VERMONT

Vermont Department of Environmental Conservation *Agency of Natural Resources*
Drinking Water and Groundwater Protection Division
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PUBLIC WATER SYSTEM CONSTRUCTION PERMIT
Public Community Water System

PROJECT # C-3750-19.0 PIN # RU96-0131
WATER SYSTEM: Bennington Water Department WSID # VT0005016

PERMITTEE:
Bennington Town
Attn: Stuart Hurd
205 South Street
Bennington VT 05201

PROJECT NAME: Town of Bennington Water System Remedial Expansion Phase II, Contract 9.

TOWN LOCATION: Bennington, Vermont

This permit is issued by the Vermont Department of Environmental Conservation, Drinking Water and Groundwater Protection Division (the Division), on behalf of the Secretary of the Agency of Natural Resources, under the authority of 10 V.S.A., Chapter 56, to be constructed in accordance with the technical standards specified under the Environmental Protection Rules, Chapter 21, Water Supply Rule (Rule), last revised April 12, 2019.

As described in the application, the applicant proposes to modify the Bennington Water Department's (WSID 5016, the Water System's) existing distribution pipe network to make municipal water service available to properties currently served by on-site wells that have been contaminated with PFOA/PFOS. The proposed water system modifications include installation of approximately:

- 10,850 linear feet of 8-inch Class 52 ductile iron distribution system main with fire protection hydrants and 400 linear feet of 3-inch diameter DR 17 HDPE distribution main. Infrastructure to be installed on Chapel Road from intersection with North Branch Street to the intersection with Crossover Road.
- Construction of a distribution pump station at the intersection with Jack's Drive. This proposed pump station will have a design capacity of 30 gallons per minute and will provide water service to six service connections located on Jack's Drive and Walt's Way.
- Pressure reducing valves to be housed in a vault located along Chapel Road.
- Individual private water system connections including removal of existing installed point of entry treatment systems along the proposed route.
- Well Abandonment of existing individual private supply sources in accordance with the requirements of Appendix A, Part 12 of the Vermont Water Supply Rule.

- Associated distribution piping appurtenances, including distribution main valves, service connections, sample hydrant assemblies, and flushing hydrants.

This project requires a construction permit because it involves expansion of the Water System, modification to the Water System's existing distribution pipe network including the installation of fire hydrants and pressure reducing valves which alters the existing hydraulic operating condition of the Public Water System, and construction of a new booster pump facility. The proposed changes to the Water System constitute a modification requiring a permit as described by Subchapter 21-4, Section 4.01 of the Vermont Water Supply Rule, Chapter 21.

Subject to the conditions included herein, the Permittee (Bennington Town) is authorized to modify the Water System as described in the approved design documents identified in Section A.5 of this Permit.

This permit does not authorize operation of the permitted modifications. Once the activities authorized by this Construction Permit have been completed, but prior to placing them into operation, the written signed and stamped Construction Completion Certification required by Condition A.11 of this Permit shall be provided to the Division. Following receipt of the Construction Completion Certification, the Division will issue a Permit to Operate to the Water System that formally recognizes the construction activities authorized by this Permit.

This Project is permitted to be constructed to conform to the Vermont Standards for Water System Design, Construction, and Protection (Design and Construction Standards) contained in Appendix A of the Rule and shall not constitute a public health hazard or a significant public health risk. The Division's review is limited to the Rule and the associated federal requirements.

A. Conditions:

1. All excess excavation materials generated during this project must be managed in accordance with a plan approved by the Vermont Department of Environmental Conservation, Waste Management and Prevention Division.

2. All supply sources, wells, at properties connected to the Public Water System must be closed in accordance with Appendix A, Part 12 of the Vermont Water Supply Rule, except for wells formally designated by the Vermont Department of Environmental Conservation to be retained for long-term monitoring.

3. If petroleum hydrocarbon and/or chlorinated solvent contaminated soils are encountered during any phase of construction, distribution main pipe materials must be ductile iron pipe with fluorocarbon elastomer gaskets, water service piping must be copper pipe, and all other appurtenances shall be of material resistant to contamination.

4. Water service connections from the valve, curb stop, corporation stop at the water mains to individual buildings or structures, shall not be constructed prior to the issuance of a Wastewater System and Potable Water Supply Permit by the Department, if a permit is required. The location of water service connections, including the entire service line; valves, including the curb stop; and the corporation stop / connection to the water main shall be recorded on the Engineer's Record Drawings pursuant to Condition A.10, below, which

shall provide for horizontal and vertical locations of the valves, curb stop, and/or corporation stop location referenced to permanent surface improvements.

5. The project shall be constructed, tested, and inspected in accordance with this permit and the approved design documents provided by MSK Engineering and Design Inc. to support the permit application, identified in the following table:

Design Documents Provided to Support Permit Application		
Document Name	Date	Comments
Permit Application	Received September 23,	None
Technical Specifications	Received October 14, 2019	None
Design Drawings, Sheets G009, G009.1, C143, C143A, C143B, C144, C144A,	October 11, 2019	Received October 14, 2019
Design Drawing Sheets C601 to C606	October 16, 2019	Received October 18, 2019
Memorandum from MSK Engineering regarding review comments provided for the permit application	October 18, 2019	None
Startup Plan Memorandum – Bennington Water Distribution System Phase II	May 7, 2019	None
Memorandum – Town of Bennington – Districts C, D, E and F – Qualitative Analysis Update	December 14, 2018	None
Memorandum – Town of Bennington Chapel Road Tank Pressure Zone Qualitative Analysis	March 13, 2019	None
Preliminary Engineering Report	July 5, 2016	None
Preliminary Engineering Report Addendum	February 27, 2017	None

The total number of engineering drawings reviewed by the Division for this project is fifty (50).

This design is permitted based upon review that determined the plans conform to the Design and Construction Standards of the Rule. Issuance of this permit does not relieve the Permittee of their responsibility to ensure that the Water System's infrastructure meets the requirements of the Rule. The Permittee shall be responsible for performing any necessary actions required to resolve any sanitary deficiencies or defects identified related to the infrastructure modifications authorized by this Permit.

6. The Division issued a variance, dated July 12, 2017, authorizing installation of in-home booster pumps, testable double-check valves and a low water pressure cut-off switch for residential service connections. There are seven proposed connections associated with this project that are subject to this variance, these connections are identified on Sheet C605 as identified in Section A.5 of this Permit. In-home booster pumps installed as part of this project must meet all of the requirements established in the July 12, 2017 Variance Approval and all conditions established in this Permit

7. **Permit Expiration:** This Construction Permit expires on **November 30, 2021**. If final field inspection and approval have not been completed by this date the Permittee shall provide a written summary of the infrastructure modifications authorized by this permit that have been completed, and provide documentation of these completed modifications, including Construction Completion Certification (see Condition A.11), Record Drawings, an O&M Manual Update (See Condition A.16), and pressure/leakage test results. If the final field inspection and approval have not been completed by this date, the Permittee shall obtain a new public water system construction permit prior to completing any work that was authorized by this permit.

8. Field inspection of the project shall be performed under the responsible charge of a Vermont licensed professional engineer.

9. Prior to being placed in operation, the newly constructed portions of the Water System shall be flushed, pressure tested, disinfected, and flushed again. Disinfection and pressure tests shall be performed in accordance the Technical Specifications identified in Section A.5 of this Permit. After this procedure, samples must be collected for the analysis of total coliform bacteria. At least two samples must be collected for every 1,200 linear feet of installed distribution main, these samples must be collected at intervals spaced at least six hours apart. These samples must be submitted to the Vermont Department of Health Laboratory at 359 South Park Dr., Colchester, VT 05446 (or any other Vermont Department of Health certified laboratory) for Bacteriological Examination of a Public Water Supply. The Permittee shall include the Water System's identification number (WSID) on the laboratory form and shall indicate on the laboratory form that the samples collected are 'special' samples collected for Construction Permit compliance. Coliform Absent sample results are required before the system may be placed "on-line" or "into service" for drinking water use. The pressure/leakage and bacteriological test results shall be submitted to the Division along with the Record Drawings.

10. Record Drawings shall be prepared by the professional engineering firm responsible for observation of construction and shall depict the system as it was constructed, including any field modifications. Record Drawings shall be dated; contain the engineer's Construction Certification; shall include the professional engineer's seal and signature; and shall be submitted to the Division and The Permittee within 90 days of final field inspection and approval by the responsible professional engineer. Record Drawings shall depict the location and alignment of all service lines extending from the foundation wall of the building to connection with the valve, curb-stop or corporation stop located at the water distribution main.

11. The following Construction Certification shall be prepared by the professional engineering firm responsible for observation of construction:

    i. "I hereby certify that in the exercise of my reasonable professional judgment the construction-related information submitted is true and correct and that the components of the public water system authorized by the Public Water Supply Construction permit #C-3750-19.0:
       1. Were installed in accordance with:
          a. The permitted design and all permit conditions; or
          b. Record Drawings and such Record Drawings are in compliance with the applicable Rule, were filed with the Secretary, and are in accordance with all other permit conditions;
       2. Were inspected;
       3. Were properly tested; and
       4. Have successfully met those performance tests."

12. Until the construction authorized by this permit has been completed and the Record Drawings have been submitted, this permit is not transferable or assignable and it shall automatically become invalid upon a change of ownership or upon suspension or revocation.

13. Lead Monitoring is to be conducted in accordance with the Startup Plan Memorandum identified in Condition A.5.

14. Disinfection by-products (total trihalomethanes and haloacetic acids) shall be monitored according to the Startup Plan Memorandum identified in Condition A.5 of this Permit.

15. The Permittee shall submit a memorandum summarizing the data obtained from execution of the Startup Plan Memorandum identified in Section A.5 of this Permit. This memorandum must include:

    i. Distribution system map identifying proposed locations to install sample hydrant assemblies.

    ii. Description of the methodology used to determine these proposed locations.

    iii. A Lead and Copper Sampling Plan for the Water System that includes the modifications authorized by this Permit.

    iv. A Total Coliform Sampling Plan that includes the modifications authorized by this Permit.

    v. A Stage 2 Disinfection Byproducts Sampling Plan that includes the modifications authorized by this Permit.

16. An Operation and Maintenance (O&M) Manual Update shall be prepared in accordance with Subchapter 21-7 and Appendix D of the Water Supply Rule, Chapter 21, for the

Water System modifications authorized by this Permit. The Completed O&M Manual Update shall be submitted to the Division for approval **within 60 days of final field inspection**. Once approved, a copy of the O&M Manual Update shall be provided to the Permittee, the Permittee shall ensure that this approved O&M Manual Update is incorporated into the Water System's approved O&M Manual.

17. No changes shall be made to the permitted project without the written approval of the Division. A new or amended Construction Permit is required for all significant system improvements, or modifications to the Water System pursuant to Subchapter 21-4, Section 4.0.1 of the Rule. These improvements or modifications shall conform to the Design and Construction Standards in Appendix A of the Rule.

18. Until the construction authorized by this permit has been completed and the Record Drawings have been submitted, this permit is not transferable or assignable and it shall automatically become invalid upon a change of ownership or upon suspension or revocation.

19. This Permit is non-transferable. Prior to a change in ownership of the infrastructure authorized by this permit, the Permittee shall provide a copy of the current Construction Permit to the prospective owner, and prospective permittee(s). Written notification of a legal change in ownership is to be provided to the Division and an application for a new Construction Permit shall be submitted by the new applicant(s) to the Division for the purpose of obtaining a new permit. Prior to obtaining new Construction and Operating Permits from the Division, the applicant(s) shall demonstrate that they currently have, and will continue to have over the long-term, the technical, financial, and managerial capacity necessary to operate and maintain the Water System in compliance with the Rule through consultation with the Capacity Development Program (attention: Megan Young).

20. By acceptance of this permit, the Permittee agrees to allow representatives of the Department access to the project, at reasonable times, for the purpose of ascertaining compliance with Vermont environmental laws and this permit.

21. Pursuant to 10 V.S.A. Chapters 56, 201 and 211, any violation of the terms and conditions of this permit, including any compliance schedule, is grounds for the initiation of an enforcement action by the State against the Permittee

22. Issuance of this Public Water System Construction Permit does not relieve the Permittee from obtaining other permits or approvals that may be necessary for the Project.

23. This permit may be appealed to the Environmental Division of the Superior Court within 30 days of the date the final decision is posted to the Environmental Notice Bulletin in accordance with 10 V.S.A., Chapter 220.

24. This permit is issued and becomes effective on the date of signing.

Signed at Montpelier, VT this 5th day of November, 2019

Emily Boedecker, Commissioner
Department of Environmental Conservation

By Bryan J. Redmond
Bryan J. Redmond, Division Director
Drinking Water and Groundwater Protection Division

PCS/TR

cc: Larry Gates, Designated Operator, WSID 5016
Jason Dolmetsch, MSK Engineering and Design, Inc.<jdolmetsch@mskeng.com>
David Swift, Regional Engineer, Rutland Office
Rick Oberkirch, Permit Specialist, EAO
Tim Raymond, Operations and Engineering Section Chief
Ellen ParrDoering, Assistant Director
Helen Banevicius, Beth Bannar, Administrative Services, DWGWP
Patrick Smart, Engineering Section Supervisor
John Schmeltzer, WMPD
Terisa Thomas, DWSRF Program
Cynthia Parks, P.E., Roger Bergeron, P.E., Water Infrastructure Division, DEC
WSID 5016

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Public Water System Construction Permit Public Comment Response

For: Attachment to C-3750-19.0, Town of Bennington Water System Remedial Expansion Phase II, Contract 9

From: Drinking Water Groundwater Protection Division

Date: Tuesday, November 05, 2019

Subject: No Comments Received

The Environmental Notice Bulletin Version 2 (ENB) public comment period for the following project ended on 11/04/2019:

> **Public Water System Permit Number:** C-3750-19.0
> **Project Name:** Town of Bennington Water System Remedial Expansion Phase II, Contract 9
> **Water System Name:** Bennington Water Dept
> **WSID:** VT0005016

No comments were received.