

**PRELIMINARY DETERMINATION REVIEW DOCUMENT**  
**for**  
**PROPOSED AMENDMENT TO**  
**ROANOKE RIVER BASIN WATER QUALITY MANAGEMENT PLAN**  
**(9 VAC 25-430-10 et seq.)**

Subject:

The proposed regulatory action is to amend the current Roanoke River Basin Water Quality Management Plan (WQMP) VA Administrative Code cite 9 VAC 25-430-10 et seq. (VR 680-16-02 et seq.). The amendment increases the wasteload allocations in the WQMP for the Chase City Municipal Sewage Treatment Plant (STP) discharge based on the results of mathematical modeling of water quality in the receiving water body.

Item 1. REASON FOR THE PROPOSED AMENDMENT

A discharger currently permitted under the Virginia Pollutant Discharge Elimination System (VPDES) has requested revised waste load allocations in its VPDES permit. The VPDES permitted discharge is Chase City Municipal Sewage Treatment Plant (VPDES No. VA0076881), which discharges to Little Bluestone Creek. Chase City is in Mecklenburg County in Water Quality Management Area VII as defined in the Roanoke River Basin WQMP; this discharge is currently limited by waste load allocations in the WQMP. The Roanoke River Basin Water Quality Management Plan was originally adopted by the State Water Control Board December 9, 1976, and most recently amended January 6, 1999. Regulatory action, in the form of an amendment to the existing Roanoke River Basin WQMP, is necessary because State Water Control Law requires that VPDES permits be consistent with approved water quality management plans. Any time the allowable discharge in a VPDES permit which is limited by a waste load allocation in a WQMP is changed, the WQMP must be amended to reflect the new waste load allocation.

Water quality management plans identify water quality problems, consider alternative solutions, and recommend control measures needed to attain or maintain water quality standards. The existing Roanoke River Basin WQMP states, AAs more data becomes available, alternative methods of analysis can be considered, and in future updates of this plan, the appropriate action item(s) can be amended to reflect the use of these other equations and methods of analysis. (9 VAC 25-430-20). This amendment addresses the results of such an analysis. The affected segment is Little Bluestone Creek.

The Little Bluestone Creek segment was originally modeled in 1976 using the TVA Flat Water Equation. In 1997, a Streeter-Phelps mathematical model characteristic of Little Bluestone Creek was developed by conducting an intensive stream survey (B&B Consultants, Inc., November 1997). In 1997, the Town of Chase City requested increased wasteload allocations for their existing facility on the basis that a seasonally tiered approach would take advantage of higher flows and lower temperatures during winter months. Based on this model, waste load allocations were developed for the existing

0.600 mgd discharge which are predicted by the model to maintain the dissolved oxygen standard in Little Bluestone Creek.

Item 2. STATEMENT OF LEGAL AUTHORITY

The basis for the existing regulation is Section 62.1-44.15(13) of the Code of Virginia, which authorizes the SWCB to establish policies and programs for effective area-wide and basin-wide water quality control and management. Section 62-14-44.15(10) authorizes the SWCB to adopt such regulations as it deems necessary to enforce the general water quality management program of the Commonwealth.

STATEMENT OF STATUTORY MANDATES

Water Quality Management Plans are required by Section 303(e) of the Clean Water Act (CWA) [33 USC 1251] as implemented by 40 CFR 130, et seq. The State Water Control Law Section 62.1-44.15(13) as implemented in the Permit Regulation states ANo permit may be issued: ... For any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA;≡ [9 VAC 25-31-50, Prohibitions C.7., July 1996].

Item 3. STATEMENT OF CONCLUSIONS

The Roanoke River Basin WQMP is an existing regulation. The Town of Chase City requested changes to the waste load allocations in its VPDES discharge permit. The proposed waste load allocations for the Town of Chase City discharge were predicted, through mathematical modeling, to be adequate to maintain water quality standards in Little Bluestone Creek. This amendment to the Roanoke River Basin WQMP will satisfy the intent of the original plan, ensure existing beneficial uses of the affected water body are maintained, and accomodate the request of the VPDES permitted discharge.

The proposed Town of Chase City STP discharge waste load allocation will enable the Town to more effectively manage its limited resources in an effort to protect the health and safety of the citizens of the community, and the citizens of the Commonwealth.

Item 4. STATEMENT OF PROCESS FOR CONSIDERING ALTERNATIVES

**Alternative 1: Amend the Roanoke River Basin Water Quality Management Plan as proposed.**

*This alternative is recommended.* The specific recommended changes to the wasteload allocations for the affected discharge are as follows:

Delete the 303(e) Wasteload Allocation (BOD<sub>5</sub>) for Chase City Regional STP in WQMA VII - Clarksville-Chase City-Boydton, from Table 2 - Wasteload Allocations for Significant Discharges for Selected Alternative (9 VAC 25-430-20), and substitute a reference to Table 3; and add to Table 3 - Wasteload Allocations for Discharges with Tiered Permits (9 VAC 25-430-20), as follows:

Water Quality Management Area (WQMA)	Study Area Name	Discharger	Months	Flow (mgd)	Effluent D.O. (mg/l)	cBOD <sub>5</sub> (lbs/day)	BOD <sub>5</sub> (mg/l)	Ammonia (mg/l)	TKN (mg/l)
WQMA VII	Clarksville-Chase City-Boydton	Chase City Regional STP	Dec-Apr May-Nov	0.60	7.0	125.22	25.0 <sup>1</sup>	3.4	8.8
				0.60	6.0	65.04	13.0 <sup>1</sup>	1.8	4.2

NOTES:

1 cBOD<sub>5</sub>/BOD<sub>5</sub> = 25/30

**Alternative 2: Deregulate the existing Roanoke River Basin WQMP.**

*This alternative is not recommended at this time for this discharge.* In the Executive Order 15 (94) review of the Water Quality Management Plan regulations, the Department of Environmental Quality (DEQ) proposed the repeal of 17 existing water quality management plans and replacement of the plans with one non-regulatory statewide plan. This proposal included the Roanoke River Basin WQMP. Deregulation and replacement of the current regulatory WQMP would eliminate the need for this proposed WQMP amendment. However, deregulation of the WQMP will not be completed in time to enable the affected discharge to increase loadings and remain in compliance with its VPDES permit.

**Alternative 3: Maintain existing waste load allocations (No Action Alternative)**

*This alternative is not recommended.* Receiving water quality modeling, based on data collected after the adoption of the existing WQMP, predicts that the proposed Town of Chase City waste load allocation will be adequate to maintain the dissolved oxygen water quality standard in the receiving water body. It is clear that the intent of the WQMP is to incorporate the results of analysis based on data made available after the adoption of the original WQMP. Additionally, because VPDES permitted discharges are required to be in conformance with WQMPs, unless the WQMP waste load allocations are changed, increased loadings requested by the permittee will not be permitted.

In compliance with the SWCB's Public Participation Guidelines (9 VAC 25-10-10 et seq.), the DEQ will, during the Notice of Intended Regulatory Action and the Notice of Public Comment, include the proposed amendment and alternatives, and request comments from the public on these and other alternatives. The DEQ will also request comments on the costs and benefits of these alternatives or any other alternatives the public may wish to provide.

The DEQ intends to hold one public meeting on this proposed amendment no less than 30 days after it is published in the Virginia Register of Regulations. The intent of the public meeting is to further explain the proposed amendment and to allow for verbal comments as requested from the public regarding the amendment. Additionally, the DEQ will form a Technical Advisory Committee to review the proposed amendment if there are more than

five (5) requests to do so within 30 days after publication of the Notice of Intended Regulatory Action in the Virginia Register of Regulations.

CONTACT PERSON

Questions on this proposal should be referred to:

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