



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, TN 37243

NOTICE OF DETERMINATION

Economic/Social Necessity for Degradation of Exceptional Tennessee Waters
Aquatic Resource Alteration Permit application NRS24.023B

City of Gatlinburg

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 (the "Department's") determination that the degradation resulting from continued withdrawal of public water supply and an increased maximum daily withdrawal rate from the West Prong Little Pigeon River proposed in the Aquatic Resource Alteration Permit application NRS24.023B is necessary to accommodate important economic or social development in the area.

Background

The City of Gatlinburg applied for an Aquatic Resource Alteration Permit for withdrawal of up to 3.25 million gallons per day (MGD) from the West Prong Little Pigeon River in Gatlinburg and issuance of a new permit that would increase the existing withdrawal of 2.2 MGD. Additional information on the project proposal and supporting documents are available for review 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 a public notice soliciting comments on the City of Gatlinburg proposal on March 26, 2024. The public comment period ended on May 6, 2024.

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 increased water withdrawal is proposed to be located in the West Prong Little Pigeon River in river segment ID TN06010107010_4000.

The calculated 7Q10 in this river segment is 6.63 cubic feet per second (CFS) or 4.29 MGD and was generated using StreamStats (*U.S. Geological Survey, 2019, The StreamStats program, online at <https://streamstats.usgs.gov/ss/>*, accessed on February 6, 2024). The withdrawal rate authorized by this permit is 2,256 gallons per minute (GPM) or 5.03 CFS. It is 75.87% of the 7Q10 flow. The combined authorized and proposed withdrawals are greater than 5% of the 7Q10 flow in the West Prong Little Pigeon River.

The Antidegradation Statement applies to new or increased water withdrawals. The new withdrawal is 1.05

MGD. The total withdrawal of 3.25 MGD (5.03 CFS) is 75.87% of the 7Q10 flow. As defined in Rule 0400-40-03-.04(4) the proposed withdrawal would result in greater than de minimis degradation.

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 existing receiving water uses. 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 withdrawal of water from the West Prong Little Pigeon River at the instantaneous rate of up to 2,257 GPM to obtain up to 3.25 MGD for public water supply, which will result in greater than de minimis degradation of an Exceptional Tennessee Water (ETW). Given the required infrastructure investment, the Department will consider the application submitted, demonstrating additional water supply need for the City of Gatlinburg. The following analysis of practicable alternatives was provided from the applicant:

Currently, aside from the withdrawal of water from the West Prong Little Pigeon River, the only available alternatives to the preferred alternative for reducing the City of Gatlinburg's dependence on the City of Pigeon Forge's water system are to develop another source, or purchase from another source.

The only source water with enough capacity and within a reasonable distance to the existing Gatlinburg service area is the Middle Prong of the Little River in the Pittman Center area. This option was considered several years ago prior to the connection with the Pigeon Forge system. The Town of Pittman Center vigorously opposed the possible location of a water plant at this location by Gatlinburg at that time. Assuming that this opposition could be overcome, the projected cost of a new 4.0 MGD treatment plant and the infrastructure required to connect it to Gatlinburg's system could easily approach \$16 to \$20,000,000 given that new water plant construction budgets are currently running at \$3-4 per gallon plus land costs. The cost to connect a new plant in this location to the City's existing water system would exceed \$2,000,000 for the required booster pump station and approximately 2 miles of water main. Therefore, this alternative is not a feasible option.

The City of Gatlinburg has also had preliminary discussions with Newport Utilities (NU) about a possible connection to their system for an auxiliary water supply source. NU already sells water to Webb Creek Utility District which provides water service in east Sevier County. NU estimated it would require the installation of 29,000 feet of 12" water main, a new booster pump station and a 0.5 MG tank for NU to supply approximately 0.75 MGD to Gatlinburg's system. The cost of this project was estimated at \$ 3,600,000 2 years ago and would easily exceed \$4,000,000 at current prices. Because this alternative cannot provide an equivalent amount of water to Gatlinburg even at double the cost it is not considered a viable alternative.

The project is required to reduce the City's dependence on the City of Pigeon Forge water system to meet current system demands. During the extreme freeze event of late December 2022, Pigeon Forge cut off their water supply to Gatlinburg for several hours over a four-day period due to pressure issues within their own system. Even with their plant at full production and issuing customer curtailment requests, the City of Gatlinburg came dangerously close to exhausting their available water storage during a seasonal peak usage period. City officials realized alternative water sources were needed and would like to utilize existing filtration capacity at their existing water treatment plant to reduce dependence on Pigeon Forge's water system.

The affected waters at the project location are not known ETWs. However, the West Prong Little Pigeon River is designated as ETW directly downstream of the withdrawal where it re-enters the Smokey

Mountains National Park. Although the proposal will result in greater than de minimis degradation, there are offsetting social and economic benefits.

The project will allow for maximized cost effectiveness and increased system resiliency with the completion of system improvements and expansion of the Water Treatment Plant, allowing the City of Gatlinburg to meet projected future water demands. Additionally, construction is to be completed without interrupting current operations, and with no lapse in services. Completion of the project will result in a continuously reliable system to meet the forecasted supply demands and the future water quality goals.

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 will have 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, Nashville, TN 37243.