

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** May 1, 2014

Thru: Bridget C. Bohac, Chief Clerk
Richard A. Hyde, P.E., Executive Director

From: L'Oreal W. Stepney, P.E., Deputy Director
Office of Water

Docket No.: 2013-2039-RUL

Subject: Commission Approval for Proposed Rulemaking
Amendments to 30 TAC Chapter 311: Watershed Protection
Rule Project No. 2014-006-311-OW

Background and reason(s) for the rulemaking:

On February 6, 2013, the Tarrant Regional Water District (petitioner) filed a petition for rulemaking that proposed amending 30 TAC §311.61, Definitions, and §311.62, Scope, and adding §311.67, Nutrient Control, to correct the definitions of Benbrook Lake water quality area and Benbrook Lake watershed, modify the scope of the subchapter, and require an effluent limit of 1.0 milligram per liter (mg/L) for total phosphorus for new or amended domestic wastewater discharges to the Benbrook Lake water quality area and Benbrook Lake watershed based on discharge flow volume and location. Besides correcting definitions, the purpose of the requested rulemaking was to protect water quality in Benbrook Lake by limiting additional nutrient enrichment in the reservoir and the associated problems that enrichment can cause.

In support of its request, the petitioner demonstrated through studies and analyses that elevated concentrations of nutrients and their primary response variable, chlorophyll-*a*, are currently causing water quality problems in Benbrook Lake (i.e., taste and odor issues due to blue-green algae proliferation) and that levels of these parameters have been increasing over the past 20 years and are likely to continue this trend with predicted population growth in the contributing watershed. Furthermore, the Texas Commission on Environmental Quality (Commission) Texas Integrated Report of Surface Water Quality has reported chlorophyll-*a* or excessive algal growth concerns in Benbrook Lake in all biennial report years dating back to 2002.

This rulemaking is not required by new or revised state or federal laws or regulations. Water Quality Division staff determined that the proposed rulemaking is an appropriate mechanism for regulating nutrients in Benbrook Lake after considering the following:

A) Use of Site-Specific Numeric Criterion for Chlorophyll-*a*

In 2010, the Commission adopted a chlorophyll-*a* criterion of 27.15 micrograms per liter for Benbrook Lake in the Texas Surface Water Quality Standards. The purpose of the criterion was to maintain water body uses and help identify eutrophic conditions associated with excessive nutrients. In addition to serving as a benchmark for surface water quality monitoring data collected in Benbrook Lake, the criterion would have been used in a nutrient screening exercise to determine if new or expanded wastewater

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discharges would cause a violation of the reservoir criterion or induce excessive growth of aquatic vegetation and, therefore, require nutrient controls. However, the United States Environmental Protection Agency disapproved the Benbrook Lake criterion for Federal Clean Water Act uses, contending that it would not protect water body uses from the effects of high chlorophyll-*a* concentrations. The Commission will continue to explore options for assigning nutrient criteria for Benbrook Lake.

B) Use of Existing Wastewater Discharge Review Procedures

In the *Procedures to Implement the Texas Surface Water Quality Standards*, the Commission has nutrient screening procedures that allow for the assessment of potential nutrient impacts from wastewater discharges on a permit-by-permit basis and provide guidance on the application of nutrient controls where warranted. These screening procedures include discharge applicability criteria, such as the volume of discharge and the discharge point distance from a downstream reservoir, that indicate whether an effluent limit for total phosphorus is recommended for a particular permit. In using the nutrient screening procedures, there may be cases where smaller dischargers (e.g., less than 0.25 million gallons per day (MGD)) that are close to the reservoir (less than five miles) or larger dischargers more distant from the reservoir may not be required to limit total phosphorus. Furthermore, predicted changes in total phosphorus or chlorophyll-*a* concentrations (factoring in a future approved chlorophyll-*a* criterion for Benbrook Lake) in the main body of the reservoir, resulting from a wastewater discharge, which do not exceed thresholds specified in the screening procedures would not result in a total phosphorus effluent limit recommendation. The potential cumulative phosphorus loading from these situations could contribute to nutrient enrichment in the reservoir.

C) Watershed Protection Rule Approach

The proposed rules would consistently require a total phosphorus limit of 1.0 mg/L for all domestic wastewater discharges that meet the proposed volume and distance-from-reservoir criteria. Furthermore, the rulemaking would not impede the Commission's ability to impose more stringent total phosphorus limits, as determined to be necessary, for those discharges to which the rulemaking would apply, nor would it preclude total phosphorus requirements being applied to discharges not covered by the rulemaking. Currently, the area to which the proposed rules would apply contains seven domestic wastewater dischargers. Of those seven dischargers, two are located within the Benbrook Lake water quality area (within five miles of the reservoir normal pool elevation), but the volume of their discharges are each well below 0.10 MGD. The five remaining dischargers are within the Benbrook Lake watershed (outside the water quality area and below the upstream Lake Weatherford dam), and three of those five dischargers currently meet the volume criterion for the proposed rules. One of the three eligible dischargers already has a 1.0 mg/L total phosphorus permit effluent limit. Given the relatively small area to which the proposed rules would apply, the small number of existing dischargers in the targeted area, and the lack of opposition to the proposed rulemaking (discussed further below), the Executive Director (ED) agrees

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that amending Chapter 311, Subchapter G would be an effective and appropriate mechanism to address nutrient-related water quality issues in Benbrook Lake.

Scope of the rulemaking:

A) Summary of what the rulemaking will do:

The proposed rules will:

- Correct the existing definitions of Benbrook Lake water quality area and Benbrook Lake watershed, which define the areas to which the existing and proposed Benbrook Lake watershed protection rules apply. The current definitions reference Lake Benbrook instead of Benbrook Lake, and the upstream boundary of the Benbrook Lake watershed is improperly defined.
- Add a daily average total phosphorus effluent limit of 1.0 mg/L for new discharge permits or existing permits that increase flow within the Benbrook Lake water quality area with a permitted annual or daily average flow greater than or equal to 0.10 MGD.
- Add the same effluent limitation for new discharge permits or permits that increase flow within the Benbrook Lake watershed, but outside the Benbrook Lake water quality area, with a permitted annual or daily average flow greater than or equal to 0.25 MGD.

B) Scope required by federal regulations or state statutes:

None.

C) Additional staff recommendations that are not required by federal rule or state statute:

None.

Statutory authority:

- Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state;
- TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction;
- TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013;
- TWC, §5.120, which authorizes the commission to promote the maximum conservation and protection of the quality of the environment and natural resources of the state;
- TWC, §26.0135, which authorizes the commission to monitor and assess the water quality of each watershed and river basin in the state;
- TWC, §26.027, which authorize the commission to issue permits; and

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- TWC, §26.121, which authorizes the commission to prohibit unauthorized discharges.

Effect on the:

A) Regulated community:

This would require dischargers with new or amended discharges that meet the proposed volume and location criteria to limit their effluent phosphorus concentrations. For affected dischargers, this could involve additional expenses to implement phosphorus removal technologies.

B) Public:

The public could benefit from improved water quality in Benbrook Lake. The public could also experience higher wastewater utility rates due to potentially higher wastewater treatment costs.

C) Agency programs:

Implementation of the proposed rules would not require any changes in current wastewater permitting program staffing and would not cause an increase in workload. It is possible that the Commission could see an increase in watershed protection rule requests of this nature, which would require ED staff time to evaluate each request. Any future watershed rule protection requests would be evaluated on a case-by-case basis.

Stakeholder meetings:

On April 1, 2013, the Commission instructed the ED to: 1) solicit stakeholder input on all the issues raised in the district's petition and on any other issues that were relevant to the issues raised in the petition and take appropriate action, and 2) report back to the Commission within nine months, unless rulemaking had been initiated following the stakeholder input. Notices of a public stakeholder meeting regarding the rule petition and associated open comment period were sent to representatives of area municipalities; state, county, and local officials; environmental groups; wastewater discharge permittees; and state and federal resource agencies. Water Quality Division staff requested that stakeholders provide comments on the proposed changes to the Commission's rules. The stakeholder meeting was held on August 7, 2013, in Aledo, Texas, and written comments were accepted until September 9, 2013. Staff received comments from Texas Parks and Wildlife Department (TPWD), Lone Star Chapter and Greater Fort Worth Regional Group of the Sierra Club, and the Town of Annetta. The TPWD and Sierra Club comments were supportive of the rule petition. None of the comments received expressed opposition to the proposed rule changes.

Potential controversial concerns and legislative interest:

There are no known controversial concerns or legislative interest at this time.

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Will this rulemaking affect any current policies or require development of new policies?

The rulemaking will complement current nutrient control policies and procedures at the agency and will not require development of new policies.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?

Without the rulemaking, wastewater discharges within the Benbrook Lake watershed will continue to be evaluated for nutrient impacts based on agency screening procedures already in place. As discussed above, the reliance on these procedures alone may result in a less comprehensive approach towards reducing point source contributions of total phosphorus to the watershed and thereby lessen the likelihood of providing relief from the effects of nutrient enrichment in Benbrook Lake. An alternative to the proposed rulemaking that would achieve similar results would require changes to the existing nutrient screening procedures to add the same effluent limit requirements for total phosphorus for discharges within the Benbrook Lake watershed. There is no precedent for adding this level of specificity to the nutrient screening procedures, which are intended as guidance for evaluating discharges on a statewide basis. It would be more appropriate to address this issue in the context of a watershed protection rule.

Key points in the proposal rulemaking schedule:

Anticipated proposal date: June 18, 2014

Anticipated *Texas Register* publication date: July 4, 2014

Anticipated public hearing date (if any): July 24, 2014

Anticipated public comment period: July 4, 2014 - August 4, 2014

Anticipated adoption date: December 10, 2014

Agency contacts:

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Attachments

Benbrook Lake Area Map

Benbrook Petition for Rulemaking

cc: Chief Clerk, 2 copies
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