

**TCEQ Response to Verbal Comments on the
Draft Guidance for Assessing and Reporting Surface Water Quality in Texas
for the 2022 Texas Integrated Report (IR) from Members of the TCEQ
Surface Water Quality Assessment Advisory Workgroup (SWQAAWG)
November 17, 2020**

Topic Number	Topic	Comment	Response
001	Integrated Report Updates	Could the presenter review the timeline for the 2022 Integrated Report?	TCEQ indicated that the data would be due by March 1, 2021. Data assessments should be complete by the summer. Public comments are currently anticipated to be solicited during the Fall of 2021. The draft IR is currently planned to go before the Commission in February or March of 2022.
		Can you provide info on target dates for IR you spoke of earlier?	Have all data in by March 2021 so we can get to assessing the data in the April to June timeframe. Comments are anticipated to be solicited during the Fall of 2021, and we anticipate going to agenda in February or March of 2022. This is all tentative and could possibly change but March 1 date is the next important date.
002	Summary of Changes to Spatial Information	To whom do I send a request for revisions to an AU? I have identified 2 AUs that need to be changed.	The recommended changes can be sent to Pat Bohannon (Pat.Bohannon@tceq.texas.gov).
		We have Station IDs that need to be changed in the upper [Colorado] basin; they have migrated over time. Who do we need to send that request and info to? Data Management and Analysis (DMA), Clean Rivers Program (CRP), Surface Water Quality Monitoring (SWQM)?	Changes to Station IDs can be sent to CRP and DMA using a Station Location (SLOC) change request.

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003	Data Exclusions Due to Extreme High Flow - Overview of Current Practice and Discuss Potential Options for the 2022 IR	We do our best to obtain flow data at stations, but in some instances we only report flow severity. We are concerned about eliminating data associated with Flow Severity 4. There would be a concern of removing all monitoring data associated with extreme hydrological conditions because of two full years of flood flows in 2015 and 2016 due to reservoir releases that were representative conditions for those years.	Since TCEQ uses a 7-10-year period of record in assessments, one to two-year spans of time typically do not influence the overall outcome. However, there will be an opportunity to express concerns about removing data (particularly data identified as Flow Severity 4) that was caused by persistent high flow conditions during the data provider coordination.
		Can you create percentile reports for the period of record rather than whole gage record? Would it be possible to create percentile graphs based on IR period of record rather than the entire gage record?	Calculating percentiles for flows for each gage station every IR based on seven- or ten-year periods would be very resource intensive. Additionally, limiting the period of record would also be less indicative of representative conditions.
		When removing monitoring data by using entire USGS gage data records, the 98th, 95th, or 90th percentile flows might be different than percentiles for IR period of record length. Excluding extreme high flow data on a case-by-case basis for each IR would take a long time. Is there a way to automate this?	There are tools that could be implemented to automate processes to remove data based on a given set of variables. There would need to be an additional evaluation of the time and complexity involved with incorporating such a method in the current assessment framework.
		We had periods where the river is a mile and half wide and very long periods of over-bank flooding. The flows were representative of the time. If we don't agree with the IR data exclusions, could we request the data not be excluded?	Yes, this could be discussed at the time of the assessment. TCEQ would work with data providers to determine if samples were collected during unrepresentative conditions due to extreme high flows and flooding.

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003, cont.	Data Exclusions Due to Extreme High Flow - Overview of Current Practice and Discuss Potential Options for the 2022 IR, continued	<p>Is there any discernible geographic or regional clustering of the sample events that would be eliminated as a result of going to one of these other approaches? For example, areas in certain parts of the state have had many more flooding events in recent years than other parts of the state. Are there any geographic or regional clustering of sampling events that would be excluded under these or other approaches since that might affect some area of the state more so than others? Is it possible to get any info on clustering prior to comment due date? This may factor into our comments.</p>	<p>TCEQ did not look too closely at the geographic distribution of gages. However, we can investigate this further. We can commit to sending a document to meeting participants detailing the geographic distribution (ecoregions and basins) of sample sets removed under various high-flow scenarios for the 2020 IR.</p> <p>TCEQ will attempt to compile this information and get it out before the comments are due, around December 1.</p> <p>Note: Additional documentation was provided to the Workgroup on December 9, 2020 that summarized the distribution of flow frequencies among the major River Basins in Texas. The comment period for input was extended to December 18, 2020</p>
		<p>Has TCEQ thought about using TSS or turbidity on a sliding scale, per site?</p> <p>[Follow up] TSS and flow severity may have a correlation; it seems to be so in the Colorado Basin</p>	<p>TCEQ has not investigated using TSS or turbidity and flow severity to determine percentiles or other statistics for extreme flow events. While that relationship would be expected, TSS data collected at high and flood flows may be limited, the reliability of Flow Severity observations, and available resources to develop this relationship for each SWQM station could be limiting factors to pursue this approach.</p> <p>TCEQ acknowledges this comment.</p>

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003, cont.	Data Exclusions Due to Extreme High Flow - Overview of Current Practice and Discuss Potential Options for the 2022 IR, continued	[Follow up]: It would be helpful to include an additional observation in flow severity rankings, such as a bankfull option between high and flood observations. When a river spreads out during flood, it will change the chemistry. There needs to be a gradation from bankfull to flood.	TCEQ acknowledges this comment.
		It is recognized that numeric water quality criteria are not based on flood conditions. No matter what high flow exclusion method is used, would it be possible adding to the IR some summary statistics about the data that was excluded? This would carry forward information that might be useable in the future in terms addressing things like whether or not water quality criteria that are designed specifically to address storm conditions are appropriate or not. This would let users and the public know what data were specifically excluded independent of the exclusion method used.	TCEQ acknowledges this comment.

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003, cont.	Data Exclusions Due to Extreme High Flow - Overview of Current Practice and Discuss Potential Options for the 2022 IR, continued	commented, I really like the idea of presenting the excluded data. I am not understanding the basis for the concern about how that would affect decisions on what data to exclude.	The TCEQ acknowledges this comment.
		Do we also exclude data below 7Q2?	<p>Yes, for streams, data are excluded below a station's 7Q2 value for certain parameters (e.g., dissolved oxygen) based on the applicability of the Texas Surface Water Quality Standards. 7Q2s only apply to perennial streams. For perennial streams, data are also excluded when a Flow Severity value of 1 (no flow) is assigned to the data and there is no measured flow value reported.</p> <p>Clarification: Bacteria data are not removed when measured or reported flows are below the 7Q2 as described in Section 307.8 of the Texas Surface Water Quality Standards. However, bacteria samples collected from perennial streams are removed when flows are below 0.1 cfs in accordance with Section 307.9(e)(8) of the Texas Surface Water Quality Standards.</p>

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		Big high flow events fill reservoirs and having general statistics information available for the excluded data would be helpful.	TCEQ acknowledges this comment.
003, cont.	Data Exclusions Due to Extreme High Flow - Overview of Current Practice and Discuss Potential Options for the 2022 IR, continued	<p>It is important that consistent stream flow records of known quality be used to develop the data exclusion statistical approaches. However, it should be noted that there is some degree of error associated with these measurements and statistical procedures. Additionally, flow severity estimates are a subjective measure and the accuracy of the observation can depend on the experience of the monitoring staff. There are positives and negatives to applying flow severity.</p> <p>Is there a time allowed for comments so we can review/digest information?</p>	<p>TCEQ recognizes the importance of quality assurance when performing assessments. Large data sets spanning many years are used to calculate flow percentiles. Errors in results from these data sets should be minimized due to the use of large volumes of data. However, TCEQ recognizes that when discrete gage flow values are assigned to data from routine monitoring events, the data still may be “provisional” and subject to revision, including after the date the data are “approved” by USGS as part of their water-year approval process.</p> <p>TCEQ evaluated potential errors with Flow Severity observations by comparing the observations with gage flow data for the 2020 IR period of record. TCEQ is currently placing more emphasis on training to improve these observations.</p> <p>As noted above, the comment period for input was ultimately extended to December 18, 2020.</p>

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		There are concerns about defining “bankfull” as an extreme event. This is a channel forming flow, but it does not fall into the definition of extreme flow similar to an over bank flow. Has TCEQ looked at really large river systems and how this would apply? These would be situations where you have large rivers that flow at 90th percentile it is completely normal and how this would operate under those conditions.	Based on gage data from across the state, TCEQ has not identified a river where the 90th percentile would be a normal base flow. Depending on the distribution of historic flow data from a given gage station, it could be possible to have 90th percentile flows for an extended period due to controlled reservoir releases. These events could be evaluated on a case by case basis.
004	Texas Beach Watch Data and Assessment Methodology	The approach to exclude revisits is an improvement over the prior method. Events that could result in bacteria impairments are a short-lived phenomenon and the new methods would avoid repeated observations of the same individual advisory event.	TCEQ acknowledges this comment.
		The new methods would reduce bias. Is the 20-25% cutoff based on a data distribution for non-impacted reference sites or whether it was arbitrary?	TCEQ clarified that the enterococcus criteria threshold (104 cfu/100 ml) is a beach action value used by the General Land Office (GLO) as it represents the 75th percentile of enterococcus data for all Texas beaches, not just reference sites. However, the 25% event-level cutoff for use support is based on older single-sample bacteria criteria for primary contact recreation
		Will the presentation be available in order to take a more in-depth look at the proposed changes?	TCEQ will post links to the presentations online.
005	General Discussion	Will there be an audio of today available of this meeting?	TCEQ will provide the meeting notes on the website.

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005, cont.	General Discussion, continued	<p>Flood events in “chain reservoirs” represent conditions that may be dangerous for collecting water samples. If you don’t use the data, why would someone be sent to collect data? Should we collect it knowing it will get rejected in the IR. Or should we skip it regardless of the situation? Chain reservoirs react differently. At what point does TCEQ decide that was a flood event? Rain at the top reservoir may not be a “big deal” but releasing the flood waters to the next reservoir can have big impacts as it goes downstream.</p>	<p>Routine monitoring is a big part of collecting information to assess representative conditions. The data collector will make a determination of the flow characteristics at the time the sample is taken when the flow severity is recorded. Data will be collected concerning flow severity or weather conditions even if a water sample is not collected. The data collected by the various water programs is not only used in assessment and may be important for other purposes. TCEQ considers safety of its staff when performing field work.</p>
		<p>Consider looking at flow severity and possibly expand it to capture more expanded events, especially on the upper end and incorporate more definition. An example may be bankfull, partially out of bank, fully out of bank, flood. This would be especially helpful if used to exclude flooding events, including addressing with language in the SWQM Procedures Manual.</p>	<p>TCEQ acknowledges this comment.</p>