Angle Pond Well 2 (-016)	Active Well, modified PPV	20,160 gallons per 24-hour period	200 feet	As shown on Figure 20	BRW14 /580' E OF ANGLE POND PH

CONNECTION REQUIREMENTS

Please note that the connection of the well to the water system and treatment facilities must comply with the requirements of New Hampshire Administrative Rules Env-Dw 404, *Design Standards for Large Public Water Systems*. Prior to connecting the well to the water system, provide a schematic depicting the chemical monitoring program sampling locations and any required treatment system, including the storage location of chemicals, chemical feed equipment, motor controls, and instrumentation. Please forward this information and any questions you may have regarding connecting the well to the water system to the attention of Michael Unger of the Drinking Water and Groundwater Bureau at (603) 271-0779 or michael.unger@des.nh.gov. Please be advised that HAWC is not approved to connect the new well to the water system without first obtaining written approval for the design and connection from the Drinking Water and Groundwater Bureau engineering section in accordance with Env-Dw 404.02.

CHEMICAL MONITORING PROGRAM

A water quality sampling program was conducted as part of the well siting approval of APW3. A total of three laboratory water quality samples were collected from APW3 during the well's pumping test program over the period February 27 through March 6, 2019. Results of this water quality sampling program indicate that each parameter was below the applicable Maximum Contaminant Level (MCL) or Secondary Maximum Contaminant Level (SMCL),

with the exception of iron, manganese and arsenic. Iron was detected in final sample from the well at 0.647 milligrams per liter (mg/L), above the SMCL of 0.3 mg/L. Manganese was detected in final sample from the well at 0.129 mg/L, above the SMCL of 0.05 mg/L. Arsenic was detected in the final sample at the current MCL of 0.01 mg/L.

You must notify NHDES when APW3 becomes active by contacting Michael Unger of the Drinking Water and Groundwater Bureau at (603) 271-0779 or michael.unger@des.nh.gov. Once you notify NHDES that the well is active, Chemical Monitoring staff will contact you with a Master Sampling Schedule. If you have any questions about the Chemical Monitoring requirements, contact Tricia Madore of the Drinking Water and Groundwater Bureau at (603) 271-3907 or tricia.madore@des.nh.gov. Please note that NHDES may initiate enforcement action if the system fails to implement a chemical monitoring program when the well becomes active.

ELECTRONIC DATA REPORTING PROGRAM

Please note that groundwater level data collected as a condition of the attached large groundwater withdrawal permit, as specified in condition No. 4 titled "Groundwater Level Monitoring and Reporting Requirements," shall be submitted to NHDES in an electronic format. The requirements and specifications of the electronic data reporting program are summarized in the attached letter and associated guidelines document.

Unless a hard copy is requested, this electronic copy of the letter and the enclosures will be the only one provided.

If you have any questions about this approval or the attached permit or any other groundwater permitting issues, please contact me at (603) 271-8866 or Andrew.Koff@des.nh.gov.

Sincerely,



Andrew Koff, P.G.
Drinking Water and Groundwater Bureau

Attachment: Figure 20 – Wellhead Protection Area Map

Enclosures: Large Groundwater Withdrawal Permit No. LGWP-2020-0003
Decision Statement and Project Narrative
Electronic Data Reporting Program Letter and Guidelines Document

cc: Charles Lanza; HAWC (email)
Daniel Tinkham; EGGI (email)
Towns of Hampstead, Sandown and Danville (email)
Community Water Systems: Cotton Farms (email)
Brandon Kernan, Stephen Roy, Stacey Herbold, Kelsey Vaughn, Michael Unger, Tricia Madore; NHDES (email)