



SUSQUEHANNA RIVER BASIN COMMISSION

4423 North Front Street • Harrisburg, Pennsylvania 17110-1788

(717) 238-0423 Phone • (717) 238-2436 Fax

www.srbc.net

Docket No. 20191207

Approval Date: December 5, 2019

PENNSYLVANIA STATE UNIVERSITY

**Groundwater Withdrawals (30-Day Averages) of 1.728 mgd from Well UN-33,
1.678 mgd from Well UN-34, and 1.728 mgd from Well UN-35;
Total System Withdrawal Limit (30-Day Average) of 7.080 mgd;
and Consumptive Use of up to 1.410 mgd for Campus Use**

Section 1. Approval

After review of the record, including the technical findings of Susquehanna River Basin Commission (Commission) staff, the Commission has determined that no significant adverse impacts are anticipated by the operation of this project as described and conditioned herein, the project is physically feasible, and does not conflict with or adversely affect the Commission's Comprehensive Plan. Accordingly, the Commission hereby approves the renewal of the project described herein in accordance with the conditions set forth below.

The project sponsor maintains and operates a public water supply system for the University Park campus that includes nine sources (Wells UN-33, UN-34, UN-35, UN-2, UN-14, UN-16, UN-17, UN-24, and UN-26) and interconnections with the State College Borough Water Authority and the College Township Water Authority to serve the potable water supply system. According to information provided by the project sponsor, no other sources are utilized to serve the potable water supply system.

The project sponsor's public water supply Water Treatment Plant (WTP) raw/source water is supplied by the Big Hollow Well Field and the Houserville Well Field. The Big Hollow Well Field consists of Wells UN-2, UN-14, UN-16, UN-17, UN-24, and UN-26. The Houserville Well Field consists of Wells UN-33, UN-34, and UN-35.

Wells UN-6 (drilled in 1938; 460 gallons per minute [gpm]) and UN-12 (drilled in 1948; 460 gpm) were installed in the West Campus Steam Plant. The project sponsor indicates that, due to their location, it is not economic to construct a raw waterline to the WTP. University records indicate these wells were installed for process and domestic use. Chlorine House #4 treated the water from Wells UN-6 and UN-12 but now is deactivated. The wells have not been used for domestic use since prior to 1987 due to the detection of tetrachloroethene in the water.

Well UN-28A is permitted by the Pennsylvania Department of Environmental Protection (PADEP) for drinking water (300 gpm). The project sponsor indicates that, due to its location, it is not economic to construct a raw waterline to the WTP. Chlorine House #3 treated the water from Well UN-28A but now is deactivated. Prior to the installation of Well UN-37 in 1990, the

golf course irrigation water was supplied by Well UN-28A and other drinking water wells. The golf course operation is a separate facility from the campus and public water supply system.

The Thompson Spring is used for non-contact cooling water (“process”) by the University’s Breazeale Nuclear Reactor. This non-contact cooling water application has been in service since 1965 and initially operated at 500 gpm. The water flows through heat exchangers and is returned to the stream below the spring without consumptive use.

The Thompson Spring and Wells UN-6, UN-12, and UN-28A all are unapproved by the Commission and must register in accordance with Section 8 of this docket.

The Commission approved the groundwater withdrawal of 3.400 million gallons per day (mgd) from Wells UN-33 and UN-34 combined, 1.700 mgd from Well UN-35, and the consumptive use of up to 2.180 mgd under Commission Docket Nos. 19890106 and 19890106-1. On July 3 and 12, 2018, the project sponsor submitted groundwater withdrawal and consumptive use renewal applications requesting approval to continue to withdraw from Wells UN-33, UN-34, and UN-35, and to continue to consumptively use water. At the request of the project sponsor, renewal of the groundwater withdrawal from Well UN-37 and consumptive use at the golf course, which was also approved under Commission Docket No. 19890106-1, is being separated and will be addressed in later Commission action. This approval authorizes continued withdrawals from Wells UN-33, UN-34, and UN-35 at the requested rate and continued consumptive use at the campus, and establishes a total system withdrawal limit for Wells UN-33, UN-34, UN-35, UN-2, UN-14, UN-16, UN-17, UN-24, and UN-26.

This approval establishes a total system limit based on the 15-year projected need through 2034. Should demand exceed the total system limit established herein, the project sponsor may request a minor modification in accordance with 18 CFR § 806.18(c)(7) (increases to total system limits that were established based on the projected demand of the project) to increase the total system limit, as the total system limit established herein is based on the 15-year projected demand and is not a resource-based limit (i.e., it is not based on a limited availability of water). Should the project sponsor request a minor modification in accordance with 18 CFR § 806.18(c)(7), such approval will not be unreasonably withheld.

Commission staff has coordinated with the PADEP and the Pennsylvania Fish and Boat Commission (PFBC) during review of this project.

Section 2. Project Information

Information concerning the project sponsor, water use type, and location are set forth in the table below.

| Project Information | |
|--------------------------------------|---|
| Project Sponsor: | Pennsylvania State University |
| Approval Types: | Groundwater Withdrawal and Consumptive Use |
| Past Docket Nos.: | 19890106 and 19890106-1 |
| Authorized Water Use Purpose: | Public Water Supply and University Campus Use |
| Municipality: | College Township |
| County: | Centre County |
| State: | Pennsylvania |

Section 3. Source Information

Information concerning the sources of water from which the withdrawals will be made is set forth in the table below.

| Source Information | |
|--|-------------------------------|
| Withdrawal Type: | Groundwater |
| Approved Sources: | Wells UN-33, UN-34, and UN-35 |
| Subbasin: | West Branch Susquehanna |
| Watershed Boundary Dataset (WBD): | 0205020401 (Spring Creek) |
| Withdrawal Location (degrees)*: | Lat: -- Long: -- |
| Special Flow Protection Required: | No |
| * Specific location information concerning discrete water-related project features has been withheld for security reasons. | |

Section 4. Aquifer Testing

The constant-rate aquifer testing required by 18 CFR § 806.12 for groundwater withdrawals was completed with prior Commission approval for Wells UN-33, UN-34, and UN-35. A 72-hour, concurrent constant-rate aquifer test of Wells UN-33, UN-34, and UN-35 was conducted from October 17 through 20, 2016, pumping at average rates of 1,199 gpm for Well UN-33, 1,165 gpm for Well UN-34, and 1,198 gpm for Well UN-35. The concurrent test was completed at a combined average rate of 3,562 gpm. Each of the wells has historically been used at maximum instantaneous rates of 1,200 gpm.

Commission staff determined that the withdrawals from Wells UN-33, UN-34, and UN-35 at the combined test and requested individual withdrawal rates should not cause permanent loss of aquifer storage, render competing supplies unreliable, or cause adverse impacts to the water resources of the basin, subject to the conditions set forth below.

Section 5. Approved Withdrawal Quantities and Limitations

The withdrawals approved hereunder are subject to the quantitative limits and restrictions set forth in the table below.

| Approved Withdrawal Quantities and Limitations | | | |
|---|-------------------|-------------------|-------------------|
| | Well UN-33 | Well UN-34 | Well UN-35 |
| 30-Day Average Withdrawal (mgd): | 1.728 | 1.678 | 1.728 |
| Maximum Instantaneous Withdrawal Rate (gpm) (Not to Exceed): | 1,200 | 1,200 | 1,200 |
| Peak Day Withdrawal (mgd): | 1.728 | 1.728 | 1.728 |
| Total System Withdrawal Limit – Wells UN-2, UN-14, UN-16, UN-17, UN-24, UN-26, UN-33, UN-34, and UN-35 (30-Day Average) (mgd): | 7.080 | | |

The withdrawals are also subject to all other conditions set forth in this docket approval.

Section 6. Approved Consumptive Use Quantities and Limitations

The consumptive use approved hereunder is subject to the quantitative limits and restrictions set forth in the table below.

| Approved Consumptive Use Quantities and Limitations | |
|--|---|
| Sources for Project Consumptive Use: | <ol style="list-style-type: none"> 1. Wells UN-2, UN-6, UN-12, UN-14, UN-16, UN-17, UN-24, UN-26, UN-33, UN-34, and UN-35 2. Public Water Supply – State College Borough Water Authority 3. Public Water Supply – College Township Water Authority |
| Consumptive Use Amount (mgd)*: | 1.410 (Not to Exceed) |
| Authorized Project Consumptive Uses: | <ol style="list-style-type: none"> 1. Land Application of Treated Wastewater 2. University Campus Water Use |
| Consumptive Use Mitigation Type: | Groundwater Recharge through Continued Land Application of Treated Wastewater at the Living Filter |
| * See Special Condition 24 for more information. | |

The consumptive use is also subject to all other conditions set forth in this docket approval.

Section 7. Existing Approved Withdrawals and Consumptive Uses

The project does not have any other existing approved withdrawals and all consumptive use is approved with this action.

Section 8. Unapproved Sources

On January 1, 2018, Subpart E to 18 CFR Part 806 became effective. The project sponsor must register its unapproved sources (Wells UN-2, UN-6, UN-12, UN-14, UN-16, UN-17, UN-24, UN-26, and UN-28A and Thompson Spring) prior to December 31, 2019.

Section 9. Standard Conditions

1. The project sponsor shall comply with all Commission regulations, 18 CFR Parts 801, 806, and 808. This project is subject to the Annual Compliance and Monitoring fee as specified in the Commission's Regulatory Program Fee Schedule, which may be modified over the term of the approval.

2. The project sponsor shall adhere to the metering plans reviewed and approved by Commission staff. Any modifications proposed for the metering plans shall be submitted for review and, if appropriate, approval by Commission staff in accordance with 18 CFR § 806.30. Modifications shall not be made until the project sponsor receives written approval of the amended plan.

3. The project sponsor shall maintain the totalizing meters and other flow and volume measuring devices, accurate to within five (5) percent, so as to provide an accurate record of withdrawals and consumptive use, and certify to the Commission once every five (5) years, or as otherwise requested, the accuracy of all measuring devices and methods to within five (5) percent of actual flow.

4. The project sponsor shall adhere to the groundwater elevation monitoring plans reviewed and approved by Commission staff for the sources listed in Sections 3, 6, and 8. The project sponsor shall maintain and monitor the accuracy of the measuring devices in accordance with the manufacturer's specifications.

5. The project sponsor shall keep daily records of the project's withdrawal and groundwater elevations for the sources listed in Sections 3, 6, and 8, and shall report the data to the Commission quarterly, and as otherwise required, in the form and manner as prescribed by Commission staff. Quarterly monitoring reports shall be submitted online and are due within thirty (30) days after the close of the preceding quarter. Any alternative measuring, monitoring, or accounting procedure, and any modifications proposed for the groundwater elevation monitoring plans, shall be submitted for review and approval by Commission staff in accordance with 18 CFR § 806.30. Modifications shall not be made until the project sponsor receives written approval of the amended plan. All data collected and submitted as required under this approval shall be maintained by the project sponsor for the duration of the approval and all subsequent renewals.

6. The project sponsor or any other person representing the project sponsor shall allow authorized employees or agents of the Commission, without advance notice, at any reasonable time and upon presentation of appropriate credentials, and without delay, to have access to and to inspect all areas where the project is being constructed, operated, or maintained, or otherwise exercise all investigative powers authorized under 18 CFR § 808.12.

7. In accordance with 18 CFR § 806.30(b)(2), the project sponsor shall report violations of any withdrawal limits and any conditions of this approval within five (5) days of such violation or report loss of measuring or recording capabilities required under 18 CFR § 806.30(a)(1) within five (5) days after any such loss.

8. In accordance with 18 CFR § 806.6, if ownership of the project changes or if the project sponsor undergoes a name change, the project sponsor shall submit application for transfer or reissuance of all approvals to the Commission within ninety (90) days of the change in ownership or project sponsor name change.

9. The project sponsor shall comply with the water conservation requirements specified in 18 CFR § 806.25.

10. This approval is conditioned on the project sponsor maintaining legal access to the withdrawal location for the duration of the approval.

11. The project sponsor shall register with the appropriate agency all surface water and groundwater sources described herein, as may be required by regulations of the member jurisdiction.

12. If the project sponsor fails to comply with the provisions of the Susquehanna River Basin Compact or any rule, regulation, or order of the Commission, or any term or condition of this docket, the project sponsor is subject to enforcement actions pursuant to 18 CFR Part 808.

13. Commission approval shall not be construed to exempt the project sponsor from obtaining and maintaining all necessary permits and/or approvals required for the project from other federal, state, or local government agencies having jurisdiction over the project. All such permits and/or approvals shall be obtained prior to the withdrawal of water. The Commission may modify, suspend, or revoke this approval if the project sponsor fails to obtain or maintain such permits and/or approvals.

14. The Commission may at any time reopen any project approval or issue such additional orders, as may be necessary, to mitigate or avoid adverse impacts or otherwise to protect public health, safety, welfare, or the environment, pursuant to 18 CFR § 806.32.

15. Commission approval confers no property rights upon the project sponsor. The securing of all rights necessary and incident to the project sponsor's development and operation of the project shall be the sole and exclusive responsibility of the project sponsor, and this approval shall be subject thereto.

16. This project is approved for inclusion in the Commission's Comprehensive Plan for the Water Resources of the Susquehanna River Basin.

17. The project sponsor is required to apply for and obtain approval prior to any increase in withdrawal or consumptive use that would exceed the amounts listed herein or to add a source used for consumptive use that is not listed in Sections 3, 6, or 8.

18. The project sponsor is required to apply for and obtain approval prior to any increase in the total system withdrawal that would exceed the approved total system withdrawal limits listed herein.

19. If the Commission determines that the operation of the project's groundwater withdrawals adversely affect any existing groundwater or surface water withdrawal, the project sponsor shall be required to provide, at its expense, an alternate water supply or other mitigating measure.

Section 10. Special Conditions

20. The project sponsor reserves the right to repair and/or replace malfunctioning meters and/or level monitoring equipment with equivalent equipment meeting Commission accuracy requirements and to submit documentation of such to the Commission. These devices also may be regulated by PADEP and require approval by that agency.

21. All grandfathered sources must be registered consistent with Section 8 or grandfathering will be forfeited.

22. The date of the last meter certification for Wells UN-33, UN-34, and UN-35 was August 22, 2017; therefore, the next meter certification is due no later than August 22, 2022. Certification of meter accuracy shall be provided to the Commission no less frequent than once every five (5) years from the date of the last certification.

23. The project sponsor shall only supply water for use in hydrocarbon development to persons who have properly registered or received approval pursuant to 18 CFR § 806.22(f), as applicable.

24. The project sponsor shall keep daily records and shall report the same to the Commission upon request, of all persons supplied water from the project for use in hydrocarbon development, including daily quantities supplied. The project sponsor also shall keep records and shall report the same to the Commission upon request, of all persons supplied water from the project that maintain a permanent connection to the public water supply system. The project sponsor shall also keep daily records and shall report the same to the Commission upon request, of all persons supplied water from the project that do not maintain a permanent connection to the public water supply system for uses other than hydrocarbon development, including daily quantities supplied.

25. The project shall determine and report its consumptive use quantity in accordance with the calculations provided in the approved metering plan. The project shall report its consumptive use in accordance with the daily methodology provided in the metering plan, which may include average day use on a monthly basis for certain aspects of the project. Because the project maintains significant storage and self-mitigates its consumptive use, the method of calculating consumptive use, which includes monthly averages of certain water meters, is acceptable.

26. The project's consumptive use is subject to mitigation requirements, as per 18 CFR § 806.22(b). For the purposes of this project, 0.062 mgd was determined to be the project's pre-1971 consumptive use and is considered exempt from consumptive use mitigation requirements. In accordance with 18 CFR § 806.22(b)(4), the Commission has determined that the project sponsor's continued use of land disposal of treated wastewater at the Living Filter, which results in recharging the local aquifer, is an acceptable alternative consumptive use mitigation for the University Park campus.

27. If disposal via the Living Filter ceases to be the primary option to dispose of wastewater, the project sponsor must notify the Commission within thirty (30) days and the consumptive use mitigation method will automatically revert to the payment of fees as the method of consumptive use mitigation. The project sponsor will be required to make quarterly payments to the Commission at the rate specified in the effective Regulatory Program Fee Schedule, as modified from time to time by the Commission. Payments shall be made quarterly and shall be calculated by applying the consumptive use mitigation fee to the total amount of water consumptively used, minus the pre-regulation quantity exempt from consumptive use mitigation, by the project during the preceding calendar quarter. Quarterly payments are due and payable within thirty (30) days after the close of the preceding quarter. The rate of payment, after appropriate notice to consumptive users of water using this method of compliance, is subject to change at the Commission's discretion.


Section 11. Term

28. This approval shall be effective January 1, 2020 and shall remain effective until December 31, 2034. As specified in 18 CFR § 806.31(e), if the project sponsor submits an application on or before June 30, 2034, the project sponsor may continue operation of this project pursuant to the terms and conditions of this approval until such time as the Commission acts on such application, or until otherwise notified by the Executive Director.

29. Approvals contained within Commission Docket No. 19890106-1 pertaining to withdrawals from Wells UN-33, UN-34, and UN-35, as well as campus consumptive use, shall expire on January 1, 2020. Commission Docket No. 19890106-1 pertaining to withdrawals from Well UN-37 and approval of consumptive use at the golf course shall remain effective until the Commission acts on the submitted renewal applications.

CERTIFICATION: I, Jason E. Oyler, Secretary to the Susquehanna River Basin Commission, do hereby certify that the foregoing project docket was approved by the Susquehanna River Basin Commission on December 5, 2019.

Dated: December 6, 2019



Jason E. Oyler, Esq.