UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

SEP 23 2014

Ms. L'Oreal Stepney, P.E., Deputy Director
Office of Water (MC-158)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Dear Ms. Stepney:

The Environmental Protection Agency (EPA or the Agency) has completed its review of several new and revised provisions in the *Texas Surface Water Quality Standards* (Texas WQS). These standards were adopted by the Texas Commission on Environmental Quality (TCEQ), on February12, 2014, and received by EPA for review on April 29, 2014.

This is the first action concerning our review of the 2014 standards and includes several new or revised provisions in §307.2, §307.3, §307.4, §307.6, §307.7, §307.8, §307.9, Appendix A, Appendix B, Appendix C, Appendix D, Appendix E and Appendix G, of the Texas WQS, as specified in the enclosure. I am pleased to inform you that the EPA is approving the provisions as documented in Parts I and II of the enclosure to this letter, pursuant to §303(c) of the Clean Water Act (CWA) and the implementing regulation at 40 CFR Part 131. As noted in Part II of the enclosure, EPA is approving specific revisions in §307.4, §307.8, Appendix A, and Appendix D subject to the outcome of consultation with the U.S. Fish and Wildlife Service under §7(a)(2) of the Endangered Species Act.

The Agency previously determined that several items in the 2010 Texas WQS were assessment or implementation provisions, rather than water quality standards under CWA §303(c), and, therefore, were not subject to EPA review. One of these items was modified in the 2014 revision. In addition, several provisions from the 2010 Texas WQS which were disapproved by EPA for CWA purposes, have been removed in the 2014 revision. Part III of the enclosure summarizes revisions in the 2014 Texas WQS which do not require EPA action under CWA §303(c).

EPA has previously stated that it is taking no action on the definition of "Surface water in the state" in §307.3(a)(66), regarding the reference to §26.001 of the Texas Water Code for the area 10.36 miles off-shore into the Gulf of Mexico. Under the CWA, Texas does not have jurisdiction to establish water quality standards more than three nautical miles from the coast. Therefore, EPA's approval action on the items in the enclosure recognizes the State's authority under the CWA to include waters extending offshore three nautical miles in the Gulf of Mexico, but does not extend past that point. In addition, EPA's approval action also does not include the application of the Texas WQS to the portions of the Red River and Lake Texoma that are located within the State of Oklahoma. EPA is also taking no action on the Texas WQS for those waters or portions of waters located in Indian Country.

I would like to commend TCEQ for its commitment in completing the task of reviewing and revising the State's water quality standards. EPA will take subsequent action on the remaining new and revised provisions in §307.3, §307.4, §307.7, §307.9, Appendix A, Appendix C, Appendix D and Appendix G of the 2014 Texas WQS. If you have any questions or concerns, please contact me at (214) 665-7101, or have your staff contact Diane Evans at (214) 665-6677.

Sincerely,

William K. Honker, P.E.
Director
Water Quality Protection Division

Enclosure

cc: Kelly Holligan, Director, TCEQ - Water Quality Planning Division (MC-203)

EPA Review of 2014 *Texas Surface Water Quality Standards*
(September 2014)

EPA's action addresses the revisions to *Texas Surface Water Quality Standards* (Texas WQS) adopted by the Texas Commission on Environmental Quality (TCEQ) in February 2014 and submitted to EPA in April 2014. This enclosure provides a summary of the revisions and the action taken by EPA. The discussion below covers the three types of actions for specific provisions: I. Revisions that are approved for purposes of Clean Water Act (CWA) §303(c), as found on pages 1-5 of this enclosure); II. Revisions that are approved for purposes of CWA §303(c), subject to completion of consultation under the Endangered Species Act (ESA), as found on pages 5-6; and, III. Revisions that do not require action by EPA under CWA §303(c), as found on page 6-7.

I. REVISIONS THAT EPA IS APPROVING

EPA has concluded that approval of certain revisions either will have no effect on listed or proposed endangered or threatened species, or are otherwise not subject to ESA consultation. For the revisions discussed in Part I of this enclosure, ESA consultation is not required, the Agency has previously completed consultation under the ESA or EPA has made a finding of no effect on federally-listed species and critical habitat.

EPA also determined that several changes are non-substantive in nature and thus do not substantively modify Texas WQS. Footnotes for the aquatic life criteria in Table 1 (Criteria in Water for Specific Toxic Materials) were relabeled. Additional non-substantive or editorial changes were made in the following provisions: §307.6(c), §307.6(e)(c), §307.7(b)(3), and §307.9(e)(7). Other revisions throughout the 2014 Texas WQS include replacement of terms as follows: chlorides" to "chloride," "gage" to "gauging station" "kilometer" to "km;" "mile" to "mi," "storm water" to "stormwater" and "sulfates" to "sulfate."

EPA considers such non-substantive edits to existing WQS to constitute new or revised WQS that EPA has the authority and duty to approve or disapprove under CWA §303(c)(3). While such revisions do not substantively change the meaning or intent of the existing WQS, EPA believes that it is reasonable to treat such non-substantive changes in this manner to ensure public transparency on what provisions are effective for purposes of the CWA. EPA notes that the scope of its action in reviewing and approving or disapproving such non-substantive changes would extend only as far as the actual non-substantive changes themselves. In other words, EPA's action on non-substantive changes to previously approved WQS would not constitute an action on the underlying previously approved WQS. Any challenge to EPA's prior approval of the underlying WQS would be subject to any applicable statute of limitations and prior judicial decisions. EPA approves the listed non-substantive changes in the 2014 Texas WQS, identified in the above paragraph, pursuant to §303(c) of the CWA.

§307.3. Definitions and Abbreviations

§307.3(a). Definitions. Definitions for "biotic ligand model" and "industrial cooling water area" were added to the Texas WQS and are approved. Non-substantive changes, including the re-numbering of definitions, were also made in §307.3 and are also approved.

EPA will take separate action on the new definition for "primary contact recreation 2" and the revised definitions for "primary contact recreation 1" and "secondary contact recreation 1" in §307.3 and the corresponding revisions under §307.4(j)(2)-(3) and §307.7(b)(1).

§307.6. Toxic Materials

§307.6(d). Specific numerical human health criteria. Table 2 – Criteria in Water for Specific Toxic Materials

Human health criteria for the substances listed below were revised or added in the 2014 WQS and are approved.

benzo(a)anthracene	dichloromethane	pentachlorophenol
bis (2-chloroethyl) ether	dicofol	polychlorinated biphenyls
carbon tetrachloride	dieldrin	pyridine
cresols	dioxin/furans	1,1,2,2 tetrachloroethane
4,4' DDD	hexachloroethane	tetrachloroethylene
4,4' DDE	hexachlorophene	thallium
4,4' DDT	methoxychlor	2,4,5-TP (Silvex)
danitol	methyl ethyl ketone	trichloroethylene
1,2 dibromoethane	nitrobenzene	

These criteria incorporate updated toxicological information and bioconcentration factors, where available. The criteria were calculated using the exposure factors which were approved in the 2010 revision of the Texas WQS. The tissue-based criteria for DDD, DDE, DDT, dixon/furans and polychlorinated biphenyls which were approved in the 2010 revision, were replaced with water-column criteria in the 2014 Texas WQS. Modifications were also made in the corresponding footnotes for these criteria.

The applicability of the human health criteria in waters designated as a sole-source drinking water supply was clarified in several items under §307.6(d). Editorial changes, which do not alter the intent or implementation of the Texas WQS, were made in several provisions under §307.6(d) and are also approved.

§307.7. Site-specific Uses and Criteria

Section 307.7(b)(1)(C) of the 2010 Texas WQS included fecal coliform criteria for use as an alternative indicator in highly saline inland water bodies, for a limited period of time. The removal of this provision in the 2014 revision of the Texas WQS is approved.

Appendix A - Site-specific Uses and Criteria for Classified Segments

A reference to the provisions for industrial cooling water areas in §307.4 and §307.8 was added to the introduction of Appendix A and is approved. The removal of language which allowed the use of fecal coliform as an alternative indicator of recreational suitability in highly saline inland waters is also approved. The language was also removed from footnotes applicable to the Red River, Brazos River, Colorado River and Rio Grande basins.

The removal of the public water supply use in segment 1110 – Oyster Creek above Tidal is approved, as there are no public water supply intakes on this water body. The high quality aquatic life and primary contact recreation uses, along with the numeric criteria for dissolved oxygen, chloride, sulfate, total dissolved solids, pH and E. coli, in Appendix A for segment 1258 – Middle Oyster Creek were previously approved when this reach was formerly included in segment 1110. The temperature criterion of 95 ^{0}C for segment 1258 – Middle Oyster Creek is based on the existing temperature criterion for an adjacent water body (segment 1245 – Upper Oyster Creek) and is approved. As noted below under Appendix C, segment 1259 - Leon River above Belton Lake was created from the lower reach of segment 1221 – Leon River below Lake Proctor. The designated uses and numeric criteria in Appendix A for segment 1258 are the same as those, which were previously approved for segment 1221.

Abbreviations for kilometer (km) and mile or miles (mi) replaced the full terms throughout Appendix A, along with the revision of "ft.^{3}/s" to "cfs" and "^{0} F" to "degrees F." These revisions are approved, along with editorial changes in footnote 1 under most basins, which includes information on the indicator bacteria for the recreation uses and the oyster water use. Non-substantive changes were also made in footnotes for segments 0105, 1427, 1428, 1903, 1906 and 2482 and are approved.

EPA will take separate action on the remaining revisions in Appendix A, which include the following items:

- aquatic life uses and/or dissolved oxygen criteria in segments 0305, 0607, 0704, 2107, 2118, 2311, 2315, 2485 and 2490;
- minerals criteria in segments 0211, 1214, 1248, 2103, 2107, 2118, 2306, and 2315;
- pH criteria in segments 0302, 0605, and 0818; and
- non-substantive revisions in the footnotes for segments 1811, 1814 and 2106 (substantive revisions to these footnotes were made in the 2010 Texas WQS and are currently under EPA review).

Appendix B – Sole-source Surface Drinking Water Supplies

Under Appendix B, 30 water bodies, or portions of those water bodies, were designated with the sole-source surface drinking water supply use, which is approved. The designation of sole-source drinking water supply was removed from nine water bodies, which no longer fit this description. Non-substantive changes in Appendix B were also made in the 2014 Texas WQS and are approved.

Appendix C – Segment Boundary Descriptions

The lower boundary in segment 0801 – Trinity River Tidal was revised to account for the saltwater barrier constructed near Wallisville. Segment 1258 – Middle Oyster Creek was created from the upper reach of segment 1110 – Oyster Creek above Tidal. The lower boundary of segment 1221- Leon River below Lake Proctor was moved upstream to the confluence with Plum Creek. Segment 1259 - Leon River above Belton Lake was created from the reach removed from segment 1221.

The lower boundary of segment 1401- Colorado River Tidal was revised to account for the diversion channel to Matagorda Bay. The boundary between segment 2303 – International Falcon Reservoir and segment 2304 – Rio Grande below Amistad Reservoir was moved upstream to reflect the pool elevation of the lake. Updated information on elevation level was incorporated in the description of segment 1404 – Lake Travis. Abbreviations for kilometer (km) and mile (mi) replace the full terms throughout Appendix C. These revisions are approved, along with all other editorial changes in Appendix C, with the exception of the revisions noted in the following paragraph.

EPA will take separate action on the revised boundaries and any editorial revisions in the following segments: 0607 – Pine Island Bayou, 1006 - Houston Ship Channel Tidal, 2107 - Lower Atascosa River, 2118 - Upper Atascosa River, 2306 - Rio Grande Above Amistad Reservoir, 2315 - Rio Grande Below Rio Conchos, 2490 - Upper Laguna Madre and 2491- Lower Laguna Madre.

Appendix D – Site-specific Uses and Criteria for Unclassified Water Bodies

The entry for Walnut Creek, previously identified as within segment 0809 was corrected to segment 0409, based on an earlier receiving water assessment that confirmed the presumed high aquatic life use. Corrections in segment descriptions, based on previously-conducted receiving water assessments or use attainability analyses (UAAs) were made for the following water bodies: Spring Branch (segment 0801), Pin Oak Creek (segment 0836), Dry Creek (segment 1009), South Mayde Creek (segment 1014), Garners Bayou (segment 1016), Gilleland Creek (two reaches in segment 1428), Dry Creek (segment 1428), and Wilson Creek (segment 1501). The term "effluent dominate" was revised to "effluent-dominated" in the segment descriptions for the Harris County Flood Control District ditches. Most footnotes in Appendix D were renumbered. In addition, county names were added for numerous water bodies to clarify a previously-approved upstream or downstream boundary. Each of the above changes is non-substantive and are approved.

EPA will take separate action on the revised designated uses and dissolved oxygen criteria in the following water bodies: Boggy Creek (segment 0607), Pine Island Bayou (segment 0607), Willow Creek (segment 0607), Cypress Creek (segment 0608), Town Creek (segment 0831), Flag Lake Drainage Canal (segment 1110), Skull Creek (segment 1402), Wilbarger Creek (two reaches in segment 1428), unnamed tributary to Wilbarger Creek (segment 1428), Atascosa River (segment 2118), and West Prong Atascosa River (non-substantive change for segment number).

Appendix E- Site-specific Toxic Criteria

Site-specific lead criteria for segment 0404 – Big Cypress Creek were revised to account for the dissolved portion of the metal. The conversion factor for the dissolved portion is calculated with the formula previously approved in Table 1 of the Texas WQS and a site-specific hardness of 40.1 mg/L. Site-specific copper criteria for a portion of Mill Creek, within segment 0506 of the Sabine River Basin, were developed based on a water effect ratio (WER).

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Segment	Site Description	Facility	Parameter	Site-specific Adjustment Factor	Additional Site-Specific Considerations
0404	Big Cypress Creek in Camp, Titus, and Morris counties	Lone Star Steel	Lead	Acute Criterion = 38.3µg/L Chronic Criterion = 5.3µg/L	Hardness = 40.1 mg/L [no change] Criteria listed in "Site-specific Adjustment Factor" column includes a correction factor of 0.924152
0506	Mill Creek from CR 1106 upstream to the permitted outfall in Van Zandt County	City of Canton	Copper	7.71	

Non-substantive changes were also adopted in Appendix E of the 2014 Texas WQS. These changes do not alter the intent of the Texas WQS and are approved.

Appendix G - Site-specific Recreational Uses and Criteria for Unclassified Water Bodies

The presumed use of primary contact recreation is revised to a secondary contact recreation use for several unclassified water bodies in the Trinity and Brazos River basins, as listed in the following table. Recreational UAAs were conducted following TCEQ's protocol in *Recreational Use-Attainability Analyses (RUAAs): Procedures for a Comprehensive RUAA and a Basic RUAA Survey*.

The UAAs documented that the primary contact recreation use is not attainable in each water body, due to the factor specified at 40 CFR §131.10(g)(2) of the federal regulation which reads: "Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met." The revised recreational uses and criteria are presented in the following table.

Segment	Water body	Use	E. coli criterion (geometric mean)
0810	Big Sandy Creek	Secondary Contact Recreation 1	630 colonies/100 mL
0810	Garrett Creek	Secondary Contact Recreation 1	630 colonies/100 mL
0810	Salt Creek	Secondary Contact Recreation 1	630 colonies/100 mL
1210	Navasota River above Lake Mexia	Secondary Contact Recreation 1	630 colonies/100 mL
1212	East Yegua Creek	Secondary Contact Recreation 1	630 colonies/100 mL
1221	Walnut Creek	Secondary Contact Recreation 2	1030 colonies/100 mL
1245	Bullhead Bayou	Secondary Contact Recreation 1	630 colonies/100 mL
1245	Unnamed tributary of Bullhead Bayou	Secondary Contact Recreation 1	630 colonies/100 mL

EPA approves each of the revised uses and criteria identified in the above table. EPA will take separate action on the proposed revisions for recreational uses in Resley Creek, South Leon River and Indian Creek.

II. REVISIONS THAT EPA IS APPROVING, SUBJECT TO ESA CONSULTATION

EPA is approving the items in Part II of this enclosure subject to the outcome of consultation with the U.S. Fish and Wildlife Service under Section 7(a)(2) of the ESA.

§307.4. General Criteria

§307.4(f) Temperature. The narrative criterion for temperature was modified to allow designation of an industrial cooling water area in a wastewater permit. The numeric temperature criteria for classified segments (Appendix A) and the maximum temperature differentials in §307.4(f)(1)-(3) are not applicable within an industrial cooling water area. Editorial changes, which do not alter the intent or implementation of the Texas WQS, were made in §307.4(f) and are also approved.

§307.8. Application of Standards

§307.8(b). Mixing zones. The provision at paragraph10 was modified to specify that the size of a mixing zone for a temperature criterion, may differ from the size of mixing zones established in a permit for aquatic life or human health criteria. This approach is consistent with EPA guidance which states: "…states….may establish independent mixing zone size specifications that apply to each criteria type."[1] Under item (2)(C), language was clarified to state that the size limitations for zones of initial dilution are also applicable for discharges in the Gulf of Mexico. These changes are approved.

Appendix A - Site-specific Uses and Criteria for Classified Segments

A reference to the provisions for industrial cooling water areas under §307.4 and §307.8 was added to the introduction of §307.10 and is approved.

Appendix D – Site-specific Uses and Criteria for Unclassified Water Bodies

Based on an aquatic life use attainability analysis, EPA approves the seasonal dissolved oxygen criteria for the unclassified reach of the Lavaca River, as shown in the following table and adopted in footnote 15 of Appendix D.

Segment	Water Body	County	Aquatic Life Use	Dissolved oxygen criteria (average, minimum)	Description
1602	Lavaca River	Lavaca	[no revision]	Footnote 15 – 3.0 mg/L, 2.0 mg/L, applicable March 15-Ocober 15 [no revision for October 16- March 14l	[no revision]

III. REVISIONS THAT DO NOT REQUIRE ACTION BY EPA UNDER CWA §303(c)

New language was added to two provisions of the 2014 Texas WQS that EPA does not consider to be new or revised WQS. These revisions include the second sentence of §307.9(e)(3) and the third sentence of §307.9(f). EPA is not taking action on these provisions because they are not (1) legally binding provisions adopted or established pursuant to State law that (2) address designated uses, criteria, or antidegradation, and (3) describe the desired condition or level of protection of the water body. Revisions were also made in 307.9(c)(1), which EPA previously determined was not a standard under CWA §303(c).

Several revisions in the 2014 Texas WQS were made to incorporate existing standards effective under the CWA. These revisions address portions of the 2010 Texas WQS, which were previously disapproved by EPA for purposes of the CWA:

- §307.6. Toxic Materials
  - Table 2 – Criteria in Water for Specific Toxic Materials – Human Health Protection
    - Insertion of the following criteria for mercury: 0.0122 ug/L (consumption of water and freshwater fish), 0.0122 ug/L (consumption of freshwater fish) and 0.025 ug/L (consumption of saltwater fish)

[1] Please see Chapter 5 in EPA's *Water Quality Standards Handbook* (available at: http://water.epa.gov/scitech/swguidance/standards/handbook/chapter05.cfm)

        - Removal of the footnote relating to the tissue based criterion for mercury, which was disapproved in the 2010 Texas WQS.
- §307.9. Determination of Standards Attainment:
    - Removal of the high-flow exemption at §307.9(e)(3) in the 2010 Texas WQS, beginning with the sentence "Samples must not include extreme" through the end of the provision
    - Removal of language from §307.9(f). Biological Integrity of the 2010 Texas WQS which allowed the deferment of listing under CWA §303(d) for unclassified perennial waters with presumed high aquatic life uses
- Appendix A- Site-specific Uses and Criteria for Classified Segments
    - Insertion of the dissolved oxygen criteria for segment 2491 (revised segment boundaries in the 2014 Texas WQS are under EPA review)
- Appendix F – Site-specific Nutrient Criteria for Selected Reservoirs
    - Removal of numeric chlorophyll *a* criteria for 36 reservoirs from the 2010 Texas WQS, which were disapproved for CWA purposes

Appendix E- Site-specific Toxic Criteria

In the 2014 Texas WQS, the following criteria in the table below were added to Appendix E. EPA has previously approved these site-specific criteria under CWA §303(c), following the process in §307.6(c)(9) of the Texas WQS, but is identifying the criteria in this enclosure for convenience. These criteria were developed after the adoption of the 2010 Texas WQS and were listed on EPA's Water Quality Standards Repository. EPA approved the criteria for Cantrell Slough (0823) and Lynn Bayou (2453), subject to the outcome of consultation with the U.S. Fish and Wildlife Service under Section 7(a)(2) of the ESA.

Segment	Site description	Facility	Parameter	Site-specific Adjustment Factor	EPA approval
0601	The entirety of the mixing zone for permitted Outfall 001 within the Neches River Tidal	ExxonMobil	Zinc	2.89	4/21/2011
0611	Lake Stryker	Luminant	Aluminum	3.70	11/19/12
0823	Cantrell Slough from the edge of the mixing zone in Segment 0823 upstream to permitted Outfall 001	Upper Trinity Regional Water District	Copper	6.43	10/11/11
1005	Phillips Ditch and Santa Anna Bayou: Phillips Ditch from the edge of the mixing zone in Santa Anna Bayou upstream to permitted Outfall 001	Oxy Vinyls	Nickel	1.13	4/4/11
1005	Phillips Ditch from the edge of the mixing zone in Santa Anna Bayou upstream to permitted Outfall 001 in Harris County	Akzo Nobel Chemical	Aluminum	3.93	3/18/14
2453	Saltwater portion of Lynn Bayou below the facility's outfall.	City of Port Lavaca	Copper	1.57	6/17/14