The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts amendments to §§307.2, 307.3, 307.6, 307.7, 307.9, and 307.10.

Sections 307.2, 307.3, 307.6, 307.7, 307.9, and 307.10 are adopted *with changes* to the proposed text as published in the September 8, 2017, issue of the *Texas Register* (42 TexReg 4565) and, therefore, will be republished.

Background and Summary of the Factual Basis for the Adopted Rules

The Federal Water Pollution Control Act, or the Clean Water Act (1972), §303 (33 United States Code, §1313), requires all states to adopt water quality standards for surface water. A water quality standard consists of the designated beneficial uses of a water body or a segment of a water body and the water quality criteria that are necessary to protect those uses. Water quality standards are the basis for establishing effluent limits in wastewater permits, setting instream water quality goals for total maximum daily loads (TMDLs), and providing water quality targets used to assess water quality monitoring data.

The states are required under the Clean Water Act to review their water quality standards at least once every three years and revise them, if appropriate. States review the standards because new scientific and technical data may be available that have a bearing on the review. Environmental changes over time may also warrant the need for a review. Where the standards do not meet established uses, they must be periodically reviewed to see if uses can be attained. Additionally, water quality standards may have been previously established for the protection and propagation of aquatic life and for

recreation in and on the water without sufficient data to determine whether the uses were attainable. Finally, changes in the Texas Water Code (TWC), Clean Water Act, or regulations issued by the United States Environmental Protection Agency (EPA) may necessitate reviewing and revising standards to ensure compliance with current statutes and regulations.

Following adoption of revised Texas Surface Water Quality Standards (TSWQS) by the commission, the Governor or their designee must submit the officially adopted standards to the EPA Region 6 Administrator for review. The Regional Administrator reviews the TSWQS to determine compliance with the Clean Water Act and implementing regulations. TSWQS are not applicable to regulatory actions under the Clean Water Act until approved by the EPA.

The TSWQS were last amended in February 2014. The EPA approved a portion of the state's revised standards in September 2014.

Reviews and revisions of the TSWQS address many provisions that apply statewide, such as criteria for toxic pollutants. They also address the water quality uses and criteria that are applicable to individual water bodies. An extensive review of water quality standards for individual water bodies is often initiated when the existing standards appear to be inappropriate for water bodies that are listed as impaired under the Clean Water Act, §303(d), or that are potentially affected by permitted wastewater discharges or other permitting actions.

States may modify existing designated uses or criteria when it can be demonstrated through a use-attainability analysis (UAA) that attaining the current designated uses or criteria is not appropriate. Most changes in designated uses or criteria are based on a demonstration that natural characteristics of a water body cannot attain the currently designated uses or criteria. Natural characteristics include temperature, pH, dissolved oxygen, diversity of aquatic organisms, amount of streamflow, physical conditions such as depth, and natural background pollutant levels. Conversely, a UAA might demonstrate that the currently designated uses and criteria are appropriate, or even that they should be more stringent.

UAAs can require several years of additional sampling studies, or they may focus on a long-term evaluation of existing historical data. For UAAs on water bodies that are potentially impacted by pollutant loadings above natural background levels, sampling and evaluation are often conducted on similar but relatively unimpacted water bodies to determine reference conditions that can be applied to the water body of concern.

The focus of UAAs depends on the uses and criteria that need to be reevaluated. The applicable aquatic life use is determined by repeatedly sampling fish or invertebrates in relatively unimpacted areas and applying quantitative indices, such as indices of biotic integrity, to the sampling data of the biological communities. UAAs to assign aquatic recreational uses include assessing physical and hydrological conditions, observing existing recreation, and collecting information on current and historical recreational activities. Dissolved oxygen criteria are evaluated by monitoring dissolved oxygen over numerous (usually ten) 24-hour periods in relatively unimpacted areas.

Site-specific criteria for toxic pollutants are evaluated by placing selected small aquatic organisms in water samples from the site and exposing them to different doses of the toxic pollutant of concern.

The commission is adopting editorial revisions as well as substantive changes. Editorial revisions are adopted to improve clarity, make grammatical corrections, and renumber or re-letter subdivisions as appropriate.

Numerous revisions of toxic criteria are adopted to incorporate new data on toxicity effects. Other adopted revisions provide clarity on how water quality standards would be assessed using instream monitoring data for bacteria. Numerous revisions are also adopted for the uses and criteria of individual water bodies to incorporate new data and the results of recent UAAs.

Section by Section Discussion

§307.2, Description of Standards

The commission adopts amended §307.2 to include language regarding temporary standards to comply with changes in federal rules listed in 40 Code of Federal Regulations (CFR) §131.14. These revisions clarify what standard applies when a criterion or designated use is not attained and cannot be attained for one or more reasons listed in 40 CFR §131.10(g) or to facilitate restoration activities. Other revisions are editorial and adopted to improve overall clarity.

In response to comments, §307.2(g), regarding temporary standards, has been divided

into paragraphs and revised to further clarify changes necessitated by the recently adopted changes to 40 CFR §131.14.

§307.3, Definitions and Abbreviations

The commission adopts amended §307.3 to add a definition for "Coastal recreation waters." Other revisions are editorial and adopted to improve overall clarity.

In response to comments regarding §307.3(a)(14), the definition for "Coastal recreation waters" was revised to remove the reference to the specific primary contact recreation categories of 1 and 2.

§307.6, Toxic Materials

The commission adopts amended §307.6 to update references to guidance documents and sources used to calculate aquatic life and human health criteria. Other revisions are editorial and adopted to improve overall clarity.

Section 307.6(c)(1), Table 1, which lists numeric criteria for the protection of aquatic life, includes adopted revisions to the existing entry for carbaryl based on the EPA issuance of an updated national criteria document. Revisions also include the addition of acrolein to the table based on the EPA issuance of a new national criteria document.

In response to comments regarding §307.6(c)(1), Table 1, changes were made to footnote m to further clarify the use of biotic ligand model results in the development of site-specific copper criteria.

In response to comments regarding §307.6(c)(10), changes were made to further clarify the use of biotic ligand model results in the development of site-specific numeric criteria for copper.

Adopted changes to the human health criteria in §307.6(d)(1), Table 2, include the addition of the following four chemicals to the table: epichlorohydrin; ethylene glycol; 4,4'-isopropylidenediphenol; and methyl *tert*-butyl ether. Bioconcentration factor updates led to revisions of criteria for the following 18 noncarcinogens: anthracene; chlorobenzene; chloroform; *m*-dichlorobenzene; *o*-dichlorobenzene; 1,1-dichloroethylene; 2,4-dimethylphenol; di-*n*-butyl phthalate; endrin; hexachlorocyclohexane (*gamma*); hexachlorocyclopentadiene; methoxychlor; nitrobenzene; pentachlorobenzene; 1,2,4,5-tetrachlorobenzene; 2,4,5-TP (Silvex); 1,1,1-trichloroethane; and 2,4,5-trichlorophenol. Bioconcentration factor updates also led to revisions of criteria for the following 37 carcinogens: acrylonitrile; aldrin; benzene; benzidine; benzo(*a*)anthracene; benzo(*a*)pyrene; bis(2-chloroethyl)ether; bromodichloromethane; bromoform; carbon tetrachloride; chlordane; chrysene; 4,4'-DDD; 4,4'-DDE; 4,4'-DDT; bis(2-ethylhexyl)phthalate; chlorodibromomethane; 3,3'-dichlorobenzidine; 1,2-dichloroethane; dichloromethane; 1,2-dichloropropane; 1,3-dichloropropene; dieldrin; heptachlor; heptachlor epoxide; hexachlorobenzene; hexachlorobutadiene; hexachlorocyclohexane (*alpha*); hexachlorocyclohexane (*beta*); hexachloroethane; pentachlorophenol; 1,1,2,2-tetrachloroethane; tetrachloroethylene; toxaphene; 1,1,2-trichloroethane; trichloroethylene; and vinyl chloride. Revisions to footnotes were included to clarify what fish consumption rates were used to calculate

mercury criteria and to cite the source for the new table entry for methyl *tert*-butyl ether.

In response to comments regarding §307.6(d)(1), Table 2, human health criteria for aldrin, anthracene, bis(chloromethyl)ether, *m*-dichlorobenzene, ethylbenzene, and 4,4'-isopropylidenediphenol were corrected.

§307.7, Site-Specific Uses and Criteria

The commission adopts an amendment to §307.7 to include an update of the saltwater single sample criterion for Enterococci from 104 per 100 milliliters (mL) to 130 per 100 mL in subsection (b)(1)(B)(i). Other revisions are editorial and adopted to improve overall clarity.

§307.9, Determination of Standards Attainment

The commission adopts an amendment to §307.9 to include basing attainment of bacteria standards in coastal recreation waters on both geometric mean and single sample criteria. Revisions regarding nutrient assessment are made to improve overall clarity. Other revisions are editorial and adopted to improve overall clarity.

In response to comments, revisions were made to §307.9(e)(3)(A) and (C) to change the term "single sample maximum" to "single sample criterion." Another revision was made to §307.9(e)(3)(A) to better clarify the determination of bacteria standards attainment in coastal recreation waters.

§307.10, Appendices A – G

The commission adopts an amendment to §307.10 to revise Appendices A - G. The adopted amendment to §307.10(1), Appendix A, includes the addition of a new segment, Blind Oso Bay (2486), based on the results of a UAA; changes to the footnote for the Houston Ship Channel Tidal (1006) and Houston Ship Channel/Buffalo Bayou Tidal (1007) to clarify that numerical toxic criteria applicable to sustainable fisheries apply to these segments; adding a footnote for Spring Creek (1008) to assign site-specific seasonal dissolved oxygen criteria based on the results of a UAA; adding a footnote for Mid Cibolo Creek (1913) to indicate that it is intermittent with perennial pools based on the results of a UAA; and removing the footnote for the Rio Grande Below Riverside Diversion Dam (2307) due to the removal of the Riverside Diversion Dam. The public water supply use for Cedar Bayou Above Tidal (0902) is adopted for removal due to a lack of public water supply intakes. Adopted changes also include changing the primary contact recreation use for Big Cypress Creek Below Lake Bob Sandlin (0404) to a secondary contact recreation 1 use with a corresponding change to the indicator bacteria criterion.

In response to comments, a sentence found in the fourth paragraph of the opening text of §307.10(1), Appendix A, that describes the allowance for a dissolved oxygen criterion of 2.0 milligrams per liter (mg/L) to have a daily variation down to 1.5 mg/L for no more than eight hours per 24-hour period has been removed.

The following water bodies are deleted from §307.10(2), Appendix B, because they no longer qualify as sole-source drinking water supplies in accordance with TWC,

§26.0286: Farmers Creek Reservoir (0210); Sabine River Above Caney Creek (0503); Sabine River Above Toledo Bend Reservoir (0505); Neches River Below B.A. Steinhagen Lake (0602); Trinity River Tidal (0801); Lake Worth (0807); West Fork Trinity River Below Bridgeport Reservoir (0810); Lavon Lake (0821); Joe Pool Lake (0838); Brazos River Below Navasota River (1202); Lake Mexia (1210); Stillhouse Hollow Lake (1216); Lake Stamford (1235); White River Lake (1240); Lake Georgetown (1249); Lake Limestone (1252); Brady Creek Reservoir (1416); Concho River (1421); Lake Texana (1604); Guadalupe River Below San Antonio River (1802); Guadalupe River Below San Marcos River (1803); Lake Placid (1804); Lake Wood (1804); Guadalupe River Above Canyon Lake (1806); Lower San Marcos River (1808); Upper Blanco River (1813); Medina River Below Medina Diversion Lake (1903); and Boerne Lake (1908). Additions and deletions were made to the "County" column as needed to better describe the general location of the water body.

In response to comments regarding §307.10(2), the Appendix B entries for Big Cypress Below Lake O' the Pines (0402), Lower Neches Valley Authority Canal (0602), Lake Grapevine (0826), Lake Houston (1002), Leon Reservoir (1224), Waco Lake (1225), and Llano City Lake (1415) are no longer being deleted from the appendix.

The adopted amendment to §307.10(3), Appendix C, includes a description for a new segment, Blind Oso Bay (2486), and revisions to the description of the existing related segment, Oso Bay (2485), based on the results of a UAA. Other changes include revisions for the upper boundary for Sabine River Tidal (0501) and lower boundary for Sabine River Above Tidal (0502) based on the results of a tidal influence study.

Segment description revisions are adopted for Lower Cibolo Creek (1902), Mid Cibolo Creek (1913), and Upper Cibolo Creek (1908) to better define the flow regime based on the results of a UAA. Editorial changes were made to clarify other water body descriptions.

The adopted amendment to §307.10(4), Appendix D, includes the addition of eight water bodies along with their designated aquatic life uses and dissolved oxygen criteria. Some of the additions are due to the results of receiving water assessments; however, most are the result of more extensive investigations via UAAs. All the water bodies are tributaries within the listed segment numbers as follows: Bois d'Arc Creek (0202); Catfish Creek* (0804); Elm Creek* (1803); Sandies Creek* (1803); Hurricane Levee Canal (2437); and Garcitas Creek* (2453). Water bodies added because of UAAs are indicated with an asterisk (*). UAAs also led to the revision of two existing Appendix D entries: Thompsons Creek (1242), which was given seasonal dissolved oxygen criteria, and Slaughter Creek (1427), which was divided into three entries in Appendix D to account for changing flow regimes as it passes over the Edwards Aquifer Recharge Zone and becomes intermittent. The flow regime for the existing entry for Bois d'Arc Creek (0202) was changed from perennial to intermittent with perennial pools based on U.S. Geological Survey gauge data. Editorial changes were made to correct clerical errors in water body descriptions and the dissolved oxygen criterion for Town Creek (0831) and misspellings in stream names, and for overall consistency. Editorial changes to footnotes for numerous water bodies throughout Appendix D were made to improve clarity.

In response to comments regarding §307.10(4), Appendix D, now includes seasonal dissolved oxygen criteria for Catfish Creek (0804) rather than annual criteria, and the segment dissolved oxygen criterion is now 4.0 mg/L. A misspelling was also corrected in the Appendix D description for the first entry for Bois d'Arc Creek (0202).

The adopted amendment to §307.10(5), Appendix E, includes the addition of five new site-specific copper water-effect ratios in the watersheds of segments 0601, 0820, 1008, 1014, and 2484. A site-specific water-effect ratio for aluminum is also adopted for Segment 1014 along with two site-specific water-effect ratios for zinc for segments 1006 and 1014. Some existing entries in the appendix have been reordered to arrange all table entries in numeric order by segment and then permit number.

In response to comments, §307.10(5), Appendix E, the segment number for the new zinc water-effect ratio entry for Akzo Nobel Chemicals LLC and Akzo Nobel Functional Chemicals LLC has been corrected to 1005, and the facility name for the existing aluminum water-effect ratio entry for the same facility has been updated. The site description for the new copper water-effect ratio entry for Weatherford U.S. L.P. has been updated to include Harris County Flood Control District ditch W167-04-00 and a series of unnamed ditches. Five new site-specific copper water-effect ratios in the watersheds of segments 0305, 0901, 1009, and 1209, which have recently been reviewed and approved by the EPA, were also added.

The adopted amendment to §307.10(6), Appendix F, includes changes to the opening paragraphs, editorial changes to the first footnote, and the deletion of the second footnote to improve clarity.

The adopted amendment to §307.10(7), Appendix G, includes changing the presumed use of primary contact recreation 1 with a corresponding criterion of 126 colonies per 100 mL to a secondary contact recreation 1 use with a corresponding criterion of 630 colonies per 100 mL for one unclassified water body in the Canadian River Basin, seven unclassified water bodies in the Red River Basin, two unclassified water bodies in the Cypress Creek Basin, five unclassified water bodies in the Sabine River Basin, three unclassified water bodies in the Neches River Basin, one unclassified water body in the Trinity River Basin, 24 unclassified water bodies in the Brazos River Basin, one unclassified water body in the Brazos-Colorado Coastal Basin, and one unclassified water body in the San Antonio-Nueces Coastal Basin. These adopted changes are based on the results from recreational UAAs.

The adopted amendment to §307.10(7), Appendix G, also includes changing the presumed use of primary contact recreation 1 with a corresponding criterion of 126 colonies per 100 mL to a secondary contact recreation 2 use with a corresponding criterion of 1030 colonies per 100 mL for six unclassified water bodies in the Brazos River Basin. Adopted changes are based on the results from recreational UAAs.

In response to comments regarding §307.10(7), Appendix G, editorial changes were

made to the descriptions of Running Creek (0512), Gibbons Creek (1209), Goose Branch (1255), and Scarborough Creek (1255).

Final Regulatory Impact Analysis Determination

The commission reviewed the adopted rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225 and determined that the rulemaking is not subject to Texas Government Code, §2001.0225 because it does not meet any of the four applicability criteria listed in Texas Government Code, §2001.0225(a). According to Texas Government Code, §2001.0225(a), §2001.0225 only applies to a major environmental rule, the result of which is to exceed a standard set by federal law, unless the rule is specifically required by state law; exceed an express requirement of state law, unless the rule is specifically required by federal law; exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking does not meet any of these four applicability criteria because it does not exceed a standard set by federal law; does not exceed an express requirement of state law; does not exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; and is not adopted solely under the general powers of the agency but, rather, specifically under 33 United States Code, §1313(c), which requires states to adopt water quality standards and review them at least once every three years; and TWC, §26.023, which requires the commission to set

water quality standards and allows the commission to amend them. Therefore, this adopted rulemaking does not fall under any of the applicability criteria in Texas Government Code, §2001.0225.

The commission invited public comment regarding the Draft Regulatory Impact Analysis Determination during the public comment period. No comments were received regarding the Draft Regulatory Impact Analysis Determination.

Takings Impact Assessment

The commission evaluated this adopted rulemaking and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The specific purpose of this rulemaking is to incorporate changes to the TSWQS deemed necessary based on the commission's triennial review of the TSWQS, which mainly consist of incorporating new data on toxicity effects and from recent UAAs and clarifying how water quality standards related to bacteria would be assessed using instream monitoring data. The adopted rulemaking would substantially advance this stated purpose by making revisions to toxic criteria, individual water bodies' uses and criteria, and bacteria standards attainment criteria in Chapter 307 of the commission's rules.

The commission's analysis indicates that Texas Government Code, Chapter 2007 does not apply to this adopted rulemaking because this is an action that is reasonably taken to fulfill an obligation mandated by federal law, which is exempt under Texas

Government Code, §2007.003(b)(4). Clean Water Act, §303 requires the State of Texas to adopt water quality standards, review those standards at least once every three years, and revise the standards as necessary based on the review. TWC, §26.023 delegates the responsibility of adopting and revising the standards to the commission.

Nevertheless, the commission further evaluated this adopted rulemaking and performed an assessment of whether it constitutes a taking under Texas Government Code, Chapter 2007. Promulgation and enforcement of this adopted rulemaking would be neither a statutory nor a constitutional taking of private real property. Specifically, the adopted rules do not affect a landowner's rights in private real property because this rulemaking does not burden, restrict, or limit an owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the rules. In other words, this rulemaking makes necessary revisions to the TSWQS without burdening, restricting, or limiting an owner's right to property and reducing its value by 25% or more. Therefore, the adopted rulemaking does not constitute a taking under Texas Government Code, Chapter 2007.

Consistency with the Coastal Management Program

The commission reviewed the adopted rulemaking and found that the adoption is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq.*, and therefore must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the adopted rules in

accordance with the Coastal Coordination Act Implementation Rules, 31 TAC §505.22, and found the adopted rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the adopted rules include protecting, preserving, restoring, and enhancing the diversity, quality, quantity, functions, and values of coastal natural resources by establishing standards and criteria for instream water quality for Texas streams, rivers, lakes, estuaries, wetlands, and other water bodies. These adopted water quality standards and criteria will provide parameters for permitted discharges that will protect, preserve, restore, and enhance the quality, functions, and values of coastal natural resources.

CMP policies applicable to the adopted rules include 31 TAC §501.21. The adopted rulemaking will require wastewater discharge permit applicants to provide information and monitoring data to the commission so the commission may make an informed decision in authorizing a discharge permit and ensuring the authorized activities in a wastewater discharge permit comply with all applicable requirements, thus making the rulemaking consistent with the administrative policies of the CMP.

The adopted rulemaking considers information gathered through the biennial assessments of water quality in the commission's Integrated Report of Surface Water Quality to prioritize coastal waters for studies and analysis when reviewing and revising the TSWQS. The TSWQS are established to protect designated uses of coastal

waters, including protecting uses for recreational purposes and propagating and protecting terrestrial and aquatic life. The adopted rulemaking is consistent with the CMP's policies for discharges of municipal and industrial wastewater to coastal waters and how they relate to specific activities and coastal natural resource areas.

Promulgation and enforcement of these adopted rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the adopted rules are consistent with these CMP goals and policies and do not create or have a direct or significant adverse effect on any coastal natural resource areas.

The commission invited public comment regarding the consistency with the CMP during the public comment period. No comments were received regarding the CMP.

Public Comment

The commission held a public hearing on October 16, 2017. The comment period closed on October 17, 2017. The commission received comments from Bayou City Waterkeeper (BCW), City of Corpus Christi (Corpus Christi), City of Corsicana (Corsicana), City of Waco (Waco), Coastal Bend Bays & Estuaries Program (CBBEP), Dallas County Park Cities Municipal Utility District (DCPCMUD), Dow Chemical Company (Dow), EPA, Gulf Coast Authority (Authority), Lone Star Chapter of the Sierra Club (Sierra Club), National Wildlife Federation (NWF), Save Our Springs Alliance (SOS), Texas Association of Clean Water Agencies (TACWA), Texas Industry Project (TIP), Texas Parks and Wildlife Department (TPWD), Texas Oil and Gas Association (TXOGA),

Water Environment Association of Texas (WEAT), and one individual.

Response to Comments

General Comments Related to the TSWQS Changes

Comment

TIP commented that it is evident that the TCEQ works hard to issue sound and protective Texas Pollutant Discharge Elimination System (TPDES) permits. TIP appreciated that the TCEQ engages in meaningful stakeholder outreach and works toward creating broader understanding in the regulated community of the issues around standards, implementation, and the implications for permitting.

Response

The commission acknowledges this comment.

Comment

SOS commented that urbanization and associated pollution (especially nonpoint sources) will continue to threaten Hill Country creeks and aquifers that provide recreation and drinking water for millions, as well as damage riparian and aquatic habitat, including habitat for many federal- and state-listed endangered species. Stretches of Onion, Barton, and Slaughter creeks, which provide the majority of recharge to the Barton Springs segment of the Edwards Aquifer, have recently been impaired, are currently impaired, or are close to being impaired and put on the Clean Water Act, §303(d) list (303(d) list). TMDLs will continue to have a central role to play

in water quality protection, management, and rehabilitation.

Response

The commission acknowledges this comment and notes that 30 TAC Chapters 213 and 311 contain specific requirements for the protection of the Edwards Aquifer and the Colorado River Watershed, lakes Travis, Austin, and Buchanan, and Inks Lake, respectively.

Comment

In general, SOS opposed revisions to site-specific uses and numerical criteria that result in less stringent standards and thus less protection of water quality. Such regulations resulting in lowered water quality cannot meet the state antidegradation policy.

Response

The commission reviews site-specific studies in order to set appropriate water quality standards. For example, dissolved oxygen standards are updated after a UAA has been performed and adequate site-specific information indicates that, although dissolved oxygen concentrations do not meet the water body's presumed criteria, the water body maintains a healthy aquatic community. This generally occurs in water bodies where natural conditions preclude attainment of a higher standard. Updates to the human health criteria found in §307.6(d)(1), Table 2 were presented to the Surface Water Quality Standards Advisory Work Group

(SWQSAWG) in January 2016. A spreadsheet showing all the inputs, equations, and changes to these numeric criteria, as well as bioaccumulation factor (BAF) calculations, are located on the agency's SWQSAWG webpage (*https://www.tceq.texas.gov/waterquality/standards/stakeholders/ swqsawg.html*) along with handouts explaining the basis for the changes for informational purposes. Updates to the factors used for toxic numeric criteria were conducted in accordance with the sources cited in §307.6(d)(3)(A). No changes were made in response to this comment.

Comment

An individual commented that the proposed changes in this and past revisions do not appear to do much to improve the protection of water quality in the state and will arguably reduce the protection of water quality.

Response

The commission responds that the purpose of Chapter 307 is to maintain the quality of water in the state consistent with public health and propagation and protection of aquatic life. The revisions to the TSWQS are needed to meet federal rule and state statute requirements and to set appropriate water quality standards that establish the instream water quality conditions to protect and maintain surface waters in the state. The commission notes that the revisions are based on new information and studies on the appropriate uses and criteria of individual water bodies, new scientific data on effects of specific chemicals and pollutants, and new

provisions in the TWC, federal regulations, and EPA guidance. Once adopted, the EPA must approve all water quality standards prior to their use in Clean Water Act activities. The commission relies upon appropriate water quality standards as targets in its water quality management programs, including TMDLs, watershed protection plans, and wastewater permitting. No changes were made in response to this comment.

Comment

An individual questioned the validity of site-specific water quality data collected by permittees or their contractors.

Response

The commission and the EPA review all proposed site-specific work plans, and approval must be given prior to data collection. The commission and the EPA also review each final analysis before any changes are made to the TSWQS based on the analysis. Site-specific changes to the TSWQS are subject to public notice and require review and approval by the EPA before they can be used for Clean Water Act purposes. No changes were made in response to this comment.

Comment

Sierra Club noted the financial benefit of removing 51 water bodies from the 303(d) list of impaired water bodies.

SOS commented that it is extremely troubling that the TCEQ appears to be regulating based on an intention to avoid or minimize triggers for TMDLs and the associated costs. The TCEQ touts the fact that the proposed revisions will save the agency money by reducing the number of TMDLs to perform. The TCEQ states these cost savings will be redirected to water bodies where restoration activities are needed.

Response

The commission responds that Texas Government Code, §2001.024(4) and (5) requires that the commission consider the costs of the proposed rules. The commission strives to be judicious with state and federal funding and uses the provided resources to fund restoration activities where they are most needed. The "Public Benefits and Costs" section of the proposal preamble referred to all the changes in the proposed TSWQS. A variety of the proposed revisions increase protective levels for numerous pollutants. The primary purpose of the changes to the recreational standards is to more appropriately assign recreational uses to water bodies in Texas and to effectively apply the amended recreational standards to protect the assigned uses. The cost savings identified in the fiscal note in the proposal preamble addressed a few of the immediate activities associated with the recreational revisions.

§307.2, Description of Standards

Comment

An individual commented that the description of temporary standards is confusing,

and it is not clear why they are needed.

Response

The commission responds that the language was revised to reflect updates to the EPA's Water Quality Standards regulations in 40 CFR Part 131. The commission has revised and restructured the language in §307.2(g) for increased clarity.

Comment

BCW commented that a temporary standard only applies for uses that do not already exist. The language stating that a temporary standard may not impair an existing use is insufficient.

Response

The commission responds that 40 CFR §131.10(g), regarding the designation of uses, states that a state may designate a use, or remove a use that is not an existing use. The explanation of temporary standards, as defined in 40 CFR §131.14, states that where a state adopts a water quality standards variance (referred to as a temporary standard in the TSWQS), the state must retain, in its standards, the underlying designated use and criterion addressed by the water quality standards variance (temporary standard). Since the regulation states that the underlying designated use and criterion must be retained, it cannot only apply to uses that do not already exist. No changes were made in response to this comment.

Comment

EPA commented that the proposed revisions are generally consistent with the federal regulation at 40 CFR §131.14, which establishes requirements for variances to water quality standards. The regulation at 40 CFR §131.14(b)(1)(ii) includes options for establishing the highest attainable condition of the water body as a quantifiable expression when the temporary standard applies to a specific discharger and additional options when the temporary standard is adopted for a water body. When a temporary standard is adopted for a water body, the regulation at 40 CFR §131.14(b)(2)(iii) requires the evaluation of best management practices that are in place to control nonpoint sources of that pollutant. While Texas's provision does not specifically include the provisions cited earlier, these requirements can be addressed during the development, proposal, and adoption of a temporary standard.

Response

The commission acknowledges this comment.

Comment

WEAT and TACWA commented that the definition of a temporary standard needs to be revised to delete the language related to the expiration of a temporary standard in order to be consistent with the duration that is allowed in the federal regulations.

Response

The commission agrees with this comment. The language regarding the expiration

of a temporary standard in §307.2(g) has been removed, and additional revisions were made for clarity.

§307.3, Definitions and Abbreviations

Comment

BCW agrees with the definition of "Coastal recreation waters" as suggested.

Response

The commission acknowledges this comment.

Comment

EPA commented that the "Coastal recreation waters" definition is generally consistent with language in the Clean Water Act, §502(21). Since the recreation uses under §307.7(b)(1)(B) do not include a primary contact recreation 2 use for saltwater, EPA recommended removing this use from the definition.

Response

The commission agrees with the comment and has removed the references to primary contact recreation 1 and 2 from the definition in §307.3(a)(14).

Comment

BCW commented that the change of the definition of "Intermittent stream," which includes a seven-day, two-year low-flow of less than 0.1 cubic foot per second, should

also include language to the effect that this standard must be attained during a normal rainfall year. This would help avoid the potential for identifying a perennial stream as intermittent during periods of exceptional drought.

Response

The commission responds that additional coordination with stakeholders is needed to consider any possible future revisions to this definition. After additional discussion and development, changes to this definition may be publicly considered in future revisions of the TSWQS.

§307.4, General Criteria

Comment

Sierra Club commented that they disagree with the procedures for conducting a recreational UAA.

Response

The commission responds that even though water levels can be lower during the summer, recreational UAAs are conducted from May through September using EPA-approved procedures in order to have the best chance to determine the appropriate recreational use for the water body. A drought index is required in the report to better determine how far study conditions deviated from normal conditions. While limited public access is taken into consideration when making a determination on a use change, landowner interviews also play an important role in recreational UAA

studies for determining current and past uses of the stream. While observing recreation on the stream would be the ideal way for determining if recreation occurs on the stream, the commission uses information in the interview forms as well as information from other water agencies familiar with the water body to determine the recreational use of the stream.

Comment

Sierra Club opposed the recreational use categories that were adopted in the 2010 revision of the standards.

Response

The commission responds that it expanded the categories for recreational use during previous revisions of the TSWQS in an effort to better characterize the different levels of water recreation activities that can occur in Texas. In the late 1980s and 1990s, a contact recreation use was broadly presumed for all surface waters in Texas with the exception of eight classified segments in §307.10(1), Appendix A, such as ship channels. As a result of these presumptions, there may be numerous water bodies with inappropriate recreational uses. These additional uses provide the commission the ability to assign more appropriate recreational uses to water bodies.

Comment

BCW commented that it is unusual to engage in secondary contact recreation 1

activities and not primary contact recreation activities.

Response

The commission responds that during recreational UAA interviews, participants are asked to list all recreational activities they have personally engaged in, observed, or heard of. Any reported primary contact recreation is taken into consideration when determining the appropriate recreation use and criterion.

§307.6, Toxic Materials

Comment

An individual requested further information regarding the demonstration that those who take fish from water bodies with an incidental fisheries use consume less of this fish than fish taken from water bodies with a higher sustainable fisheries use.

Response

The commission responds that the definition of an incidental fishery is given in §307.3(a)(31), and §307.6(d)(5) and (6) describe what water bodies are presumed to be a sustainable fishery versus an incidental fishery. All perennial streams and rivers with a stream order of three or greater, all lakes and reservoirs greater than or equal to 150 acre-feet or 50 surface acres, all bays and estuaries, and all designated segments (unless specifically exempted) are considered to be sustainable fisheries. Any other water bodies that potentially have sufficient fish production or fishing activities to create significant long-term human consumption

of fish would also be subject to the more stringent criteria that apply to a sustainable fishery. Because of the mobility of fish, it is difficult to protect fish tissue in downstream water bodies that are sustainable fisheries from contamination without also protecting for an incidental fishery use in smaller water bodies which are less likely to be significantly fished by people on a long-term basis. No changes were made in response to this comment.

Comment

An individual commented that there has been no consideration of the development of sediment criteria for toxics.

Response

The commission responds that it may consider the development of numeric sediment criteria in future revisions of the TSWQS. The commission does have sediment benchmarks located in *Conducting Ecological Risk Assessments at Remediation Sites in Texas* (RG-263) from the Ecological Risk Assessment Program, but numeric criteria have not been added to the TSWQS at this time. The commission will continue to work with stakeholders on upcoming toxic criteria issues.

Comment

EPA supported the adoption of the new and revised aquatic life criteria for acrolein and carbaryl.

Response

The commission acknowledges this comment.

Comment

For the language in §307.6(c)(1), Table 1, footnote m and §307.6(c)(10), EPA commented that additional changes could be incorporated to better differentiate between results gained from a water-effects ratio versus a biotic ligand model. Although site-specific criteria based on a biotic ligand model have not been adopted to date, EPA anticipated that this option will be used more frequently due to the lower costs, as compared with developing a water-effect ratio. EPA suggested editorial changes to §307.6(c)(1), Table 1, footnote m and §307.6(c)(10) to further clarify how these different approaches are used in the development of site-specific copper numeric criteria.

Response

The commission agrees with this comment and has made editorial changes to the language in §307.6(c)(1), Table 1, footnote m and §307.6(c)(10).

Comment

Sierra Club commented that protecting both freshwater and saltwater organisms from harmful levels of toxic materials is of great importance. Thus, it was refreshing to see that the proposed revisions in this area establish stringent criteria by following

suggested EPA criteria. Acrolein, a priority pollutant, matches the suggested EPA chronic and acute criteria of 3.0 micrograms per liter (µg/L). Moreover, the TCEQ has proposed both acute and chronic freshwater criteria of 2.0 µg/L for carbaryl that closely follows the suggested EPA criteria of 2.1 µg/L. The saltwater acute criterion for this pollutant is also strengthened by being changed from 613 µg/L to 1.6 µg/L. Sierra Club agreed with and supported these proposed criteria and would like to see the TCEQ follow this approach of matching or closely mirroring EPA's suggested criteria for other toxic pollutants in the future.

BCW agreed with the inclusion of epichlorohydrin, ethylene glycol, 4,4'-isopropylidenediphenol, and methyl *tert*-butyl ether in §307.6(d)(1), Table 2. BCW agreed that the adopted standards for the new inclusions are appropriate.

Response

The commission acknowledges these comments.

Comment

BCW objected to the increase of permissible standards for toxics in "water and fish" and "fish only" for a number of chemicals included in Table 2. These chemicals include both non-carcinogenic and carcinogenic species. While the basis is said to be updates of bioconcentration factors, no information was provided on the specifics of those updates. In addition, some of the specific compounds for which the standards are being increased substantially are often found as decomposition products of other

compounds for which the standard is being decreased. For example, one standard for 1,1-dichloroethylene is being increased (23,916 µg/L to 55,114 µg/L), but the same standard for one of its decomposition products, trichloroethylene, is being decreased (82 µg/L to 71.9 µg/L). Some compounds for which the standard is being reduced are also associated with compounds that are not being reduced and are of considerable concern in BCW's watershed. For example, while BCW's watershed is under a fish advisory for dioxin, it makes no sense to increase the standard for 2,4,5-TP from 19 µg/L to 50 µg/L in "water and fish" and from 21 µg/L to 369 µg/L in "fish only."

An individual commented that data used for these revisions should not be provided by dischargers and should be independently peer reviewed. Scientific reasons should be given when deviating from federal guidance.

SOS opposed lowering the statewide human health toxic criteria for 24 toxic constituents. The TCEQ provided no support for revising the statewide toxic criteria other than a vague statement that they "incorporate new data on toxicity effects." Also of concern was the TCEQ's statement that for those toxic criteria revisions not based on federal guidance, the TCEQ will provide the scientific reasoning to the EPA when the TSWQS are submitted for federal approval. SOS believed such reasoning should be provided to the public during the comment process, at least in summary form, and not just to the EPA. The public will be the ones swimming, drinking, and fishing in these waters and have a right to know why standards for known toxics are being raised.

Response

The commission responds that updates to the human health criteria found in §307.6(d)(1), Table 2 were presented to the SWQSAWG in January 2016. A spreadsheet showing all the inputs, equations, and changes to these numeric criteria, as well as BAF calculations, are located on the agency's SWQSAWG webpage (*https://www.tceq.texas.gov/waterquality/standards/stakeholders/swqsawg.html*) along with handouts given at the meeting which explain the basis for the changes for informational purposes. Updates to the factors used for toxic numeric criteria were conducted in accordance with the sources cited in §307.6(d)(3)(A). Criteria calculations reflect the best available data, and it is not unusual for criteria values to fluctuate based on this data. No changes were made in response to these comments.

Comment

BCW commented that increasing the concentration standards for toxic pollutants is inconsistent with the anti-backsliding provisions of the Clean Water Act and should not be done. This is particularly the case in waters for which fish consumption advisories are in effect for the specific compounds in question, or associated compounds.

Sierra Club commented that while they supported the proposed strengthening of the criteria for priority pollutants with regard to human health protection, they cannot support the proposed weakening of standards for certain priority pollutants, including

bis(2-chloroethyl)ether and 1,2-dichloropropane. There is also an underlying trend with respect to most of the listed criteria wherein they greatly exceed, sometimes more than double, the EPA-suggested criteria. Sierra Club recognized that each state is entitled to develop its own criteria based on new scientific data. However, gross deviations from EPA-suggested criteria, as are found in several instances in the proposed rules, are deeply concerning. Whether even new data warrants such a deviation, especially with respect to priority pollutants, is questionable.

Response

The commission responds that the revisions are based on new information and studies on the potential toxic effects of chemicals of concern to human health. Triennial revisions of the TSWQS are performed in part to include new scientific data on the effects of chemicals and pollutants. Revisions to toxic criteria are made in accordance with EPA guidance and federal regulations, and updates to the factors used for toxic numeric criteria were conducted in accordance with the sources cited in §307.6(d)(3)(A). No changes were made in response to these comments.

Comment

TACWA and WEAT were concerned about adding the following chemicals to the toxic material criteria for human health protection: epichlorohydrin, ethylene glycol, 4,4'-isopropyldenediphenol, and methyl *tert*-butyl ether. With the exception of epichlorohydrin, the proposed new chemicals do not have analytical methods approved by EPA for Clean Water Act programs. Finding a laboratory that can conduct

the analytical testing for the new chemicals could be problematic. Pretreatment programs are required to conduct routine monitoring of the chemicals with criteria listed in the TSWQS. Therefore, adding the new chemicals to the monitoring list could significantly increase the analytical costs to a local government with a pretreatment program.

As stated in the "Background and Summary of the Factual Basis for the Proposed Rules" section of the proposal preamble, "Dischargers may have to change or employ new wastewater treatment methods or techniques to meet the proposed TSWQS. These changes may range from developing new wastewater processes to building a new wastewater treatment facility." Although the EPA and states are not required to conduct an economic analysis pursuant to the Clean Water Act prior to adopting new criteria, adopting criteria before the economic costs and environmental benefits are known is not appropriate.

TACWA and WEAT, therefore, requested that the following information be provided for the four chemicals: information regarding the presence of the chemicals in discharges or waters of the state; clarification as to why these criteria are proposed when the criteria are not identified in the EPA's National Recommended Water Quality Criteria (NRWQC); potential financial impacts of the new criteria on local governments, particularly to local governments with pretreatment programs; acceptable analytical methods and minimum analytical limits; and results of cost-benefit analyses that show why establishing these criteria is appropriate.

TACWA and WEAT requested that the proposed criteria for these four chemicals not be adopted until the requested information can be reviewed.

Response

The commission responds that epichlorohydrin, ethylene glycol, and 4,4'-isopropyldenediphenol were added at EPA's request during the preliminary comment period for this revision cycle as published in the March 6, 2015, issue of the *Texas Register* (40 TexReg 1131). The EPA asked the commission to consider adding criteria for 37 substances which were reported in the 2013 Toxics Release Inventory as discharged directly to surface waters in Texas. Out of the 37 substances requested for consideration, these three chemicals were chosen for addition to §307.6(d)(1), Table 2 because they are discharged directly to surface waters in Texas at a rate of over 1,000 pounds per year and had reference doses or cancer potency factors listed in EPA's Integrated Risk Information System (IRIS) database as being of high confidence. Methyl *tert*-butyl ether was added at TCEQ staff's recommendation. This is a fuel additive, and requests are often received by the agency regarding what should be considered "safe" levels of this substance.

As there are currently no criteria for these substances, facilities have not been testing for these constituents. What facilities may have these chemicals and at what levels is unknown. Therefore, an economic analysis of which facilities may be impacted by these additions to §307.6(d)(1), Table 2 is not quantifiable. Acceptable

analytical methods and minimum analytical limits will be included in the next revision of the *Procedures to Implement the Texas Surface Water Quality Standards* (RG-194). No changes were made in response to these comments.

Comment

EPA supported the use of updated toxicity and bioaccumulation values for the calculation of human health criteria.

Response

The commission acknowledges this comment.

Comment

Based on the TCEQ human health calculation spreadsheet provided to the SWQSAWG, EPA, TACWA, and WEAT commented that it appears there is an error in the calculations for the updated criteria for aldrin. EPA also recommended the adoption of a criterion for fish consumption of 1,317 µg/L for anthracene, as included on TCEQ's calculation spreadsheet.

EPA also noted a typographical error for 4,4'-isopropylidenediphenol (bisphenol A). The criterion for water and fish consumption for bisphenol A should be 1,092 µg/L.

Response

The commission agrees with these comments. The commenter's recommendations

have been incorporated into the human health criteria in §307.6(d)(1), Table 2.

Comment

EPA commented that the 2015 NRWQC for the protection of human health included a BAF of 1.0 for bis(chloromethyl)ether; however, this BAF was not updated in the TCEQ calculation spreadsheet for this rule revision. Using TCEQ's calculation spreadsheet, EPA calculated a criterion of 0.2745 µg/L for fish consumption, with no change to the criterion for consumption of fish and water. This also appears to be the case for ethylbenzene. Based on the 2015 NRWQC and TCEQ's fish consumption rate, EPA calculated a BAF of 143.42, which results in criteria for ethylbenzene of 1,039 µg/L (water and fish consumption) and 1,867 µg/L (fish consumption).

EPA commented that the TCEQ's calculation spreadsheet may also include a typographical error in the BAF for *m*-dichlorobenzene. The final BAF calculated as a sum from the trophic levels is 135.05588; however, a BAF of 1355 was used to derive the proposed human health criteria. The BAF of 135 produces criteria of 322 µg/L (water and fish consumption) and 595 µg/L (fish consumption).

Response

With the exception of the water and fish consumption criterion for ethylbenzene, the commission agrees with this comment. The criterion for water and fish consumption for ethylbenzene is based on the more stringent drinking water maximum contaminant level (MCL). The corrections to all the other BAFs have been

made in the calculations, and the revised human health criteria have been incorporated into §307.6(d)(1), Table 2.

Comment

EPA commented that the 2015 NRWQC for the protection of human health for *p*-dichlorobenzene are based on a reference dose (RfD) of 0.07 milligrams per kilogram per day (mg/kg-day). However, the TCEQ's calculation spreadsheet includes an RfD of 0.007 mg/kg-day, which results in more stringent criteria. In this case, the different values for an RfD do not make a difference in the criteria in §307.6(d)(1), Table 2, as the TCEQ is retaining the more protective criterion based on the MCL.

Response

The commission acknowledges this comment.

Comment

Dow recommended that the TCEQ modify their proposed approach for dioxin and rely on EPA's current approach rather than the linear cancer slope factor used in the TCEQ's current dioxin proposal. Also, Dow recommended applying greater levels of uncertainty to the RfD and bioconcentration factor approaches in the rule proposal. The TCEQ should continue to apply appropriate variances and incorporate site-specific factors to develop site-specific adjustments.

Response

The commission follows EPA's current national guidance regarding water quality standard development for dioxin. The RfD used to calculate the criteria are from EPA's 2002 NRWQC calculation matrix. Bioconcentration factors (BCFs) for a particular chemical can vary widely from water body to water body depending on site-specific factors. The commission recognizes that using a one-size-fits-all approach may result in an overestimation (or underestimation) of bioaccumulation when applied to a given site. However, facilities may, with the agreement of the commission, develop site-specific BCFs. The commission will further evaluate the suggested approaches and assumptions for future consideration in criteria development. No changes were made in response to this comment.

Comment

TIP and TXOGA commented that the TCEQ should default to a BCF instead of a BAF in calculating human health criteria except in circumstances in which Texas-specific information exists to properly calculate BAFs.

Response

The commission supports using a translation factor with the widest margin of acceptance among the scientific community. Federal criteria developed by the EPA have begun using BAFs in accordance with federal guidance, and the commission encourages the use of BAFs for the development of human health criteria. These factors will continue to be updated in future revisions as the science of developing BAFs progresses. No changes were made in response to these comments.

Comment

TIP and TXOGA commented that the TCEQ should use the most up-to-date cancer slope factors in human health criteria when calculating human health-based water quality standards. This does not appear to be the case for polynuclear aromatic hydrocarbons, such as benzo(*a*)pyrene, dioxin, aldrin, and hexachlorobenzene.

TACWA and WEAT commented that the proposed criterion for hexachlorocyclohexane (*gamma*) for "fish only" does not reflect the most current scientific and technical information. The EPA updated the RfD for hexachlorocyclohexane (*gamma*) in their 2015 NRWQC, which was not incorporated into the calculations for the proposed criteria. The source of the RfD used by the TCEQ is the EPA IRIS assessment, which is from 1986. The hexachlorocyclohexane (*gamma*) RfD source used by the TCEQ is outdated. Therefore, in accordance with the purpose of the TCEQ triennial review, which is to review the standards and incorporate new data, the proposed hexachlorocyclohexane (*gamma*) criterion for "fish only" should be based on the hexachlorocyclohexane (*gamma*) RfD in the EPA's 2015 NRWQC.

Response

The commission uses the latest information found in EPA's IRIS assessment in accordance with §307.6(d)(3)(A). Cancer slope factors used in this revision were pulled from the IRIS database in 2015 in order to prepare the revised calculations for presentation to the SWQSAWG in early 2016. Updates to the IRIS database since

2015 will be utilized in the next revision cycle, where they can also be presented to the SWQSAWG for their input and review. The commission supports using information located in IRIS in order to have a consistent, peer-reviewed source for toxicity factors that is used throughout the agency in order to create consistency among all program areas. No changes were made in response to these comments.

Comment

TIP and TXOGA commented that prior to using the EPA's values and methodology in calculating water quality standards, the TCEQ should conduct careful review of the scientific literature to identify uncertainty and bias inherent in differing approaches. TIP commented that a few examples regarding this concern include the TCEQ's use of EPA's BAF for bis(2-ethylhexyl)phthalate, relative source contribution factors, and exposure reduction that occurs from cooking fish.

An individual asked for an explanation regarding the valid scientific reasons why the TCEQ chose to deviate from federal guidance when revising the toxic criteria.

Response

The commission will continue to work with stakeholders in the evaluation of different approaches to criteria development. The inputs used in this revision cycle to update numeric criteria for human health protection were shared with the stakeholders and posted on the SWQSAWG webpage *(https://www.tceq.texas.gov/waterquality/standards/stakeholders/swqsawg.html*).

The EPA's recommended relative source contribution factors were not utilized in the human health calculations, and this deviation from federal guidance was also utilized by the commission during the EPA-approved 2010 and 2014 revisions to human health criteria. No changes were made in response to these comments.

Comment

An individual was concerned that §307.6(c)(11), which describes additional site-specific factors that may indicate if the numerical criteria listed in §307.6(c)(1), Table 1 are inappropriate for a particular water body, can be used inappropriately to reduce restrictions on dischargers. The individual expressed similar concerns regarding §307.6(e)(2)(E), which lists the same site-specific factors for use in the development of discharge permit limits based on total toxicity. The individual did not think the Clean Water Act supports such environmental degradation.

Response

The commission responds that the purpose of these rules is to describe some of the justifications that might be appropriate in the development of site-specific standards for toxicity and toxic pollutants. This type of site-specific standard requires a revision to the TSWQS, public notice of the revised site-specific standard, and EPA review and approval of the revised site-specific standard for it to be fully incorporated into water quality management programs covered under the Clean Water Act. No changes were made in response to this comment.

§307.7, Site-Specific Uses and Criteria

Comment

An individual requested further information regarding the saltwater single sample criterion proposed in §307.7(b)(1)(B)(i). The individual asked if the EPA has revised its recommended criterion and if there are any data that show that this proposed change will not reduce water quality protection.

BCW opposed the saltwater single sample criterion proposed in §307.7(b)(1)(B)(i). BCW stated that this change is inconsistent with the goals of the Clean Water Act.

Response

The commission responds that the 2000 Beaches Environmental Assessment and Coastal Health Act requires states to adopt new recreational water quality criteria for which the EPA has published Clean Water Act, §304(a) criteria. The EPA conducted the National Epidemiological and Environmental Assessment of Recreational Water (NEEAR) from 2003 - 2009 at beaches located in the United States. As a result of this study, recreational water quality criteria include two sets of criteria for the protection of primary contact recreation in marine waters. The commission already uses the geometric mean of 35 colonies per 100 mL and is adopting the single sample criterion of 130 colonies per 100 mL for coastal recreation waters as recommended in the EPA's 2012 Recreational Water Quality Criteria. Texas beaches are sampled by the General Land Office which will continue to use a single sample criterion of 104 colonies per 100 mL for advisories on Texas

beaches. The criteria developed from the NEEAR study are protective of primary contact recreation in coastal recreation waters. No changes were made in response to these comments.

Comment

EPA supported the adoption of the saltwater criterion of 130 colonies per 100 mL and recommended identifying the criterion as a statistical threshold value (STV) rather than as a single sample maximum.

Response

The commission responds that the term "single sample criterion" is used in the TSWQS for both freshwater and saltwater. This term is clear and understood by stakeholders. No changes were made in response to this comment.

Comment

An individual commented that a minimal aquatic life use is not scientifically defensible in any water body in the state that contains water frequently enough to support some aquatic life.

TPWD recommended that §307.7(b)(3)(A)(i), Table 3 be revised to include a narrative description for the minimal aquatic life use subcategory.

Response

The commission responds that a minimal aquatic life use is only used when assigning presumed aquatic life uses to intermittent streams without perennial pools for permitting purposes. The minimal aquatic life use is based on flow characteristics and not aquatic life attributes. No changes were made in response to these comments.

Comment

An individual asked the TCEQ to clarify the meaning behind footnote 1 in §307.7(b)(3)(A)(i), Table 3.

Response

The commission responds that during the editing process, the first and second footnotes of Table 3 were inadvertently merged together. The footnotes have been restored to the original format found in the current TSWQS.

Comment

An individual commented that §307.7(b)(3)(A)(ii), Table 4 is an unsupported estimate for flow within systems. If human use of water reduces flow, then less pollutants must be allowed to be discharged.

Response

The commission responds that §307.7(b)(3)(A)(ii), Table 4 clarifies how dissolved oxygen criteria for east and south Texas streams are applied to all water bodies,

including segments, at lower flow ranges and how the critical low-flow values can be adjusted by relating site-specific dissolved oxygen concentrations with other stream characteristics. The table is a simplified version of a regression equation depicting expected average dissolved oxygen at a given bedslope and stream flow. When investigating a particular site, other factors such as local hydrology or temperature may become important factors in determining dissolved oxygen concentrations. These factors are consistent with those used in the commission's water quality simulation models. No changes were made in response to this comment.

§307.8, Application of Standards

Comment

An individual commented that there are no designated areas where the adopted seagrass propagation use applies. While this use was adopted many years ago, the TCEQ has not designated specific areas where it applies or adopted water quality criteria to protect this use.

Response

The commission responds that because of the interest in designating individual segments for seagrass use, draft designations were presented to the SWQSAWG during the development of the 2010 TSWQS revision. The commission was unable to resolve substantial stakeholder concerns about unintended negative regulatory impacts of these designations on navigation in coastal waterways. Provisions that

were added in the previous standards revisions, such as the specification of seagrass propagation as a protected use in §307.7(b)(5), remain in place so an important tier of protection is still provided. The commission will continue to coordinate with stakeholders to better monitor, assess, and protect seagrasses along the Texas coast.

§307.9, Determination of Standards Attainment

Comment

An individual disagreed that samples taken during or shortly after storm events should not be used to determine standards attainment.

Response

The commission uses water samples collected under representative hydrologic conditions to determine standards attainment. Samples taken during or shortly after storm events does not necessarily preclude them from being used for standards attainment. However, samples collected under extreme hydrologic conditions, such as high flows and flooding immediately after heavy rains, are not representative hydrologic conditions. No changes were made in response to this comment.

Comment

An individual commented that it is not appropriate to limit dissolved oxygen sampling to the mixed surface layer and should incorporate hypolimnetic sampling. The

individual also commented that the commission should not approve proposals to create or exacerbate stratification.

Response

The commission follows the *Surface Water Quality Monitoring Procedures* on the appropriate depth to sample dissolved oxygen. Sampling in the mixed surface layer provides a representative sample throughout the year. While using hypolimnetic dissolved oxygen concentrations, which would mean sampling the bottom layer of water in a thermally stratified lake, may be a useful tool for assessing trophic status in northern natural lakes, it is not a reliable indicator of trophic status in southern reservoirs. When stratification occurs in Texas reservoirs, the hypolimnetic water is much warmer than the hypolimnetic water in northern lakes. This results in increasing metabolism and consuming oxygen at a faster rate, resulting in hypoxic conditions. Section 307.4(f) establishes temperature criteria, expressed as maximum temperature differentials, for water bodies in the state, and maximum temperatures for classified segments are given in §307.10(1), Appendix A. For freshwater lakes and impoundments, the maximum temperature differential is 3 degrees Fahrenheit so as to not interfere with the reasonable use of the water. Temperature criteria protect water bodies from thermal pollution that may increase epilimnetic temperatures, which are the temperatures in the top layer of water in a thermally stratified lake, and exacerbate stratification. No changes were made in response to this comment.

Comment

BCW suggested that the bacteria single sample maximum for inland waters, which is already in the standards, be used as a standard criterion for assessment purposes. Currently, this value is only used for swimmer safety notification programs and wastewater permit compliance issues.

Response

The commission uses a geometric mean to determine standards attainment in freshwater. Using the geometric mean allows the commission to track trends in water quality and address those water bodies where restoration activities are most needed. Changes to this language may be publicly considered in future revisions of the standards. No changes were made in response to this comment.

Comment

BCW was concerned about §307.9(e)(3)(D) because it allows for the accounting of statistical variability in evaluations of bacteria data. While this may be of value in reducing uncertainty, it also has the potential to make significant less common events get swallowed up in the background data.

Response

The commission responds that due to the inherent variability in bacteria data, the commission accounts for statistical variability when assessing water bodies to ensure the accuracy of impairments and reduce spurious listings. No changes were

made in response to this comment.

Comment

EPA recommended clarifying in §307.9(e)(3)(A) that if either criterion (geometric mean or single sample maximum) is exceeded, the recreation use is not supported in coastal recreation waters.

Response

The commission agrees that replacing "and" with "or" brings clarity to §307.9(e)(3)(A) that standards attainment will be determined if either the geometric mean or the single sample exceed the criterion and has amended the rule accordingly.

Comment

EPA recommended adding language to §307.9(e)(3)(A) requiring a frequency of no more than 10% exceedances and a duration of up to 90 days to represent an acceptable exposure period to calculate the geometric mean and assess the STV.

Response

The commission responds that a duration and frequency will be included in the next revision of the *Guidance for Assessing and Reporting Surface Water Quality in Texas*. No changes were made in response to this comment.

Comment

EPA recommended using the same duration and frequency components for the assessment of recreational criteria (geometric mean and single values) in inland waters under §307.9(e)(3)(B) as it recommended using in coastal recreation waters.

Response

The commission responds that the duration and frequency components from the EPA's 2012 Recreational Water Quality Criteria are not appropriate for use with the indicator bacteria in freshwater, *Escherichia coli*. EPA's 2012 Recreational Water Quality Criteria were based on epidemiological studies using Enterococci as the indicator bacteria. The only studies conducted in freshwater were located on the Great Lakes. Those studies found no statistically significant relationships between indicator bacteria and gastrointestinal illness in any methods used. Therefore, it is not appropriate to amend the criteria or assessment procedures based on these studies. No changes were made in response to this comment.

Comment

EPA remained concerned with language in §307.9(e)(7) regarding the assessment of numeric chlorophyll *a* criteria as a component of a weight-of-evidence approach, under which chlorophyll *a* impairments may be masked when these impairments are not corroborated by other assessment parameters. EPA considered chlorophyll *a* criteria to be stand-alone criteria based on the methodology used to calculate the values.

Response

The commission responds that the proposed approach appropriately implements broad elements of the water quality standards for listing purposes in accordance with federal regulations at 40 CFR §130.7(b)(3) rather than relying solely upon numeric criteria as suggested by EPA's comments. Relying solely upon chlorophyll *a* concentrations to identify impairments of designated uses is inappropriate due to natural environmental variability, confounding factors such as reservoir residence time, and uncertainties with chlorophyll *a* analytical results. Corroborating data are needed to identify impacts to designated uses from excessive algae caused by nutrients. No changes were made in response to this comment.

Comment

EPA assumed that the last sentence of §307.9(e)(7) refers to the benchmarks for the corroborating assessment parameters (total phosphorus, total nitrogen, Secchi depth, and dissolved oxygen) used in the weight-of-evidence approach. EPA noted that in similar situations, it has determined that water quality provisions in a state's assessment procedures (or regulation) were considered to be water quality standards because they were legally binding provisions that define, change, or establish the magnitude, duration, or frequency components of water quality criteria.

Response

The commission responds that identifying the use of these benchmarks for assessment purposes only is an appropriate translation of narrative criteria for

nutrients and is needed to prevent the inappropriate use of these benchmarks in wastewater permitting. Effluent limits for nutrients are assigned according to screening evaluations described in the *Procedures to Implement the Texas Surface Water Quality Standards.* No changes were made in response to this comment.

Comment

EPA noted that in §307.9(e)(7), the proposed weight-of-evidence approach is only used to address instances in which chlorophyll *a* criteria are exceeded. That is, if chlorophyll *a* criteria are attained, but the other screening factors are exceeded, the water body is considered to be "fully supporting." Therefore, the approach appears imbalanced in that it addresses only the potential for false positives.

Response

The commission disagrees with the comment and asserts that the proposed approach is consistent with federal requirements regarding water quality standards and assessments at 40 CFR §130.7(b)(3) and §131.3(b). When numeric chlorophyll *a* criteria are met, it is reasonable to conclude that observed concentrations of chlorophyll *a* are relatively unchanged from historical conditions captured by the criteria development process and that designated uses associated with those historical conditions are sufficiently maintained. No changes were made in response to this comment.

§307.10, Appendices A – G

General Comments

Comment

TPWD recommended retaining the primary contact recreation use for water bodies with reservoirs or public parks on or downstream from the water body. This applies to the following water bodies in Appendices A and G: Big Cypress Creek Below Lake Bob Sandlin (0404), Duncan Creek (1222A), Willis Creek (1247A), Walnut Creek (0838C), and Gibbons Creek (1209I).

Response

The commission responds that it evaluates water bodies on a site-specific basis to establish the appropriate recreation use. The commission considers all parks and reservoirs in the evaluation of recreational UAAs, and reservoirs are often excluded in the descriptions found in Appendix G. No changes were made in response to this comment.

Comment

An individual commented that while the Clean Water Act may allow assigning a low aquatic life use to channelized streams due to major habitat destruction, it does not support allowing such destruction after passage of the act. Nonetheless, the TCEQ continues to approve proposals to destroy streams via Clean Water Act, §401 certifications and then conducts UAAs that find that stream habitat is of poor quality and deserves only a low aquatic life use.

Response

The commission responds that the state's role in Clean Water Act, §401 certifications is administered under a separate set of rules (30 TAC Chapter 279). Section 307.2(d)(3) states, "An amendment that establishes a site-specific standard requires a use-attainability analysis that demonstrates that reasonably attainable water-quality related uses are protected." In instances where streams subject to UAAs are potentially impacted by anthropogenic effects, a sufficiently similar and relatively unimpacted water body may be used as a reference system. EPA regulations at 40 CFR §131.10(g) list six reasons for a change in use in a water body. At least one of these reasons has been included in each UAA submitted to EPA. No changes were made in response to this comment.

Comment

An individual questioned whether the proposed changes for dissolved oxygen and aquatic life criteria in §307.10(1), Appendix A, and §307.10(4), Appendix D, are actually supported. The individual further asked if the changes are based on actual natural conditions. The individual strongly disagreed with the conclusion that most changes in designated uses or criteria are based on a demonstration that natural characteristics of a water body cannot attain the currently designated uses or criteria. It would not be appropriate to designate unclassified water bodies as low or intermediate (or even no aquatic life use) if the reason for an existing low aquatic life use is due to human impacts that occurred after passage of the Clean Water Act. The individual asked which water bodies is the TCEQ providing revised site-specific criteria

because the water body is impaired because of apparent inappropriate water quality standards. The TCEQ should also provide explanations and evidence that support those proposed changes.

Response

The commission responds that all use changes were made due to inappropriate water quality standards and are not based on human-impacted conditions. Furthermore, a use change cannot be made outside the regulations set forth in 40 CFR §131.10(g). Section 307.2(d)(3) states, "An amendment that establishes a site-specific standard requires a use-attainability analysis that demonstrates that reasonably attainable water-quality related uses are protected." EPA regulations at 40 CFR §131.10(g) list six reasons for a change in use in a water body. At least one of these reasons has been included in each UAA submitted to EPA. All UAAs must be approved by EPA before they are used for any Clean Water Act purpose. Spring Creek (1008), found in Appendix A, is revised due to inappropriate water quality standards that resulted in an impairment. The following water bodies in Appendix D are revised due to inappropriate water quality standards that resulted in an impairment: Catfish Creek (0804), Thompsons Creek (1242), Slaughter Creek (1427), Elm Creek (1803), Sandies Creek (1803), and Garcitas Creek (2453). No changes were made in response to this comment.

Comment

An individual requested that the TCEQ provide detailed justification for all low and

intermediate aquatic life uses, as well as an opportunity for public review and comment on such justifications.

Response

The commission responds that §307.2(d)(3) states, "An amendment that establishes a site-specific standard requires a use-attainability analysis that demonstrates that reasonably attainable water-quality related uses are protected." EPA regulations at 40 CFR §131.10(g) list six reasons for a change in use in a water body. At least one of these reasons has been included in each UAA submitted to EPA. The commission makes every effort to engage stakeholders on changes to the TSWQS. Changes to aquatic life uses were discussed at both the January and March 2016 SWQSAWG meetings, and the information presented at those meetings is available on the agency's SWQSAWG webpage (*https://www.tceq.texas.gov/waterquality/standards/stakeholders/swqsawg.html*). In addition, a public comment period was held from August 27, 2017 through October 17, 2017, and a public hearing was held on October 16, 2017.

Comment

TPWD commented that the proposed amendments to §307.10(1) and (4), Appendices A and D, include entries which result in dissolved oxygen criteria that are less stringent than the criteria currently being applied to those water bodies. Future expansions of facilities operated by 12 domestic permittees and 14 industrial permittees may be facilitated by the proposed revisions.

Response

The commission's water quality management program has a framework to address protections to water quality in future expansions to existing permitted facilities. Under this approach, permittees that wish to expand their facilities must go through the same rigorous review as new facilities. This includes modeling of oxygen downstream, an evaluation of the appropriate aquatic life uses and dissolved oxygen criteria, and a screening for toxic criteria limits. No changes were made in response to this comment.

Comment

Sierra Club commented that changing recreation use designations can condemn water bodies to pollution from various sources.

Response

The commission responds that 30 TAC §309.3(h)(2) states, "The monthly average bacteria effluent limitation in a Texas Pollutant Discharge Elimination System (TPDES) permit must be the applicable geometric mean for the most stringent contact recreation category as specified in Chapter 307 of this title." The most stringent contact recreation category in the TSWQS is primary contact recreation 1. Therefore, all facilities that discharge to freshwater with TPDES permits for domestic wastewater must adhere to the geometric mean of 126 colonies per 100 mL associated with primary contact recreation 1 in §307.7(b)(1)(A)(i).

The commission's water quality management program has a framework to address the protection of downstream water quality standards that are more stringent than those found upstream. This is a common occurrence with other kinds of criteria, such as those for dissolved oxygen and toxic pollutants. Under this approach, for permits and TMDLs, pollutant point sources are evaluated and controlled so that different standards in affected water bodies are attained. Nonpoint sources can be addressed through watershed protection plans. No changes were made in response to this comment.

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

Comment

An individual questioned the purpose and validity of language found in the fourth paragraph of the opening text of §307.10(1), Appendix A, which describes the allowance for dissolved oxygen criteria of 2.0 mg/L to have a daily variation down to 1.5 mg/L for no more than eight hours per 24-hour period.

Response

The commission responds that this language was included in §307.10(1), Appendix A prior to the inclusion of the minimal aquatic life use category in §307.7(b)(3)(A)(i), Table 3. This language is no longer needed because of the freshwater mean and minimum dissolved oxygen values defined in §307.7(b)(3)(A)(i), Table 3. The commission removed this language from §307.10(1), Appendix A.

Comment

EPA commented that they will provide a separate review of the UAAs or other documentation supporting the proposed revisions in the following water bodies: Cedar Bayou Above Tidal (0902), Spring Creek (1008), and Mid Cibolo Creek (1913).

Response

The commission acknowledges this comment.

Comment

EPA recommended retaining the primary contact recreation use for Big Cypress Creek Below Lake Bob Sandlin (0404) in §307.10(1), Appendix A.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Information collected from five public meetings and six interviews indicated that one person had witnessed swimming in Big Cypress Creek Below Lake Bob Sandlin. Stakeholders reported that they prefer to swim in nearby lakes. Access is moderately difficult due to natural features of the water body. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

BCW commented that the aquatic life use designations for Cedar Lakes (2442) and Christmas Bay (2434) should be exceptional. The aquatic life use designation for Buffalo Bayou Above Tidal (1014) should be high.

Response

The commission responds that at this time, no recent evaluation of these water bodies in the form of a receiving water assessment or UAA has been provided to the commission. The comment requesting the re-evaluation of these water bodies is noted and may be considered by the Water Quality Standards Group of the Water Quality Planning Division and the Standards Implementation Team of the Water Quality Division for future triennial revisions. No changes were made in response to this comment.

Comment

BCW commented that they disagree with the removal of the public water supply designation for Cedar Bayou Above Tidal (0902). While there are currently no public water supply intakes on Cedar Bayou, BCW believed that the use designation should remain in order to assure the standards are maintained sufficient to make use of this water as a public supply at some future time.

Response

The commission agrees there are currently no public water supply intakes or wells

under the influence of surface water in Cedar Bayou Above Tidal. The removal of the public water supply use does not preclude the possible future use of the segment as a public water supply. At such a time that a public water supply use is identified, the public water supply designation will be placed on Cedar Bayou Above Tidal. No changes were made in response to this comment.

Comment

Corsicana requested that the TCEQ include a site-specific daily average dissolved oxygen standard of 3.0 mg/L for the Post Oak Creek transition zone of the Richland-Chambers Reservoir.

Response

The commission will review the applicable studies for possible inclusion in future revisions of the TSWQS. No changes were made in response to this comment.

Comment

An individual and EPA recommended that aquatic life uses be adopted for segments 1006 and 1007 of the Houston Ship Channel. EPA noted that data has been collected to demonstrate that an aquatic life use is justified. In accordance with this recommendation, EPA stated that the dissolved oxygen standards should be re-evaluated. Increasing the dissolved oxygen standards from 1.0 mg/L to 2.0 mg/L for Segment 1007 and from 2.0 mg/L to 3.0 mg/L for Segment 1006 are recommended to protect the actual aquatic life use. The adoption of uses and revised standards would

allow a transition to a dissolved oxygen standard of 4.0 mg/L and high aquatic life use for Segment 1005, and the present transition from a standard of 2.0 mg/L to 4.0 mg/L may result in impairment around the segment boundary.

Response

The commission responds that at this time, no recent evaluation of these segments in the form of a UAA has been performed. The comment requesting the re-evaluation of both segments is noted and may be considered by the Water Quality Standards Group of the Water Quality Planning Division and the Standards Implementation Team of the Water Quality Division for future triennial revisions of the TSWQS. No changes were made in response to this comment.

Comment

Sierra Club commented that the proposed site-specific criteria for Spring Creek are not likely supported by what little data is available. The UAA makes it clear that the applicable 24-hour average dissolved oxygen and 24-hour minimum dissolved oxygen standards (5.0 mg/L and 3.0 mg/L, respectively) are appropriate for Spring Creek for the majority of the year, as it has a high aquatic life use. Thus, the small amount of data from 2015 - 2016 does not support the proposed seasonal dissolved oxygen criteria (24-hour average of 4.0 mg/L and 24-hour minimum of 3.0 mg/L) for this segment from July to September. More data would be needed to determine the frequency of sustained low-flow in the segment from year to year in order to warrant this type of seasonal exception.

Response

The commission responds that data collected over a two-year period is typically used to determine site-specific conditions of water bodies through the UAA process in accordance with the *Surface Water Quality Monitoring Procedures, Volume 2* (Appendix D). The minimum requirement for a UAA is ten dissolved oxygen samples over a two-year period. The UAA for Spring Creek meets the requirements necessary to develop site-specific criteria. No changes were made in response to this comment.

Comment

EPA recommended the adoption of an aquatic life use and corresponding dissolved oxygen criteria for Mid Pecan Bayou based on the completed UAA.

Response

The commission will review the UAA for possible inclusion in future revisions of this rule.

Comment

Sierra Club appreciated the outreach by proponents of the proposed Blind Oso Bay segment and the information they provided to Sierra Club for their review of this issue.

Response

The commission acknowledges this comment.

Comment

Corpus Christi and CBBEP supported the proposed rules as drafted for both Oso Bay and Blind Oso Bay.

Response

The commission acknowledges this comment.

Comment

EPA commented that water quality standards in Blind Oso Bay must protect downstream uses.

Response

The commission's water quality management program has a framework to address the protection of downstream water quality standards that are more stringent than those found upstream. Under this approach, in permits and TMDLs, pollutant sources are evaluated and controlled so that different standards in affected water bodies are attained.

Comment

EPA commented that the proposed criteria for the new segment, Blind Oso Bay, were determined by modeling Oso Bay without the Oso wastewater treatment plant

discharge. This approach does not constitute a reference or least-impacted condition. The lack of a reference condition does not preclude site-specific dissolved oxygen criteria; however, any criteria must be protective of the aquatic life use. Supporting documentation for the UAA of Oso Bay provided in the 2010 revision noted that the biological community in Blind Oso Bay represents "at best what could be called a stable-stressed environment."

Response

The commission responds that the purpose of the model was not to simulate a reference condition. The model removed the permitted discharges and included multiple parameters, including sediment oxygen demand, in order to demonstrate that the current criteria are unattainable with or without the current permitted discharge. This model confirms that the current standards are inappropriate.

The commission further recognizes that portions of Oso Bay are potentially impacted by anthropogenic effects. This is not generally the case for the Upper Laguna Madre. Although the Upper Laguna Madre is a fairly unique system, studies show that it shares chemical and physical characteristics with Oso Bay. Both water bodies are very shallow, hypersaline, and support communities of seagrasses. Over 80% of the coastline of Upper Laguna Madre is sparsely populated, if it is populated at all. It is because of this that the Upper Laguna Madre is one of the least impacted marine water bodies in Texas. The commission has asserted that Upper Laguna Madre is sufficiently similar to Oso Bay to be used as a reference site in previous

revisions and does so again. No changes were made in response to this comment.

Comment

EPA commented that the federally recommended saltwater criteria for dissolved oxygen are based on warm water species, most of which are found in Texas at the species or genus level. One component of the federally recommended criteria protects larval recruitment from cyclic exposure to low dissolved oxygen levels. At the minimum dissolved oxygen level of 1.5 mg/L proposed for Blind Oso Bay, an eight-hour exposure (based on Texas standards) is predicted to result in approximately 95% mortality to aquatic species. Dissolved oxygen data collected in Oso Bay show that low oxygen concentrations often occur on consecutive days. EPA further commented that a portion of Blind Oso Bay is designated as critical habitat for the piping plover, a federally listed threatened species found along the Texas coast from mid-July through April. The piping plover consumes marine worms, beetles, spiders, crustaceans, mollusks, and other small marine animals. Site-specific criteria must be protective of the food base for this species.

TPWD commented that the preservation of the proposed area of Blind Oso Bay's exceptional aquatic life use is paramount and cannot be achieved with the proposed site-specific dissolved oxygen criteria of 4.0 mg/L daily average and 1.5 mg/L daily minimum for seven months of the year (March 15 - 0ctober 15).

Response

The commission responds that during the course of the studies used in the determination of dissolved oxygen criteria for Blind Oso Bay, which were conducted on Oso Bay and Upper Laguna Madre, multiple sampling events under least impacted conditions in Upper Laguna Madre demonstrated low dissolved oxygen levels. Additionally, data provided by TPWD for all three water bodies demonstrates they all have similar and moderately high species diversity despite these low concentrations of dissolved oxygen. The criteria are reflective of current conditions, and the segment boundary for Blind Oso Bay does not physically affect the current conditions of Blind Oso Bay. No changes were made in response to these comments.

Comment

An individual questioned the purpose of the addition of the new segment, Blind Oso Bay.

Sierra Club commented that the proposal to create Blind Oso Bay as a new segment apart from Oso Bay is troubling. It is an unprecedented action that provides a dangerous exception to established rules. Sierra Club commented further that dividing existing stream segments to create one or more new segments composed of areas where meeting established water quality standards may be difficult creates a loophole that sanctions a failure to achieve appropriate levels of water quality.

TPWD commented that the creation of a new segment in the area of a discharge in

order to meet a lowered dissolved oxygen criteria should not be used to circumvent the obligation of any permittee to protect established designated uses in a receiving water body. TPWD also commented that Blind Oso Bay is not naturally different from the rest of Oso Bay but, rather, has been influenced by the wastewater inflow.

Response

The commission responds that segment boundaries have been modified in past revisions due to the results of UAAs when warranted, which is the case for Blind Oso Bay. The segment boundary was selected because this area includes a wide wind-tidal flat. Wind-tidal flats are naturally shallow areas that incur irregular flooding, hot summer temperatures, little freshwater inflow, and salty soils. Slight differences in elevation can markedly affect the frequency with which wind-tidal flats are flooded. This differs significantly from the bulk of Oso Bay, which has water depths in excess of 0.3 meters. No changes were made in response to these comments.

Comment

NWF and Sierra Club commented that the length of the proposed seasonal dissolved oxygen standard for Blind Oso Bay seems to be too long and weak. NWF further commented that the lower average and minimum dissolved oxygen levels are not justified for the entire proposed time period. The proposed period seems to reflect the statewide "index period" for purposes of assessment rather than site-specific data reflecting the minimum portion of the year when the current dissolved oxygen criteria

might not be met under unimpacted conditions. Sierra Club commented that existing TMDL data do not appear to support the length of the site-specific minimum dissolved oxygen criterion, and NWF made a similar comment based on National Oceanic and Atmospheric Administration (NOAA) data.

Response

The commission recognizes that the proposed period reflects the index period as set forth in the *Surface Water Quality Monitoring Procedures, Volume 2*. The index period represents the warmer season of the year when temperatures increase across the state. Although the index period is further subdivided into the critical period when maximum temperatures typically occur, sufficient changes in temperature occur during the index period to warrant the proposed seasonal criteria for Blind Oso Bay. The data referenced by Sierra Club from the TMDL phase 2 and 3 report were not collected in Blind Oso Bay. Data used to develop the criteria were collected from the Upper Laguna Madre, which is the unimpacted reference site for Oso and Blind Oso bays. These data demonstrate that a minimum criterion of 1.5 mg/L is appropriate. Additionally, Blind Oso Bay is a shallow, tidal flat that will experience greater fluctuations in temperature than the NOAA stations located in Corpus Christi Bay or Laguna Madre. No changes were made in response to these comments.

Comment

Sierra Club commented that supporting documentation for Blind Oso Bay

demonstrates that the 24-hour minimum dissolved oxygen was less than 2.0 mg/L only 14% of the time during warmer seasons. Sierra Club recommended that the 24-hour average dissolved oxygen criterion be 4.5 mg/L and the 24-hour minimum dissolved oxygen criterion be 2.0 mg/L.

Response

The commission responds that the data cited in the comment was collected for Oso Bay and included in the 2010 UAA reports in support of changes to the 2010 TSWQS, but this data was not used in the calculation of the current criteria. It has been noted that portions of Oso Bay are potentially impacted by anthropogenic effects. For this reason, Upper Laguna Madre was used in the study as a reference system for the newly created segment, Blind Oso Bay. Upper Laguna Madre shares similar chemical and physical characteristics with Oso Bay. Both of the water bodies are very shallow, hypersaline, and support communities of seagrasses. The commission used the lower 90th percentile of the dissolved oxygen data from Upper Laguna Madre, which is 1.6 mg/L, to derive the minimum criterion for Blind Oso Bay. In EPA's *Quality Criteria for Water 1986*, the section regarding dissolved oxygen states, "Where natural conditions alone create dissolved oxygen concentrations less than 110 percent of the applicable criteria means or minima or both, the minimum acceptable concentration is 90 percent of the natural concentration." The commission has used this methodology to set the criteria for Blind Oso Bay. No changes were made in response to these comments.

Comment

NWF commented that it is unfortunate that the proposed changes to Oso Bay and Blind Oso Bay were not included in discussions with the agency's stakeholder group.

TPWD commented that neither the proposal to create a new segment for Blind Oso Bay nor lower dissolved oxygen criteria were presented to the stakeholders during the two meetings that were held in 2016. As a result, TPWD did not benefit from the discussion of other stakeholders on this topic.

Response

The commission significantly values stakeholder involvement in the water quality standards process, and staff sent members of the SWQSAWG and the public at large advance notice of the potential changes via the public hearing notice at the beginning of the comment period and prior to the August 23, 2017, Commission's Agenda. The commission will continue to coordinate with stakeholders during future revisions to address site-specific standards.

Appendix B, Sole-source Surface Drinking Water Supplies

Comment

BCW was in general agreement with the removal of the listed waters from the list of sole-source drinking water supplies where they no longer meet the classification. This should not result in any reduction in water quality standards.

Response

The commission acknowledges this comment.

Comment

EPA generally defers to the TCEQ regarding the specific segments that should be included in §307.10(2), Appendix B but had questions regarding the following deletions based on information from TCEQ's Drinking Water Watch database and other sources of information: Big Cypress Creek Below Lake O' the Pines, Lower Neches Valley Authority Canal, Lake Houston, Leon Reservoir, and Llano City Lake.

Waco requested that the commission reconsider removing the sole-source designation from Waco Lake. Waco does utilize groundwater wells, but the city does not rely on the wells for any substantive component of its long-term water supply. The city is actively working to reduce its well water use and relies on the protection given by the sole-source designation. The city has spent over $47 million on a water treatment facility to reduce the high nutrient loadings in Waco Lake, and a continued designation as a sole source will help protect water quality and the city's significant investment in this facility.

DCPCMUD commented that Lake Grapevine should not be removed from §307.10(2), Appendix B. DCPCMUD obtains all its water from Lake Grapevine, except in cases of emergency, and according to the TWC, this designates a surface water body as a sole source. DCPCMUD requested that the TCEQ put Lake Grapevine back in §307.10(2),

Appendix B.

Response

The commission has reviewed this issue and agrees that Big Cypress Below Lake O' the Pines (0402), Lower Neches Valley Authority Canal (0602), Lake Grapevine (0826), Lake Houston (1002), Leon Reservoir (1224), Waco Lake (1225), and Llano City Lake (1415) should not have been removed from the sole-source list. Therefore, the commission modified §307.10(2), Appendix B, to include these segments as sole-source drinking water supplies.

Appendix C, Segment Descriptions

Comment

EPA commented that they will review the aquatic life UAAs or other documentation for the revised boundaries in Sabine River Tidal (0501), Sabine River Above Tidal (0502), Lower Cibolo Creek (1902), Upper Cibolo Creek (1908), Mid Cibolo Creek (1913), Oso Bay (2485), and Blind Oso Bay (2486).

Response

The commission acknowledges this comment.

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

Comment

EPA commented that they will provide separate reviews of the UAAs for the following

water bodies: Bois d'Arc Creek (0202), Catfish Creek (0804), Thompsons Creek (1242), Slaughter Creek (1427), Elm Creek (1803), Sandies Creek (1803), Hurricane Levee Canal (2437), and Garcitas Creek (2453). EPA also commented that several of the new entries in §307.10(4), Appendix D are upgrades of the presumed aquatic life uses or confirmation of the presumed aquatic life uses. Therefore, EPA will not require additional documentation for those water bodies.

Response

The commission acknowledges this comment.

Comment

NWF commented that "Crocket" is misspelled in the new entry in §307.10(4), Appendix D for Bois d'Arc Creek (0202). It should be "Crockett."

Response

The commission agrees with this comment, and the typographical error has been corrected.

Comment

TPWD recommended that a seasonal 24-hour average dissolved oxygen criterion of 3.0 mg/L and a 24-hour minimum dissolved oxygen criterion of 2.5 mg/L for Catfish Creek (0804) be considered from May to September rather than a 24-hour average of

dissolved oxygen criterion 3.0 mg/L and a 24-hour minimum dissolved oxygen criterion of 2.0 mg/L being applied for the entire year.

Response

The commission responds that of the nine data points TPWD used in their cool weather analysis, two data points do not meet the 5.0 mg/L 24-hour average dissolved oxygen criterion, although they do meet a 4.0 mg/L 24-hour average dissolved oxygen criterion. Physical characteristics such as low flow, minimal bedslope, deep pools, and extensive canopy cover preclude the attainment of the 5.0 mg/L 24-hour average dissolved oxygen criterion year round. The TPWD analysis of the seasonality of the proposed 3.0 mg/L 24-hour average dissolved oxygen criterion is supported by the data. The biological results from the UAA demonstrate that the stream supports a high aquatic life use for both fish and macrobenthics even as low dissolved oxygen levels persist. Due to these factors, the commission adopts a seasonal 24-hour average dissolved oxygen criterion of 3.0 mg/L and a 24-hour minimum dissolved oxygen criterion of 2.0 mg/L from May through September. During the remainder of the year, a 24-hour average dissolved oxygen criterion of 4.0 mg/L with a presumed 24-hour minimum dissolved oxygen criterion of 3.0 mg/L, as described in §307.7(b)(3)(A)(i), Table 3, will apply. No changes were made in response to this comment.

Comment

EPA commented that the dissolved oxygen criterion for Town Creek (0831) is

acceptable based on the UAA submitted for the 2014 revision of the TSWQS.

Response

The commission acknowledges this comment.

Comment

SOS opposed the proposed division of Slaughter Creek (1427) in §307.10(4), Appendix D and corresponding weakened dissolved oxygen criteria. SOS commented that protecting ground and surface waters should be complimentary, not conflicting, forces. This is generally the case in TCEQ's rules. Therefore, the TCEQ should require a minimum dissolved oxygen criterion of 5.0 mg/L for Slaughter Creek's entire length, including places where much of its water (particularly in drier seasons) disappears into the Edwards Aquifer. In order to avoid potential violations of the Endangered Species Act, the TCEQ should establish surface water quality standards for all surface streams draining into the Edwards Aquifer that are at least minimally protective of the salamanders, including a 5.0 mg/L minimum dissolved oxygen criterion. SOS further commented that if any changes are to be made to how Slaughter Creek is managed, it should be to enhance protection and develop TMDLs to ensure that Slaughter Creek is not further degraded.

Response

The commission responds that the adopted language better describes the conditions found in the described portions of Slaughter Creek. The portion of the

water body that flows over the recharge portion of the Edwards Aquifer is best described as intermittent without perennial pools. The commission currently assigns minimal aquatic life use as the presumed use for intermittent streams without perennial pools, and the minimal aquatic life use is based on flow characteristics and not aquatic life attributes. Additional protections are given to water bodies that are within 10 miles of the Edwards Aquifer recharge zone. Any discharge to this area must meet the requirements set forth in Chapter 213. Any discharge within the Slaughter Creek watershed must additionally meet the requirements set forth in Chapter 311, Subchapter E. The commission further responds that the TMDL program is used to mitigate point sources of pollution within a watershed and restore impaired uses through load allocations. Currently, there are no permitted wastewater discharges to Slaughter Creek to control with the TMDL approach. No changes were made in response to this comment.

Comment

SOS commented that the TCEQ gives no consideration as to how the lowering of dissolved oxygen criteria in a stream segment upstream might affect the water quality in an immediate or proximate downstream segment that is designated for a higher level of aquatic life use than the upstream segment.

Response

The commission's water quality management program has a framework to address the protection of downstream water quality standards that are more stringent than

those found upstream. Under this approach, in permits and TMDLs, pollutant sources are evaluated and controlled so that different standards in affected water bodies are attained.

Comment

SOS commented that maintaining Slaughter Creek's water quality is crucial because the Barton Springs segment of the Edwards Aquifer is home to federally listed endangered species, including the Barton Springs salamander (*Eurycea sosorum*) and the Austin blind salamander (*Eurycea waterlooensis*). By effectively lowering the minimum dissolved oxygen required for this crucial section of Slaughter Creek, the TCEQ puts the continued existence of the salamanders in jeopardy. Also, lower quality water in Slaughter Creek would lead to direct degradation of this known Barton Springs salamander habitat.

Response

The commission responds that all revisions to the TSWQS must be reviewed and approved by the EPA before being used for any program covered under the Clean Water Act. During this review, if a critical habitat is identified, the EPA will consult with the United States Fish and Wildlife Service before further approval of the revisions.

Comment

The Authority supported the addition of the Hurricane Levee Canal to §307.10(4),

Appendix D with the proposed site-specific dissolved oxygen criteria.

Response

The commission acknowledges this comment.

Appendix E, Site-specific Toxic Criteria

Comment

BCW disagreed with the site-specific toxic criteria adjustment factors as proposed. BCW was particularly concerned about the factors as applied to segments 1014 and 2484 and other segments that are tidal or near tidal due to the high toxicity of copper in saltwater environments. The TCEQ should require these segments to meet the unadjusted standards for the protection of aquatic resources in receiving waters and ultimate discharge areas.

An individual commented that copper is extremely toxic to marine and estuarine invertebrates, raising the question of whether it is appropriate to allow site-specific criteria to be developed for this contaminant in marine or estuarine waters. Concerns include the approved process for developing such criteria and that these criteria are not reviewed by independent, expert reviewers. Given that some important marine and estuarine invertebrates are particularly sensitive to copper, the choice of toxicity test organisms would seem to be critical in these cases. Perhaps any proposals for site-specific copper criteria in Texas estuarine or marine waters should be based only on the bivalve, *Mytilus* sp., and 48-hour embryo-larval development chronic estimator test

methods.

Response

Water-effect ratio studies are conducted by permittees as site-specific adjustment factors to the statewide metals criteria listed in §307.6(c)(1), Table 1. Studies are conducted in accordance with EPA guidance using EPA-recommended species, results are sent to the EPA as the studies are completed, and the EPA reviews and approves the results on a permit-by-permit basis. Water-effect ratio results are also included with the public notice of each permit. All copper water-effect ratio results adopted in this revision have been publicly noticed for comment in accordance with §307.6(c)(9) and (10) and received EPA approval. No changes were made in response to this comment.

Comment

EPA commented it has previously completed technical reviews of the criteria based on water-effect ratio studies for the following water bodies: Segment 0601 (non-tidally influenced ditches upstream of Star Lake Canal) developed by the INEOS Calabrian Corporation; Segment 0820 (Muddy Creek) developed by the North Texas Municipal Water District; Segment 1006 (Santa Anna Bayou) developed by Akzo Nobel Chemicals LLC and Akzo Nobel Functional Chemicals LLC; Segment 1008 (Montgomery County Drainage District No. 6 Channel IIDF) developed by the Rayford Road Municipal Utility District; Segment 1014 (Willow Fork Bayou) developed by the Igloo Products Corporation; Segment 1014 (unnamed ditch and Harris County Flood Control District

ditch W167-01-00) developed by National Oilwell Varco, L.P.; Segment 1014 (Turkey Creek) developed by Weatherford U.S. L.P.; and Segment 2484 (tidal ditches) developed by the MarkWest Javelina Company, L.L.C. With the exception of the site-specific copper criteria in Segment 2484, the EPA has also previously approved the criteria for these water bodies under the Clean Water Act, §303(c). EPA believed that the site-specific zinc criteria proposed for Segment 1006 (Akzo Nobel Chemicals LLC and Akzo Nobel Functional Chemicals LLC) is also applicable to Segment 1005. Also, the TCEQ may wish to update this same facility's name in the existing entry for the previously approved aluminum criterion. For the site-specific copper criteria developed by the Weatherford U.S. L.P. facility, the unnamed ditch and Harris County Flood Control District ditch W167-04-00 could be added to the site description.

EPA also recently approved a site-specific acute copper criterion for Segment 1209 (unnamed tributary to Sulphur Creek), which could be inserted in §307.10(5), Appendix E of the adopted standards. This criterion was developed by the Tenaska Frontier Partners facility, and public participation on the site-specific criterion was completed through the TPDES permitting process.

EPA has also completed technical reviews of four additional studies for site-specific copper criteria. If the public comment periods are completed through the TPDES permitting process prior to the adoption of the final water quality standards, it would be appropriate to include the following criteria in §307.10(5), Appendix E: Segment 0305 developed by Lamar Power Partners, LLC; two studies for Segment 0901

(unnamed ditches) developed by Enterprise Products; and Segment 1009 (Faulkey Gully) developed by the Faulkey Gully Municipal Utility District.

Response

The commission agrees with the recommended changes. Corrections have been made to the facility name for Akzo Nobel Chemicals LLC and Akzo Nobel Functional Chemicals LLC, and the segment number for the zinc information for this facility has been corrected to Segment 1005. The additional water bodies for Weatherford U.S. L.P. have been included in the site description. Entries for La Frontera Holdings, LLC (which EPA referred to as Lamar Power Partners), Enterprise Products Operating, LLC, Faulkey Gully Municipal Utility District, and Tenaska Frontier Partners, LTD., have also been added.

Appendix F, Site-specific Nutrient Criteria for Selected Reservoirs

Comment

An individual commented that there is a lack of progress towards development and approval of numerical nutrient criteria. More types of water bodies should have criteria - not just reservoirs.

Response

The commission is continuing to conduct research to examine nutrient relationships to flow, sunlight, and dissolved oxygen in multiple water body types. The commission is developing a robust dataset of nutrient, biological, and physical

parameters so that nutrient criteria will be developed based on sound science.

Comment

An individual commented that in addition to criteria for chlorophyll *a*, nutrient criteria for reservoirs should include periphyton growth or biomass. Increases in periphyton in reservoirs reduce the aesthetic quality in reservoirs, with implications for contact recreation.

Response

The commission responds that chlorophyll *a* in the water column (sestonic) is the appropriate biological response variable to measure in reservoirs and is best utilized in assessments when paired with additional causal and response variables. Sestonic chlorophyll *a* is part of the suite of parameters routinely collected. As a result, the commission has decades of statewide data to reference historic conditions and track changes in nutrient responses over time. However, the commission does see periphyton as a useful response variable for nutrients in streams and is currently working to study periphyton in lotic systems. No changes were made in response to this comment.

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

Comment

TPWD recommended implementing the following to address bacteria loading issues rather than downgrading contact recreation standards: best management practices for

protecting riparian zones, maintaining on-site sewage facilities, excluding livestock from water bodies, TMDL limits, and watershed protection plans.

Response

The commission responds that the proposed revisions to the TSWQS are needed to meet federal rule and state statute requirements and to set appropriate water quality standards that establish the instream water quality conditions for surface waters in the state. Once adopted, the EPA must approve all water quality standards prior to use in Clean Water Act activities. Recommended use changes are based on completed recreational UAA studies, which were performed according to established procedures developed by the commission and approved by the EPA. The recreational UAA results provide the information to determine the most appropriate recreational use for each water body. The commission considered feedback from the public on both the recreational UAA study report and the draft recommendation for each water body before the recreational use changes were proposed in this revision. The commission relies upon appropriate water quality standards, including those for bacteria, as targets in its water quality management programs, which include TMDLs, watershed protection plans, and wastewater permitting. No changes were made in response to this comment.

Comment

BCW commented that bacteria standards changes in §307.10(7), Appendix G will allow for increased bacteria in those water bodies and their larger receiving waters.

Response

The commission's water quality management program has a framework to address the protection of downstream water quality standards that are more stringent than those found upstream. This is a common occurrence with other kinds of criteria, such as those for dissolved oxygen and toxic pollutants. Under this approach, in permits and TMDLs, pollutant point sources are evaluated and controlled so that different standards in affected water bodies are attained. Nonpoint sources can be addressed through watershed protection plans. The TCEQ's rules at §309.3(h)(2) state that the monthly average bacteria effluent limitation in a TPDES permit must be the applicable geometric mean for the most stringent contact recreation category as specified in the TSWQS. The most stringent contact recreation category in the TSWQS is primary contact recreation 1. Therefore, all facilities that discharge to freshwater with TPDES permits for domestic wastewater must adhere to the geometric mean of 126 colonies per 100 mL associated with primary contact recreation 1. No changes were made in response to this comment.

Comment

Sierra Club opposed the recreational use changes to 51 unclassified streams in §307.10(7), Appendix G. The recreational use changes have been made without explanation.

SOS opposed the recreational use changes in §307.10(7), Appendix G for similar

reasons.

BCW disagreed with all the changes in §307.10(7), Appendix G and noted that none of the unclassified water bodies included in the appendix are designated for primary contact recreation.

Response

The commission responds that the recommended use changes for 51 water bodies were based on completed recreational UAA studies, which were performed according to established procedures developed by the commission and approved by the EPA. The recreational UAA results provided the information the commission used to determine the most appropriate recreational use for each water body. The commission considered feedback from the public on both the recreational UAA study report and the draft recommendation for each water body before the recreational use changes were proposed in this TSWQS revision.

The commission notes that designating site-specific recreational uses for certain water bodies is appropriate due to contact recreation being broadly presumed for all Texas surface waters, with the exception of eight classified segments in §307.10(1), Appendix A, such as ship channels, in the 1980s and 1990s.

Water bodies where it has been determined that the presumed use of primary contact recreation is correct have not been added to §307.10(7), Appendix G

because a standards change has not occurred, i.e., the use and bacteria criterion remain the same. No changes were made in response to these comments.

Comment

EPA recommended retaining the primary contact recreation use for Bois d'Arc Creek (0202) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Ten individuals were interviewed regarding Bois d'Arc Creek and did not know of any primary contact recreation occurring on the stream. The average thalweg depth was 19 inches. Access is moderately difficult due to natural features of the water body and private property fencing. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Choctaw Creek (0202) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Ten

individuals were interviewed regarding Choctaw Creek and did not know of any primary contact recreation occurring on the stream. The average thalweg depth was 26 inches. Access is available at bridge crossings, but the stream banks have slick and near-vertical slopes. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contract recreation use for Tankersley Creek (0404) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Three individuals were interviewed regarding Tankersley Creek and did not report any primary contact recreation occurring on the stream. The average thalweg depth was 32 inches. Public access is moderately difficult due to steep banks and fenced private property. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Grace Creek (0505) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. One interviewed individual reported they had observed children wading in Grace Creek. The average thalweg depth was 21 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for South Fork Sabine River (0507) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Two interviewed individuals reported they had observed swimming at the South Fork of Sabine River. One of those interviewees referenced seeing boys swimming because their boat had stopped working. The average thalweg depth was 29 inches. Of the 12 study sites, five sites had public access. Natural features of the water body such as steep vegetated banks and log jams make the river only moderately accessible. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended excluding Elberta Lake from the description for Running Creek (0512) in §307.10(7), Appendix G.

Response

The commission agrees with the comment, and the description of Running Creek now excludes Elberta Lake.

Comment

EPA recommended retaining the primary contact recreation use for Prairie Creek (0606) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Twelve individuals were interviewed regarding Prairie Creek. Several interviewees stated that there was insufficient depth for recreational activity. One interviewee stated they had observed swimming once. At most of the public road crossings along the creek, there were private property boundaries that limited access beyond the road crossing. Access at the road crossings was moderate due to physical conditions and natural features of the water body. The average thalweg depth was 28 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Mud Creek (0611) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Fourteen individuals were interviewed regarding Mud Creek, and they did not know of any primary contact recreation occurring on the stream. Several interviewees stated that nearby lakes provide better opportunities for recreation. Private property boundaries generally limited access at road crossings to directly around the crossing. Physical conditions of the water body made access moderately difficult. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Walnut Creek (0838) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Interviews

with stakeholders indicated that they did not know of any primary contact recreation occurring on Walnut Creek. Although public access is available, access to the stream is difficult at many of the sites due to physical conditions of the water body. The average thalweg depth was 30 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Wickson Creek (1209) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Eight individuals were interviewed regarding Wickson Creek, and they did not report any primary contact recreation occurring on the stream. Access to the creek is moderate, and most of the water body runs through private property. The average thalweg depth was 24 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Cedar Creek (1209) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Six individuals were interviewed regarding Cedar Creek, and one reported observing primary contact recreation. Access to the creek is moderate, and most of the water body runs through private property. The average thalweg depth was 24 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Gibbons Creek (1209) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. The average thalweg depth of Gibbons Creek was 23 inches. Access to the creek is moderate, and most of the water body runs through private property. Therefore, the designation of secondary contact recreation 1 is appropriate. However, the commission acknowledges that the description should not include Gibbons Creek Reservoir and has excluded it from the description.

Comment

EPA commented that the commission should consider removing a second reservoir from the description of Alarm Creek (1226) in §307.10(7), Appendix G.

Response

The commission responds that the second reservoir is a small farm pond measuring approximately nine acres and will not be excluded. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Little Green Creek (1226) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. One individual was interviewed regarding Little Green Creek, and they did not know of any primary contact recreation occurring on the water body. Access to the creek is moderate and affected by private property, fences, and steep slopes. The average thalweg depth was 20 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Walnut Creek (1242) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. One individual was interviewed regarding Walnut Creek, and they reported personal primary contact recreation (wading children) occurring on the water body. Access to the creek is moderate and affected by private property fences and physical conditions of the water body. The average thalweg depth was 11 inches. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended retaining the primary contact recreation use for Big Creek (1242) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Fifteen individuals were interviewed regarding Big Creek, and one reported personal primary contact recreation (wading children) occurring on the water body. Most interviewees stated that there was not enough water or access for primary contact

recreation. The average thalweg depth was 13 inches. Access to the creek is very limited due to the stream running through private property. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA commented that the commission should consider removing a reservoir from the description of Goose Branch (1255) in §307.10(7), Appendix G.

Response

The commission agrees with this comment and has excluded Goose Branch Reservoir from the description of Goose Branch.

Comment

EPA recommended excluding a reservoir from the description of Scarborough Creek (1255) in §307.10(7), Appendix G.

Response

The commission agrees with this comment and has excluded Scarborough Creek Reservoir from the description of Scarborough Creek.

Comment

EPA recommended retaining the primary contact recreation use for the unnamed

tributary to Scarborough Creek (1255) in §307.10(7), Appendix G.

Response

The commission relied upon information collected during the recreational UAA for each water body to develop the site-specific contact recreation uses. Two individuals were interviewed regarding the unnamed tributary to Scarborough Creek, and one reported personal primary contact recreation (wading children) occurring on the water body. The interviewees stated that the creek only flows when it rains. At the time of the surveys, the stream was completely dry. Access to the creek is very limited due to the stream running through private property. Therefore, the designation of secondary contact recreation 1 is appropriate. No changes were made in response to this comment.

Comment

EPA recommended excluding six impoundments from Dry Branch (1255) in §307.10(7), Appendix G.

Response

The commission responds that the six impoundments are farm ponds, and all are less than one acre. Therefore, the ponds will not be excluded from the description of Dry Branch. No changes were made in response to this comment.