TCEQ Interoffice Memorandum

To: Municipal Permits Team
Wastewater Permitting Section

From: James E. Michalk, Water Quality Modeler
Water Quality Assessment Team
Water Quality Assessment Section

Date: January 24, 2020

Subject: City of Granbury
New Permit (WQ0015821001/TX0139556)
Discharge to a tributary above Lake Granbury (Segment No. 1205)

The referenced applicant is seeking a permit authorizing the discharge of 2.0 MGD of treated domestic wastewater into the watershed of Lake Granbury (Segment No. 1205). A dissolved oxygen analysis of the referenced discharge was conducted using an uncalibrated QUAL-TX model for an interim effluent flow of 1.0 MGD and final effluent flow of 2.0 MGD. The facility is located in Hood County.

Based on model results, effluent limits of 5.0 mg/L $CBOD_5$, 1.6 mg/L NH_3-N, and 6.0 mg/L DO for the interim flow phase (1.0 MGD) and 5.0 mg/L $CBOD_5$, 1.0 mg/L NH_3-N, and 6.0 mg/L DO for the final flow phase (2.0 MGD) are predicted to be necessary to ensure that dissolved oxygen levels will be maintained above the criteria stipulated by the Standards Implementation Team for the unnamed tributary (3.0 mg/L), Rucker Creek (5.0 mg/L), and Lake Granbury (5.0 mg/L).

These effluent limits also satisfy the requirements of the statewide lake rule for discharges within five miles upstream of public water supply reservoirs.

Coefficients and kinetics used in the model are a combination of standardized default and estimated values. The results of this evaluation can be reexamined upon receipt of information that conflicts with the assumptions employed in this analysis.

Segment No. 1205 is not currently listed on the State's list of impaired and threatened waters (2016 Clean Water Act Section 303(d) list).

The effluent limits recommended above have been reviewed for consistency with the State of Texas Water Quality Management Plan (WQMP). The proposed limits are not contained in the approved WQMP. However, these limits will be included in the next WQMP update.