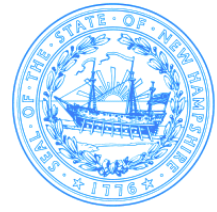




The State of New Hampshire  
**Department of Environmental Services**



**Robert R. Scott, Commissioner**

April 21, 2023

Pillsbury Lake Village District  
396 Deer Meadow Lane  
Webster, NH 03303

transmitted via email to: [Plvd.robison@gmail.com](mailto:Plvd.robison@gmail.com)

**Subject: Final Well Siting Approval  
CWS Webster; Pillsbury Lake Village District System PWS ID: 2462040  
BRW8; NHDES#DR005683**

Dear PLVD Member Robinson:

The purpose of this letter is to conditionally approve bedrock well BRW8 for the Pillsbury Lake Village District (PLVD) in Webster. This decision was based on a review of the final report received by New Hampshire Department of Environmental Services (NHDES) on March 14, 2023, submitted to meet the requirements of New Hampshire Administrative Rule Env-Dw 305, *Small Production Wells for Small Community Water Systems*.

BRW8 was drilled in December 2019 as an emergency source with an emergency connection to the system and has been operating since. PLVD did not follow the NHDES Community Well Siting (CWS) rules (Env-Dw 305) for approval prior to the connection. CWS has reviewed the water level monitoring results and finds that BRW8 does not provide PLVD a new and independent source of water, BRW8 is essentially another straw in the aquifer similar to BRW4. Any future wells for the PLVD will not be approved without going through the CWS program approval process before they are connected to the system.

### **Summary of Well Testing**

BRW8 was pumped continuously for a 72-hour withdrawal test performed in November 2022. The final pumping rate for BRW8 was 10 gallons per minute (gpm) with a total drawdown of 88.5 feet at the end of 72 hours, resulting in a specific capacity of 0.11 gpm/ft drawdown. Following termination of the pumping test, the water level in BRW8 recovered to 90% of its pre-pumping level in 6.25 days, and within 47% in 72 hours. The pumping test results show BRW8 has poor recovery properties and does not have sufficient properties to pump at 10 gpm for a permitted production value (PPV) of 14,400 gallons per day. Reviewing ambient water level data of wells BRW4, BRW7, and BRW8 in addition to the BRW8 pumping test results shows that BRW8 may provide the requested PPV of 5,200 gpd under certain water level conditions.

Ambient water level data show that a major water bearing fracture provides the water to BRW4 and BRW8 at 206 ft below top of casing in BRW8. It is important that pumping water levels in both BRW4 and BRW8 stay above this level to prevent mechanical and hydraulic damage to the fracture. A water level condition is part of this approval to maintain pumping water levels above the fracture zone at 206 ft. No additional wells will be approved as sources within 1000 feet of BRW8.

[www.des.nh.gov](http://www.des.nh.gov)

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Offsite water level monitoring using submersible pressure transducers occurred at five private wells during the 72-hour test. All five wells monitored had no significant response to pumping, showing that the surrounding bedrock wells were not influenced directly by BRW8 pumping during the 72-hour pumping test.

### Conditions of Approval

NHDES approves BRW8 as a small new production well for a small community water system with the following conditions:

- 1) Lot 10-4-55, which is within the sanitary protective area (SPA) of BRW8 remains undeveloped. NHDES acknowledges that the system does not own or control this lot at this time, as required by Env-Dw 305.10(c). Should at any time, Lot 10-4-55 become developed, NHDES will require the system to deactivate BRW8 and develop an alternative source that meets the SPA rules Env-Dw 305.10.
- 2) The water system must implement the Water Conservation Plan, signed March 15, 2023, and approved by NHDES on March 30, 2023, in accordance with Env-Wq 2101, *Water Conservation*.
- 3) Withdrawals from all wells on the property, shall be metered and reported to the NHDES Water Use Registration and Report Program in accordance with the Water Conservation Plan.
- 4) In accordance with Env-Dw 405.23(g), a stilling tube shall be installed in BRW8 to allow for water level measurements.
- 5) The water system shall install a submersible pressure transducer in BRW8 to record and monitor water levels within the stilling tube. A sampling rate of at least 1 reading per hour should be maintained while the well is actively being used by the water system, 1 reading per 15 minutes is recommended. The monitoring shall start as of this approval. The sensor shall be installed to a depth capable of capturing water levels at least 225 feet below top of casing. The water level data shall be stored by the water system and provided to NHDES upon request.
- 6) The water level in BRW8 shall stay at or above 201 feet below top of casing, the depth of the major water bearing fracture in the well. Report to the Community Well Siting Program any times the pumping water levels drop below 201 feet below top of casing.
- 7) In accordance with We 602.22(b), the well casings for BRW8 shall extend at least 18 inches above the final ground surface.
- 8) Within 60 days of the date of this letter, please authorize Nelson Analytical Lab, the laboratory that performed the pumping test water quality analyses for BRW8 to provide the Community Well Siting Program with a digital version of the IOC and radiological water quality analysis results via email to [communitywell@des.nh.gov](mailto:communitywell@des.nh.gov). The data should be formatted using NHDES' Environmental

Monitoring Database (EMD) “Activity Data Upload Template for Consultants and Labs” so that NHDES can submit the results to the database.

Use the following labels: *EMD PROJECT ID = PTCHEM, EMD STATIONID = 2462040003*

- 9) Within 60 days of the date of this letter, provide collected water level data to the well owners of properties monitored, copy community well siting program via email at [communitywell@des.nh.gov](mailto:communitywell@des.nh.gov).

Water Quality: The water quality results from the samples collected at the end of the pumping test from BRW8 had no exceedances of primary or secondary drinking water standards. Iron and radon showed elevated levels.

Well	Sample	Result	Limit
BRW8	Iron	0.149 mg/l	0.3 mg/l
BRW8	Radon	2130 pCi/l	

**Pumping Test Water Quality Analysis-Laboratory Sample ID Numbers:**

Inorganic Compound Analysis (IOC):

Nelson Analytical Lab ID #s: 122120093.01

Radiological Analysis:

Nelson Analytical Lab ID #s: 122120093.01

**Source Specifications:**

Well Number	Well Status	Permitted Production Volume/Yield	Sanitary Protective Area Radius	Wellhead Protection Area Radius	Source Description
BRW8	New Well for Existing System	5,200 gallons per 24-hours	200 feet	1500 feet	BRW8, 30’ E from Pump House

The previous table outlines the specifications for the new wells. The Permitted Production Volume (PPV) is the maximum volume that may be pumped from each well in any 24-hour period.

The sanitary protective area (SPA) for each well is a circle, centered on the well, with the radius listed above. The SPAs shall remain in a natural state and under the water system’s control at all times, in accordance with Env-Dw 305.10.

The Wellhead Protection Area (WHPA) for each well is a circle, centered on the well, with the radius listed above. This is the area within which educational materials must be periodically distributed as part of the water system’s Wellhead Protection Program (WHPP), in accordance with Env-Dw 305.24 and Env-Dw

305.31. NHDES has revised the wellhead protection program mailing schedule, so that educational materials will be required to be distributed in June 2024 and every three years thereafter.

A copy of this letter should be kept on file with the water system's records for future reference and as an aid to meeting NHDES' source water protection requirements.

If you have any questions about this letter or any other community well siting issues, please contact me at (603) 271-3918 or [communitywell@des.nh.gov](mailto:communitywell@des.nh.gov).

Regards,



David Hisz  
Drinking Water and Groundwater Bureau

ec: Abigail Fopiano; (Edgewater Strategies)  
Andrew Koff, Kelsey Vaughn, Christina Rambo, Shelley Frost; (NHDES)