

Summary and Excerpts from the Texas Surface Water Quality Standards (TSWQS)

2018 Guidance Advisory Work Group - August 24, 2018

Flow Condition	Applicable TSWQS Section	Applicable parameters for 2016 IR	Method applied to ___ for 2016 IR	What sample results were excluded for 2016 IR?	Future application -- Discussion items
Critical Low-Flow	§307.8(a)	All applicable parameters in TSWQS	All impairments and concerns	Exceedances only	- Consider excluding all critical low-flow data for applicable parameters in TSWQS
Severe Low-Flow	§307.9(e)(8)	All applicable parameters in TSWQS	All impairments and concerns	All sample results	- Consider excluding all severe low-flow data for applicable parameters in TSWQS
Extreme High Flow	§307.9(b)	N/A	N/A	N/A	- Overall method - What sample results to exclude?
Reservoir Drought	§307.9(b)	Nutrients only	New impairments	All sample results for drought period	- Apply to all parameters? - Start of drought determination - End of drought determination - What sample results to exclude? - Apply to new impairments only? - Should water quality data be considered when determining whether data should be excluded?
In-stream Drought	§307.9(b)	N/A	N/A	N/A	- Apply to all parameters? - Overall method - What sample results to exclude? - Apply to new impairments only?

Applicable Sections of 2010 TSWQS

§307.8. Application of Standards.

(a) Flow conditions.

(1) The following standards do not apply below critical low-flows:

(A) site-specific criteria for dissolved oxygen, pH, temperature, and numerical chronic criteria for toxic materials, as listed in Appendices A, D, and E of §307.10 of this title (relating to Appendices A -G);

(B) numerical chronic criteria for toxic materials as established in §307.6 of this title (relating to Toxic Materials);

(C) total chronic toxicity restrictions as established in §307.6 of this title;

(D) maximum temperature differentials as established in §307.4(f) of this title (relating to General Criteria); and

(E) dissolved oxygen criteria for unclassified waters, as established in §307.4(h) of this title and §307.7(b)(3) of this title (relating to Site-Specific Uses and Criteria).

(2) Critical low-flows for streams or rivers that are dominated by springflow are listed in the standards implementation procedures as amended and are calculated as follows:

(A) for springflow-dominated streams or rivers that contain federally listed endangered or threatened aquatic or aquatic dependent species, the critical low-flow value is the 0.1 percentile value derived from a lognormal distribution for the period of record at the nearest United States Geological Survey (USGS) or International Boundary and Water Commission (IBWC) gage;

(B) for springflow-dominated streams or rivers that do not contain federally listed endangered or threatened species, the critical low-flow value is the 5th percentile value of the flow data for the period of record at the nearest USGS or IBWC gage.

(3) Numerical acute criteria for toxic materials and preclusion of total acute toxicity as established in §307.6 of this title are applicable at stream flows that are equal to or greater than one-fourth of critical low-flows.

(4) Harmonic mean flow is the applicable upstream flow when calculating wastewater permit limits for criteria that are assessed as long-term means, such as criteria for total dissolved solids, chlorides, sulfates in Appendix A of §307.10 of this title, and human health toxic criteria in Table 2 of §307.6(d)(1) of this title. These criteria are applicable at all flow conditions except as specified for the applicability of assessment data in §307.9 of this title (relating to Determination of Standards Attainment).

(5) Critical low-flows and harmonic mean flows for some classified segments are listed in the standards implementation procedures as amended. These critical low-flows are not for the purpose of regulating flows in water bodies in any manner or requiring that minimum flows be maintained in classified segments.

(6) Critical low-flows and harmonic mean flows listed in the standards implementation procedures as amended apply only to river basin and coastal basin waters. They do not apply to bay waters, gulf waters, reservoirs, or estuaries.

(7) Critical low-flows and harmonic mean flows in the standards implementation procedures as amended were calculated from historical USGS or IBWC daily streamflow records. If the calculated critical low-flow or harmonic mean flow value was equal to or less than 0.1 cubic foot per second (ft³/s), it was rounded up to 0.1 ft³/s.

(8) Flow values are periodically recomputed to reflect alterations in the hydrologic characteristics of a segment, including reservoir construction, climatological trends, and other phenomena.

(9) The general criteria are applicable at all flow conditions except as specified in this section or in §307.4 of this title.

§307.9. Determination of Standards Attainment.

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(b) Samples to determine standards attainment are collected at locations approved by the commission. Samples collected at non-approved locations may be accepted at the discretion of the commission. Samples to determine standards attainment in ambient water must be representative in terms of location, seasonal variations, and hydrologic conditions. Locations must be typical of significant areas of a water body. Temporal sampling must be sufficient to appropriately address seasonal variations of concern. Sample results that are used to assess standards attainment must not include samples that are collected during extreme hydrologic conditions such as high-flows and flooding immediately after heavy rains. Further guidance on representative sampling, both spatially, temporally, and hydrologically, can be found in the TCEQ Surface Water Quality Monitoring Procedures and the TCEQ Guidance for Assessing and Reporting Surface Water Quality in Texas as amended.

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(e) Sampling periodicity and evaluation.

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(8) Site-specific criteria for aquatic recreation (geometric mean), total dissolved solids, chloride, and sulfate as established in Appendix A of §307.10 of this title, and human health criteria as established in Table 2 of §307.6(d)(1) of this title do not apply in the following stream types and flow conditions:

(A) perennial streams when flows are below 0.1 cubic feet per second;

(B) intermittent streams when less than 20% of the stream bed of a 500 meter sampling reach is covered by pools; or when extremely dry conditions are indicated by comparable observations of flow severity.