

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners

Date: January 24, 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.: 2013-0544-RUL

Subject: Commission Approval for Adopted Rulemaking
Chapter 307, Texas Surface Water Quality Standards
Revisions to the Texas Surface Water Quality Standards
Rule Project No. 2012-001-307-OW

Background and reason(s) for the rulemaking:

Amendments are adopted to the Texas Surface Water Quality Standards (TSWQS), 30 TAC §§307.1 - 307.10. The adopted revisions are a result of a review of the TSWQS as required on a triennial basis by Federal Clean Water Act (FCWA), §303(c). The TSWQS were last revised in 2010, and significant portions of the 2010 TSWQS were approved by the United States Environmental Protection Agency (EPA) by 2013.

The revisions to the TSWQS are adopted to incorporate new information and studies on the appropriate uses and criteria of individual water bodies, to incorporate new scientific data on the effects of specific chemicals and pollutants, and to address new provisions in the Texas Water Code (TWC), federal regulations, and EPA guidance.

Specific adopted changes to the rules include:

- addition of primary contact recreation 2 as a contact recreational use category, to more appropriately assign site-specific contact recreation uses and criteria;
- revisions to statewide toxic criteria to incorporate new data on toxicity effects, in order to address revised Texas Commission on Environmental Quality (TCEQ) and EPA procedures;
- additions and revisions to site-specific toxic criteria to incorporate local water quality data into criteria for selected water bodies;
- addition of industrial cooling areas and revisions to mixing zone provisions to facilitate implementation of thermal water quality standards in wastewater permitting;
- numerous revisions and additions to the uses and criteria, and descriptions of individual water bodies, to incorporate new data and the results of recent use attainability analyses (UAAs); and

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- addition of site-specific recreational uses for selected water bodies, to incorporate results of recent recreational UAAs.

Scope of the rulemaking:

A.) Summary of what the rulemaking will do:

The adopted revisions to the TSWQS include numerous substantive changes and clarifications in all sections of the rulemaking except for §307.1 and §307.5. The adopted revisions to the TSWQS incorporate new information and studies on the appropriate uses and criteria of individual water bodies, incorporate new scientific data on the effects of specific chemicals and pollutants, and address new provisions in the TWC, federal regulations, and EPA guidance.

The adopted revisions in §§307.2 - 307.4 and 307.6 - 307.9 are changes in the basic numerical and narrative provisions of the TSWQS that apply to all surface waters in the state. The numerous revisions and additions to site-specific uses and criteria in the Appendices of §307.10 are tailored to individual water bodies. These site-specific revisions are based on studies and evaluations of each water body, and UAAs have been conducted as needed to develop revisions in uses and/or associated numerical criteria.

B.) Scope required by federal regulations or state statutes:

The FCWA and associated EPA rules require states to review and, if appropriate, revise the TSWQS at least every three years. The TWC stipulates that the state may amend the standards from time to time.

These amendments are adopted under the TWC, §5.013(a)(3), relating to the TCEQ's general jurisdiction over the state's water quality program, and TWC, §26.023, which requires the TCEQ to by rule set TSWQS for all water in the state. These amendments are also being adopted under TWC, §5.103, which authorizes the TCEQ to adopt any rules necessary to carry out its powers and duties under the TWC and other laws of this state. The adopted amendments will satisfy the provision in FCWA, §303(c), which requires states to adopt water quality standards and to review and revise standards from time to time, but at least once each three-year period.

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

- In §307.2, changes are strictly editorial and are included to improve clarity.
- In §307.3, numerous definitions are revised or added in order to improve clarity, including establishing definitions of biotic ligand models and a primary contact recreation 2 category, and revising primary contact recreation to include handfishing, as defined by Texas Parks and Wildlife Code, Title 5, Subtitle B, §66.115.

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- In §307.4, the addition of industrial cooling water areas to surface waters specifies that numerical temperature criteria do not apply in these areas. Language is also added about the applicability of primary contact recreation 2, as a new category of recreational use.
- In Table 2 of §307.6, revisions to several numeric toxic criteria to protect human health are adopted to incorporate updated EPA guidance procedures for calculating human-health criteria and to incorporate additional EPA data on toxic effects.
- In §307.7, language allowing fecal coliform to be used as an alternative bacteria indicator in high saline waters is removed. Primary contact recreation 2 is adopted as an additional category of recreational use for freshwater, with a geometric mean criterion for *E. coli* of 206 per 100 milliliters (mL).
- In §307.8, revisions and additional specificity are adopted to clearly state that different mixing zones may apply to different types of numeric criteria, including temperature. Language is also added to specify that the 50-foot radius zone of initial dilution applies to the Gulf of Mexico as well as other large, tidal water bodies.
- In §307.9, language is added to clarify standards attainment of chloride, sulfate, total dissolved solids, dissolved oxygen, and chlorophyll *a* standards.
- In §307.9, language is added to allow the consideration of statistical variability when making attainment determinations for bacteria and biological integrity standards.
- In Appendices A, D, E, and G in §307.10, a large number of additions and revisions are adopted to site-specific uses and numeric criteria. These changes are based on new data and evaluations for individual water bodies, and a UAA is required by the EPA to support those changes that are less stringent than current water quality standards or presumed uses.
- Numerous other minor revisions are adopted throughout Chapter 307 to improve clarity and to provide additional specificity.

Statutory authority:

TWC, §§5.013, 5.103, and 26.023; and
FCWA, §303(c)

Effect on the:

A.) Regulated community:

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The TSWQS can directly affect permitted wastewater discharges in Texas including cities, counties, state agencies, water districts, utility districts, investor-owned utilities, river authorities, mobile home parks, recreational vehicle parks, hotels, motels, industries, campgrounds, or any other business with an industrial or domestic wastewater treatment facility.

Revisions to site-specific standards may affect requirements in state, municipal, agricultural, and industrial wastewater discharge permits. These changes may involve alterations or new treatment methods or techniques that can range from best management practices to renovating, expanding, or building new treatment facilities. These permit holders may need to seek permit amendments to adjust treatment criteria to newly adopted standards. Small businesses that discharge wastewater would also be required to comply with the adopted requirements.

The rulemaking does not create a group of affected entities in the regulated community who were not affected previously. Numerous water quality uses and criteria are revised, but the scope and applicability of the rulemaking or affected permitting actions are not expanded with this proposal.

There will be a fiscal impact to some permitted facilities. Other facilities could benefit from this rulemaking because of cost savings. The adopted amendments have potential cost implications associated with revised criteria for toxic substances to protect human health and aquatic life, revised criteria for recreational uses, and revised dissolved oxygen criteria and aquatic life uses for classified and unclassified water segments.

The adopted amendments have cost implications associated with revised criteria for toxic substances to protect human health, revised criteria for recreational uses, and revised dissolved oxygen criteria and aquatic life uses for classified and unclassified water bodies. These cost implications are generally associated with chemical screening and monitoring and with the additional treatment of wastewater that may be needed to meet the standards for water quality. Dischargers may have to change or employ new wastewater treatment methods or techniques in order to meet the adopted standards.

The adopted changes in dissolved oxygen criteria are anticipated to affect some local governments that operate domestic wastewater facilities. In the absence of site-specific information, unclassified perennial water bodies are assigned a presumed high aquatic life use and associated dissolved oxygen criteria. None of the adopted revisions for dissolved oxygen criteria for classified or unclassified water bodies are anticipated to require more stringent treatment by domestic wastewater facilities. However, adopted changes for dissolved oxygen criteria for 12 classified or unclassified water bodies are less stringent and could facilitate future facility expansion for governmental entities. There are approximately 12 governmental domestic and two governmental industrial permitted wastewater dischargers on classified and unclassified segments that could be aided by the adopted less stringent revisions.

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B.) Public:

For each year of the first five years the adopted rules are in effect, the public benefit anticipated from the changes in the adopted rules will be continued protection of public drinking water supplies and aquatic life resources, an improved regulatory process for permitted wastewater discharges, and improved quality of the surface water resources of the state.

The rulemaking does not create a group of affected parties from the general public who were not affected previously.

These adopted revised criteria are more protective of human health and provide a public benefit. The adopted revisions more accurately assess water quality in the state and revise requirements to protect human health and water quality. The adopted rules would substantially advance this stated purpose by adopting revised water quality criteria and requirements that are supported by site-specific studies, federal and state research, and statewide monitoring and sampling data. Promulgation and enforcement of these rules will not burden private real property that is the subject of the rules because the amendments revising the state's surface water quality standards do not limit or restrict a person's rights in private real property.

C.) Agency programs:

Several of the adopted site-specific revisions to criteria for individual water bodies in §307.10 are intended to reflect natural local conditions and application of water quality standards. In these cases, the adopted water quality standards can help streamline the water quality management programs of the TCEQ if restorative activities are not required under Total Maximum Daily Loads (TMDLs). Adopted changes may result in the removal of water bodies that appear on the current 303(d) *List of Impaired Water Bodies*. Removal of water bodies listed for dissolved oxygen and aquatic life impairments would eliminate the need for approximately 20 TMDL studies. Adopted changes for dissolved minerals and pH, in conjunction with the creation of a new segment (Rio Grande below Rio Conchos - Segment 2315) and its site-specific dissolved mineral criteria, would remove approximately 41 impairments from the list. Changes to designate site-specific contact recreation criteria would remove approximately 11 impairments. As a result of the adopted changes, the agency expects that it would reallocate its resources for other water quality management activities and initiatives.

The rulemaking does not create a group of affected agency programs who were not affected previously.

No additional costs are anticipated for the TCEQ to implement the revisions to the TSWQS. The revised water quality standards are primarily operational and procedural. The

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statewide monitoring and assessment of surface water quality data and the review of wastewater permit applications may need to incorporate numerous changes and additions.

Stakeholder meetings:

Three stakeholder meetings were held at the TCEQ complex in Austin on the following dates: March 28, 2012; May 25, 2012; and November 07, 2012 (on nutrient criteria).

Other outreach efforts have included presentations at:

- Water Quality Advisory Group Quarterly Meetings
- TCEQ Water Quality Seminar
- TCEQ Environmental Trade Fair and Conference
- Numerous meetings of specific stakeholder groups

On average, approximately 60 people attended each meeting. Electronic notices of the stakeholder meetings were sent to the Surface Water Quality Standards Advisory workgroup, which is a balanced group of regulated entities, public, environmental, consumer, and professional organization representatives; as well as to individuals interested in local water quality issues. Notice of the meetings was posted on the TCEQ TSWQS home page, with completed meeting minutes and follow-up information posted upon completion of each meeting.

Other interested parties or individuals who requested notification of stakeholder meetings were provided an open invitation to the meetings via written notice.

The adopted revisions were developed with extensive input and involvement from stakeholder participation in the water quality standards workgroups.

As a result of stakeholder comments, the existing Leon River (Segment 1221) would be split into two segments (Leon River Above Belton Lake – Segment 1259, and Leon River Below Lake Proctor – Segment 1221).

Public comment:

The commission received 36 comment letters from organizations, affiliations, and elected officials. Over two thousand comments were received from individuals, including 2,212 form letters, and three attendees provided oral comments at the Public Hearing on October 17, 2013. Form letters from 2,205 individuals were in opposition to the proposed recreational use category, primary contact recreation 2, and site-specific recreational use changes to unclassified water bodies in Appendix G. Form letters from 7 individuals were in support of the proposed primary contact recreation 2 use category, site-specific recreational use changes to unclassified water bodies in Appendix G that are located in the Leon River watershed, re-classification of segment boundaries associated with the Leon River, and a request to apply the primary contact recreation 2 category to the Leon River and Pecan Creek.

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The major concerns identified during the public comment period include the following:

- Public participation process - The commission received comments noting concern that two of the significant proposals were not discussed during Surface Water Quality Standards Advisory workgroup meetings held in 2012. The proposal to expand existing contact recreational use categories to include primary contact recreation 2 was added based on public discussion during the August 21, 2013 proposal agenda meeting. Temperature revisions were included to address recent EPA discussions regarding thermal provisions in some wastewater permits.
- Recreation - The commission received comments in both support and opposition to the proposed recreational revisions in general. Specific comments regarding the proposed changes to recreational uses and criteria include: (1) concerns that expanding recreational use categories to include categories less stringent than primary contact recreation 1 would not be sufficiently protective of water quality; (2) concerns that assigning site-specific recreational use changes of secondary 1 or secondary 2 to unclassified water bodies in Appendix G is not protective of water quality; and (3) concerns the site-specific recreational use changes to secondary contact recreation 1 or 2 for Resley Creek, South Leon River, Indian Creek and East Yegua Creek are not justified, due to the evidence of limited primary contact recreation documented in the use-attainability analyses. In addition, the EPA expressed concern regarding the risk of illness associated with the primary contact recreation 2 geometric mean criterion of 206 colonies *E. coli* per 100 mL.
- Temperature - The commission received comments in both support and opposition to the proposed temperature revisions in general. Specific comments regarding the proposed changes to temperature include: (1) uncertainty regarding the implementation of industrial cooling water areas in wastewater permits, since the Procedures to Implement the Texas Surface Water Quality Standards are not being revised concurrently with the standards; and (2) concern regarding the protectiveness of the temperature provisions.

Significant changes from proposal:

Staff has not made significant changes from proposal as a result of public comment. Changes have been made to correct typographical errors and make editorial improvements noted in public comments.

Potential controversial concerns and legislative interest:

- Primary Contact Recreation 2 - This additional recreational use category was added to the proposal at the August 21, 2013 agenda following public discussion. Members of the

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public and some workgroup members submitted over 2,000 public comments expressing concern that the category may not adequately protect surface water quality. Some members of the workgroup also noted their concern that the primary contact recreation 2 category was added to the proposal at the August 21, 2013 agenda meeting and not discussed during Surface Water Quality Standard Advisory workgroup meetings in 2012.

- **Contact Recreation in the Leon River Watershed** - Several workgroup members expressed concerns regarding the adopted changes from the primary contact recreational uses and criteria for water bodies in the Leon River watershed. Stakeholders were concerned that the adopted changes in criteria for South Leon, Resley, and Indian Creeks were not protective due to the evidence of limited primary contact recreation and availability of access for recreation. Additionally, stakeholders were concerned the proposals to retain primary contact recreation for the Leon River Below Lake Proctor, the Leon River Above Belton Lake, and Pecan Creek were too stringent.
- **Temperature** - As a result of a permitting issue that arose after the two Surface Water Quality Standard Advisory workgroup meetings, adopted revisions were included to allow exemptions from temperature criteria. These exemptions will apply in industrial cooling water areas as defined in the rule. Some members of the workgroup noted their concern that temperature revisions were not discussed during workgroup meetings in 2012.
- **Mercury** - In Table 2 of §307.6, the adopted mercury water column criteria of 0.0122 µg/L in freshwater and 0.0250 µg/L in saltwater reflect the values adopted by the Texas Natural Resource Conservation Commission (TCEQ predecessor) in 1995 and approved by the EPA on March 11, 1998. In 2010, TCEQ adopted a mercury criterion of 0.7 milligram per kilogram in fish tissue. This criterion was disapproved by EPA in a letter dated June 29, 2011, thereby making the most recently-approved criteria applicable for regulatory purposes. In its letter, EPA stated that it may promulgate its criterion recommendation of 0.3 milligram per kilogram if TCEQ did not adopt a revised mercury human health criterion.
- **Rio Grande** - There is significant interest regarding site-specific changes to the dissolved minerals criteria of the Rio Grande Above Amistad Reservoir (Segment 2306), as well as the creation of the new classified segment Rio Grande Below Rio Conchos (Segment 2315), due to the shared boundary with Mexico. Adopted changes to the dissolved minerals criteria and segment boundaries are warranted to better reflect the local conditions of the water body and to incorporate the influence of natural springs on water quality.

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

The TSWQS establish state goals and targets for water quality. For individual water bodies, the standards assign water quality-related uses and specify associated numerical

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criteria to protect the assigned uses. In addition, some narrative and numerical criteria are applied statewide, and the TSWQS also includes procedures on how water quality standards are applied and assessed. This rulemaking will not require the development of new policies.

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

The adopted revisions are a result of a review of the TSWQS as required on a triennial basis by FCWA, §303(c). The TSWQS establish the water quality conditions for surface water in the state. TSWQS are the basis for establishing discharge limits in wastewater and stormwater discharge permits, setting instream water quality goals for TMDLs, and providing water quality targets to assess water quality and identify impaired water bodies.

If this rulemaking is not approved, these different TCEQ water programs may be addressing water quality standards that have been shown to be inappropriate for some water bodies

An alternative to state rulemaking is EPA promulgation of federal water quality standards for Texas.

Key points in the adoption rulemaking schedule:

***Texas Register* proposal publication date:** 9/13/13

Anticipated *Texas Register* adoption publication date: 2/28/14

Anticipated effective date: 3/6/14

Six-month *Texas Register* filing deadline: 2/21/14

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Attachments

None.

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