



The  
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

hereby issues

LARGE GROUNDWATER WITHDRAWAL PERMIT

NO. LGWP-2020-0003

to the permittee

HAMPSTEAD AREA WATER COMPANY  
54 SAWYER AVENUE  
ATKINSON, NH 03811  
(603-362-4299)

for the withdrawal of the following volume of groundwater from the following wells for the purpose of community water supply:

Angle Pond Well 1 (APW1):	10,700 gallons over any 24-hour period
Angle Pond Well 2 (APW2):	20,160 gallons over any 24-hour period
Angle Pond Well 3 (APW3):	164,160 gallons over any 24-hour period

Date of Issuance: February 13, 2020  
Date of Expiration: February 13, 2030

Pursuant to authority in N.H. RSA 485-C:21, the New Hampshire Department of Environmental Services (NHDES), hereby grants this permit to withdraw groundwater from the Angle Pond Wells subject to the following conditions:

1. The permittee shall comply with the requirements of this permit, Env-Wq 403 and RSA 485-C at all times.
2. Water Conservation: The permittee shall implement the approved Water Conservation Plan, dated May 8, 2008, in accordance with Env-Wq 2101 and NHDES' approval dated June 5, 2008.
3. Metering Requirements: Withdrawals from the sources must be metered at all times. All meters must be selected, installed, tested, and maintained in accordance with Env-Wq 2101. The permittee shall read the source water meter to adequately report the following volumes to the reporting program referenced in condition No. 6 of this permit:
  - a) The 24-hour peak day volume withdrawn from each well during each month and the date the water use occurred; and
  - b) The cumulative volume withdrawn from each well during each month.
4. Monitoring and Reporting Requirements: The permittee shall establish and maintain the monitoring and reporting program as described below:
  - a) Groundwater Monitoring
    - i. Off-site Private Bedrock Wells:
      - 1) The permittee shall install a pressure transducer and data logger and measure water levels at a frequency of at least once every four hours in the private bedrock wells serving the properties below, starting at least 30 days before initiating the withdrawal from APW3.

Property Identification Number	Station ID:
██████████	20200003DW01
██████████	20200003DW02
██████████	20200003DW03

\*or another nearby private well if this location is not available

- 2) Water level monitoring shall commence at least one month prior to initiating a withdrawal from APW3 and shall continue indefinitely as a condition of this permit.
- 3) The private wells above shall be sampled for bacteria in accordance with Env-Wq 403.16(e)(5) and Env-Wq 403.16(g) prior to and after the installation of any monitoring equipment
- 4) Before installing the monitoring equipment, the private wells above shall be sampled for the following water quality parameters: arsenic, chloride, hardness, iron, manganese, nitrate, pH, and sodium. Copies of the water quality reports shall be provided in the first annual report.
- 5) If a well owner denies permission to monitor water levels, then the permittee shall propose an alternative monitoring location to NHDES for approval.
- 6) Monitoring locations and frequencies may be added or changed if the data obtained contradict the information provided in the permittee's application, or if additional data points are required to assess the potential for adverse impacts to occur.

- ii. On-site Production Wells: The permittee shall install pressure transducers and data loggers and measure water levels at a frequency of at least once every four hours in all three Angle Pond production wells. Water level monitoring shall commence upon initiating a withdrawal from APW3 and shall continue indefinitely as a condition of this permit.

Station IDs: 20200003PWAPW1, 20200003PWAPW2, 20200003PWAPW3

- b) All groundwater monitoring data shall be submitted to NHDES on a quarterly basis, by January 31, April 30, July 31, and October 31 of each year. All groundwater monitoring data collected under condition No. 4a shall be submitted in an electronic format established by NHDES.
- c) An annual monitoring report shall be submitted to NHDES annually by January 31 of each year in an electronic format. The annual monitoring report shall summarize the groundwater monitoring data, note any relevant observations that may affect the measurements and include all field notes documenting the monitoring activities for the preceding year.
- d) All monitoring shall be completed by a person who can demonstrate, by education or experience, competency in collecting and reporting hydrogeologic measurements.

## 5. Mitigation Requirements

- a) Prior to initiating the large groundwater withdrawal, the permittee shall notify in writing via certified mail the owners of all properties served by private wells or public wells not owned by the permittee within the 180-day potential zone of influence of the Angle Pond Wells, as illustrated on Figure 18A, titled "Angle Pond Well Field and Parcels within Revised Wellhead Protection Area" in the Supplemental Information Final Well Siting Report prepared by Emery & Garrett Groundwater Investigations, a Division of GZA, dated November 13, 2019. The permittee shall provide a copy of the notification letter and copies of the return receipts to NHDES. The permittee shall explain to property owners with wells in the identified areas that their well may be influenced by the withdrawal at the Angle Pond Wellfield and provide the property owners with clear instructions and contact information for both the permittee and NHDES in the event they believe they may be adversely impacted by the withdrawal.
- b) The permittee shall maintain an emergency well service agreement with a company capable of providing pump- and well-related services, including the drilling of new wells, so that in the event of an adverse impact to a public or private well, mitigation steps can be undertaken expeditiously.
- c) Where the status of an unanticipated impact is not clear, the permittee shall gather information needed to quantify the impact and determine its status relative to the adverse impact criteria defined under RSA 485-C:21, V-c and provide this information to NHDES within 48 hours of being notified by NHDES. A verified adverse impact shall be mitigated in accordance with Env-Wq 403.
- d) In the event that an adverse impact occurs, the permittee shall comply with the impact mitigation and source replacement requirements of Env-Wq 403 and implement the stage 2 management procedures below.

- e) NHDES will routinely review the results of all monitoring data, and if water level monitoring data indicate that groundwater is being extracted at a rate that exceeds natural recharge on average, then NHDES will modify the permit in accordance with Env-Wq 403 in order to prevent adverse impacts from occurring.
- f) In addition, the permittee shall operate the Angle Pond Wells 3 in accordance with the management procedures described below.

#### STAGE 1 MANAGEMENT PROCEDURES:

In the event that the following trigger occurs, output from APW3 production well shall be reduced to 75% of the permitted withdrawal volume such that output from the well does not exceed 123,120 gpd:

*Trigger:* A 15-foot drawdown below the 180-day no-recharge projections (at locations and associated values listed in Table 1), unless it is determined by NHDES that the drop in water levels in a specific monitoring point is erroneous.

As part of Stage 1 Management Procedures, the permittee shall increase the frequency of reporting of all on-site and off-site water level measurements to NHDES, and submit all measurements electronically to NHDES by the last day of each calendar month.

#### STAGE 2 MANAGEMENT PROCEDURES

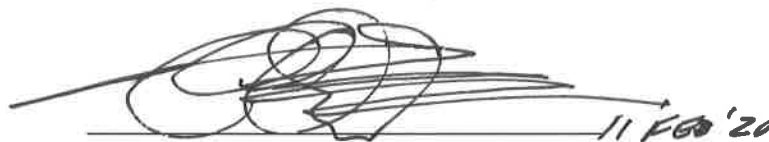
In the event that the following trigger occurs, the combined production from APW3 shall be reduced to less than 57,600 gallons over any 24-hour period:

*Trigger:* A thirty-foot drawdown below the 180-day no-recharge projections (at locations and associated values listed in Table 1), unless it is determined by NHDES that the drop in water levels in a specific monitoring point is erroneous.

As part of Stage 2 Management Procedures, the permittee shall continue reporting all on-site and off-site water level measurements to NHDES electronically by the 15th and last day of each calendar month.

- 6. The permittee shall register APW3 with the NHDES Water Use Registration and Reporting Program and maintain the water use reporting requirements of the Angle Pond Wellfield established by RSA 488, Env-Wq 2102 and this permit.
- 7. The permittee shall apply for renewal of this permit no more than 6 months prior to its expiration date in accordance with Env-Wq 403. The permittee shall continue to comply with all conditions in this permit until the permit is renewed or the facility is closed in accordance with all applicable requirements, regardless of whether a renewal application is filed.

Any person aggrieved by any terms or conditions of this permit may appeal in accordance with RSA 21-O:7, IV within 30 days.

A handwritten signature in black ink, appearing to read "TOD", with a date "11 Feb '20" written to the right.

Thomas O'Donovan. P.E.,  
Director Water Division

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**Table 1. Trigger Water Level Elevations for Angle Pond well field Large Groundwater Withdrawal Permit 2020-0003**

Town Map / Lot Number Station ID:	Address	Top of Casing Elevation (feet MSL)	Static Water level (feet below top of casing)	180-day Projected Water Level (feet below top of casing)	Stage 1 Trigger Level (75% of PPV) (feet below top of casing)	Stage 2 Trigger Level (<57,600 gpd) (feet below top of casing)
20200003DW01		238.2	14.98	22.3	37.3	52.3
20200003DW02		235.1	5.07	25.4	40.4	55.4
20200003DW03		TBD	TBD	Note 1	Note 1	Note 1

**NOTES:**

1. Static water level for this well shall be determined at the time monitoring begins. Stage 1 and 2 trigger levels shall be established based on static water levels and observations following start of monitoring.
2. If an alternative monitoring location is used, the trigger levels shall be established as specified in Note 1 above.
3. The stage 1 and 2 water level triggers are for a resting or non-pumping water level measurement that does not include the additional effects of domestic water use.