



STATE OF TENNESSEE
Department of Environment and Conservation
Division of Water Resources, Natural Resources Unit
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243

NOTICE OF DETERMINATION

Necessity to Accommodate Economic or Social Development Degradation of Exceptional Tennessee Waters Aquatic Resource Alteration Permit Application NRS22.288 City of Spring Hill

Pursuant to *The Tennessee Water Quality Control Act of 1977*, and Tenn. Comp. R. & Regs. 0400-40-03-.06(4)(d), this notice sets out the Department of Environment and Conservation's determination that the degradation resulting from continued withdrawal of drinking water from the Duck River proposed in the Aquatic Resource Alteration Permit application NRS22.288 is necessary to accommodate important economic or social development in the area.

Background

The City of Spring Hill has applied for an Aquatic Resource Alteration Permit (ARAP) for the continued withdrawal of up to six million gallons per day (MGD) from the Duck River near river mile 166. Additional information on the project proposal and supporting documents are available for review on the internet at the Division's Water Resources Permits Data viewer (<https://www.tn.gov/environment/about-tdec/tdec-dataviewers.html>) by entering the permit file number listed in the title of this Notice of Determination.

The Division issued an ARAP and Section 401 Water Quality Certification to the City of Spring Hill dated March 8, 1999, for the construction of a new intake and withdrawal of up to six MGD. This permit expired on March 8, 2004.

The Division has since determined that the withdrawal was not grandfathered and required an application for an ARAP from the City of Spring Hill in 2023. Public notice of a draft permit that would authorize the continued withdrawal of six MGD was issued on September 26, 2023, which announced the scheduling of a public hearing to be held on October 30, 2023, at Henry Horton State Park. The public comment period ended on December 13, 2023.

Pursuant to Tennessee's water quality standards, Rule 0400-40-03-.04, a single water withdrawal is considered de minimis if it removes less than five percent of the minimum 7-day average streamflow with a 10-year recurrence interval (7Q10) flow of the stream. The intake is located near Duck River mile 166 in river segment ID TN06040002001_1000.

Using the USGS Hydrologic Toolbox 1.0.0 for the period of record from April 1, 2012 – March 31, 2025, at the USGS Gage 03599419 DUCK RIVER AT MILE 156 NEAR POTTSVILLE, TN, the

calculated 7Q10 in this river segment is 142.14 cubic feet per second (CFS).

The Antidegradation Statement applies to new or increased water withdrawals. Because the withdrawal was determined not to be grandfathered and the previous permit expired, this withdrawal is subject to permitting requirements as a new withdrawal. The continued withdrawal is six MGD (9.28 CFS). The new withdrawal is 6.53% of the 7Q10 flow. As defined in Rule 0400-40-03-.04(4) the withdrawal results in greater than de minimis degradation.

The Duck River at the location of the withdrawal constitutes Exceptional Tennessee Waters. In waters identified as Exceptional Tennessee Waters, new or increased water withdrawals that would cause degradation of any available parameter above the level of de minimis will only be authorized if the applicant has demonstrated to the Department that there are no practicable alternatives to prevent or lessen degradation associated with the proposed activity and the degradation is necessary to accommodate important economic or social development in the area and will not violate the water quality criteria for uses existing in the receiving waters. If one or more practicable alternatives is identified, the Department shall only find that a lowering is necessary if those alternative(s) are selected for implementation.

Discussion

The proposed activity is the continued withdrawal of up to six million gallons per day (MGD) from the Duck River near river mile 166.

The City of Spring Hill received approval from the Division for an Aquatic Resource Alteration Permit (ARAP #98-463) to withdraw six MGD from the Duck River at River Mile 166 on March 8, 1999. The existing raw water intake and pumping station, raw water transmission line and water treatment plant (WTP) facilities were constructed during the time frame of November 2001 to August 2003. The existing facilities were brought online on August 18, 2003, to provide potable water for the residents of Spring Hill. At the time these facilities were brought online, the population of Spring Hill was approximately 11,500. Within the first 4-year period after the WTP was brought online the population more than doubled to approximately 25,000 residents. The current population is estimated to be near 58,000 residents by the end of 2023, which represents an approximate 400% increase in growth within a 20-year period, or 8.43% annually since the WTP was brought online.

In 2022 the new Highway 31 Water Booster Station was completed and brought on-line. The new water booster station was constructed to provide additional capacity to purchase water from Columbia Power and Water Systems (CPWS). The additional capacity increased the purchase capacity from approximately 1.0 MGD to 2.88 MGD, which is the maximum purchase amount per the current purchase agreement.

The 2023 average day water demand for Spring Hill was approximately 4.45 MGD and the maximum day water demand was approximately 5.28 MGD from the WTP plus a water purchase average of 1.37 MGD for a total max day demand of 6.65 MGD.

The City of Spring Hill states that if it is granted the renewal of their 6.0 MGD ARAP withdrawal permit, plus the 2.88 MGD purchase from CPWS, this would extend their supply needs out to the year 2028-2029. This projection would provide time to perform a pilot project and design of a proposed advanced purification facility and construction of an off-line raw water

storage reservoir.

Although legally this withdrawal is treated as a new or increased withdrawal for purposes of the Antidegradation Statement, it is in fact an existing withdrawal that serves the public interest by providing a source of potable water to residents and businesses served by the City of Spring Hill.

Determinations

After taking into consideration the information received in support of the permit application and the comments received through public participation, the Department has determined that:

1. As defined in rule 0400-40-03-.04(4) the proposed withdrawal is greater than de minimis degradation of water quality parameters in waters identified as Exceptional Tennessee Waters.
2. The degradation of Exceptional Tennessee Waters is necessary to accommodate important economic or social development in the area.

Petition for Declaratory Order/Permit Issuance

Pursuant to the Antidegradation Statement, Tenn. Comp. R. & Regs. 0400-40-03-.06(4)(d), the Department's determination that degradation above a de minimis level of the Exceptional Tennessee Waters is necessary to accommodate important economic or social development in the area is subject to review by the Board of Water Quality, Oil, and Gas.

Within 30 days after the date of this notification, any affected intergovernmental coordination agency or affected third person may petition the Board for a declaratory order under Tenn. Code Ann. § 4-5-223, and the Board shall convene a contested case. If a petition for declaratory order is timely filed, it will be processed in accordance with Tenn. Comp. R. & Regs. 0400-40-03-.06(4)(d) and rules governing contested case hearings. If no such petition is filed within 30 days after this notification, then the Department will proceed to its final determination of whether to issue the permit. A petition may be filed by electronic mail at TDEC.Appeals@tn.gov or by mail to Jenny Howard, TDEC General Counsel, 500 James Robertson Parkway, 5th Floor, Nashville, Tennessee 37243.