TCEQ Response to Written Comments on the Draft Guidance for Assessing and Reporting Water Quality in Texas for the 2022 Texas Integrated Report (IR) from Members of the TCEQ Surface Water Quality Assessment Advisory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

December 18, 2020

Tracking Number	Commenter	Comment	TCEQ Response
001	Sierra Club Lone Star Chapter	The Sierra Club is the nation's oldest and largest conservation organization. The Lone Star Chapter is the Texas chapter of the Sierra Club and was incorporated in 1965. We have 30,000 members and another 150,000 supporters. We have been involved in monitoring and providing input to the surface water quality programs of TCEQ and its predecessor agencies since the 1970s. We participated in the November 17, 2020 virtual meeting of the TCEQ Surface Water Quality Assessment Work Group in which the TCEQ monitoring and assessment staff provided information on the development of the 2022 Integrated Report (IR), which incorporates the 303(d) list of impaired waters. We appreciate the presentations by TCEQ staff and especially appreciate the additional work done by the staff – in response to our request – to provide further information about the regional distribution of sample events during different high flow conditions. This data is important in the consideration of the options laid out by TCEQ staff for exclusion from the 2022 IR of certain data during flood or high flow conditions.	TCEQ acknowledges these comments. Based on feedback from the SWQAAWG, TCEQ has decided not to change the procedures to implement the extreme hydrologic flow provisions at this time.

Tracking Number	Commenter	Comment	TCEQ Response
001 cont.	Sierra Club Lone Star Chapter, continued	With regard to the changes to spatial information for Surface Water Quality Monitoring (SWQM) segments and Assessment Units (AUs), we have no specific comments. We do not have the resources to evaluate any individual revision, but the rationale provided for the revisions (for example, EPA approval of certain surface water quality standards, correction of spatial or attribute errors, hydromodification of segments or AUs, and the like) indicates that these revisions are appropriate. We do have concerns, however, about the possible change in the current method for exclusion of sample events under certain high flow scenarios in assessing attainment of a particular stream segment with surface water quality standards set for that segment. As we understand it, the rationale for exclusion of any such sample events is that part of the Texas Surface Water Quality Standards that says that: "Sample results that are used to assess standards must not include samples that are collected during extreme hydrologic conditions such as high flows and flooding immediately after heavy rains." Whether or not we agree with that limitation, we understand that flood events may introduce certain contaminants into a stream at levels that are not characteristic of the stream at all times during normal flow conditions. In addition, of course, a flooding event may complicate efforts to obtain samples for several reasons. In our opinion, the current approach taken by TCEQ to data exclusions due to extreme high flow is a reasonable one that limits the exclusion to sampling events from all stations when a flow severity of 4 (flood) is reported and – on a case-by-case basis "where the reported instantaneous flow is greater than the 90th percentile." Regarding the latter scenario, TCEQ staff report that this method was only applied to two monitoring stations for the 2018 IR and no additional stations for the 2020 IR. Therefore, it appears that this case-by-case approach is being used judiciously and does not provide a "loophole" through which data from a large number of stations are excluded.	

Tracking Number	Commenter	Comment	TCEQ Response
001, cont.	Sierra Club Lone Star Chapter, continued	The option to the current method that was presented by TCEQ staff at the November 17 meeting — the exclusion of data based on instantaneous flow from all SWQM stations located within a ¼ mile of a USGS gage if flow is identified as "extremely high" — would lead to the exclusion of a larger number of sample events for assessment purposes in several river basins, particularly in the Trinity, Brazos, and San Antonio River basins and especially if the 90th percentile flow figure is used to define "extremely high" flow. We do note that the increase in number of sample events excluded is not very high if "bankfull" is used to define "extremely high" flow. Candidly, we do not understand what, if any, scientific rationale there is for moving from the current method to an optional method, especially one in which the 90th percentile flow would be chosen as the definition of "extremely high" flow. What constitutes "extremely high" flow is certainly is a judgement call. If there is a scientific rationale for making this change, then TCEQ staff need to clarify what that is. Otherwise, we see no compelling reason for modifying the method for data exclusion. We also note that given the prospects for more extreme weather events in the future as the result of the impacts of climate change — which may well mean more extreme rainfall events — a revision in the methodology for data exclusion may lead to much more data being excluded than currently would be the case. In a state where many people — including ourselves — share the concern that we need more, not less, data to make evaluations about stream conditions, it seems problematic to exclude more of the water quality data that we already have. Moreover, the staff through their current data exclusion methodology has the ability to go beyond the exclusion of data where flow severity is reported as 4 and remove data from events where flow is greater than the 90th percentile on a case-by-case basis to meet special circumstances. That to us is a preferable approach than a blanket exclusion of all sample events from a large number of stations during 90th percentile flow conditions.	

Tracking Number	Commenter	Comment	TCEQ Response
001, cont.	Sierra Club Lone Star Chapter, continued	Thank you for the opportunity to submit these comments and thank you to the TCEQ monitoring and assessment staff for their work to address water quality issues.	
002	Texas Parks and Wildlife Department (TPWD)	The Texas Parks and Wildlife Department (TPWD) appreciates the opportunity to provide comment on the exclusion of data due to extreme high flow in the Integrated Report process proposed by the TCEQ's Surface Water Quality Monitoring Program at the November 11, 2020 Surface Water Quality Assessment Advisory Work Group meeting. TPWD is the agency with primary responsibility for protecting the state's fish and wildlife resources (Texas Parks and Wildlife Code §12.0011(a)) in addition to encouraging outdoor recreation on Texas water bodies, especially those in or adjacent to TPWD properties. Furthermore, we are charged with providing information on fish and wildlife resources to any local, state, or federal agency or private organization that make decisions affecting those resources (Texas Parks and Wildlife Code §12.0011(b)(3)). Please be aware that a written response to this comment letter is required by Texas Parks and Wildlife Code Section 12.0011(c)–(d).	TCEQ acknowledges these comments. Based on feedback from the SWQAAWG, TCEQ has decided not to change the procedures to implement the extreme hydrologic flow provisions at this time.

Tracking Number	Commenter	Comment	TCEQ Response
002, cont.	Texas Parks and Wildlife Department, continued	TPWD has reviewed the various proposals for excluding data collected under various extreme flow conditions for use in the State's Integrated Report (IR). While the TPWD realizes that the Texas Surface Water Quality Standards allows for the exemption of data collected under extreme high flow conditions from determining standards attainment, it is the belief of TPWD that removal of data from the assessment process should not be done in order to avoid addressing real water quality issues affecting aquatic life, human health, or recreation. The term "extreme" can be interpreted many ways and is subjective depending on the nature of the water body (incised channel vs. channel in close proximity to its floodplain), geographic location, and size of the water body (headwater stream vs. main stem channel). Many species of fish depend on high flow and flood conditions to trigger various life stage events such as spawning and water quality during such high flow events should be protected. It is only when flood waters leave the channel and come in contact with terrestrial pollution sources in the floodplain that regulatory efforts to control these pollution sources may not be feasible. It seems reasonable that data being affected by these sources during flood conditions may not be representative of in-channel conditions and may be excluded from assessing the designated use support of a given water body. It is the opinion of TPWD that high flows (i.e., bankfull flows) are not "extreme" flows and should be expected to occur on a somewhat frequent enough basis that these data reflect in-channel conditions, are not biased, and should be included in the IR assessment. While bankfull conditions may indicate flows which have left the channel and entered the floodplain, that is not always the case. In many parts of the state, stream channels are highly incised and bankfull flows merely reach the first terrace within the channel and are in no way connected to the floodplain. For this reason, TPWD does not recommend using bankfull flows to be indicative of extreme flow conditions and we do not support the use of this proposal for the exclusion of data in the IR assessment.	

Tracking Number	Commenter	Comment	TCEQ Response
002, cont.	Texas Parks and Wildlife Department, continued	TPWD supports the use of the current approach of using the flow severity method whereby an aquatic scientist familiar with the instream conditions of a given site over time is skilled at determining what is high flow and what is flood at any given time. We support the use of this approach in excluding specified data based on a similar approach for how low flow data is currently excluded from the IR assessment. It is TPWD's understanding that this similar approach would provide for the assessment being run, and upon a result of any given parameter showing nonsupport of a designated use, that the data set would be inspected and data collected under Flow Severity of "4" (FS4), or "flood" conditions, would then be excluded and the assessment re-run for that parameter. TPWD does not support the exclusion of all data in an event data set when collected under FS4 conditions, but rather only when a specific parameter is showing nonsupport with the FS4 data included in the data set. Another benefit of using the FS4 method is that this method would cover all stream stations and not just a subset of those in proximity to USGS stream gages. If FS4 data were to be deleted regardless of the use support outcome in running the IR assessment as is currently being proposed, it is very likely that there would be unintended consequences. For example, if a data set shows full support of the aquatic life use for dissolved oxygen (DO) including data collected under FS4 conditions (which is likely due to flood waters often being highly oxygenated) and that FS4 DO data were then removed, this may actually result in a water body once fully supporting its aquatic life use for DO now showing nonsupport for DO. It is also the position of TPWD that toxic substances data should not be deleted when assessed for acute toxicity regardless of the flow conditions, either during extreme low or high flow conditions. If toxic substances are showing up during flood conditions, then there likely is a real water quality problem that needs to be addressed through the regulatory process. Surface waters should not have exemptions for toxic conditions regardless of flow.	

Tracking Number	Commenter	Comment	TCEQ Response
002, cont.	Texas Parks and Wildlife Department, continued	There are also numerous water bodies, such as in Central Texas, where recreation is more likely to occur during high or flood conditions and the removal of some parameters, specifically bacteria, in these types of water bodies could risk human exposure to pathogens often present during high flow conditions. For this reason, TPWD recommends that the removal of bacteria under this proposal only be allowed in water bodies where high- water recreation is not likely to occur. This will need to be on a case-by- case basis rather than based on any flow regime determination including the designation of FS4 on the data reporting form. TPWD appreciates the opportunity to offer comment and looks forward to working with the TCEQ SWQM Program on further input regarding these proposals.	
003	Texas General Land Office (TGLO)	Texas Beach Watch staff appreciate the opportunity to provide supplemental information to the Surface Water Quality Assessment Advisory Work Group (SWQAAWG) for inclusion into considerations of a potential revised data assessment method. Due to the complex nature of characterizing coastal water quality data, we are requesting an opportunity to share information with the SWQAAWG before the decision is made and the proposed revisions are finalized. **The proposed method may potentially exclude a significant amount of available data, which could prove important in better understanding coastal contact recreation conditions.**	TCEQ acknowledges these comments. TCEQ has decided not to change the procedures to evaluate Beach Watch advisories at this time.

Tracking Number	Commenter	Comment	TCEQ Response
003, cont.	Texas General Land Office, continued	As you may recall, Texas Beach Watch recently collaborated with TAMUCC-HRI scientists to conduct an 11-year data analysis. This review included data from 169 monitoring stations and more than 75,000 sampling events. While this study was not conducted specifically for aiding with the IR data analysis, the information is insightful and may help the SWQAAWG better understand coastal FIB in the nearshore environment. For instance, (excerpt from Characterizing Water Quality Conditions in the Texas Coastal Zone study, attached): *"In general, beaches located in bays and lagoons (defined as bayside beaches) experienced higher enterococci concentrations compared to bays located on the Gulf of Mexico (defined as Gulfside beaches).* *The higher enterococci concentrations at bayside sites could be attributed to closer proximity to bayside population centers (e.g., Port Arthur, Houston, Port Lavaca, Corpus Christi, and Brownsville). The higher concentrations could also be attributed to reduced dilution or flushing as multiple Texas bays and lagoons exhibit limited freshwater inflow and little exchange with the Gulf of Mexico (reviewed by Montagna et al., 2013). A previous long-term data 20 analysis at the German Baltic coast similarly revealed that bays and lagoons pose higher microbial risks compared to open-water areas (Buer et al., 2018). The authors of that study postulated that bacteria pollution at bayside sites was likely a multifactorial problem owing to the resuspension of bacteria from sediments in shallow water, prolonged bacteria survival in turbid water, and the heightened bayside impact of stormwater inflows."* If you think it would be beneficial, we appreciate the opportunity for our team to present information to the group before a final decision is made. A brief 30-minute review of data findings and group discussion might highlight key aspects and allow opportunities for a data-driven approach to revising IR methodologies.	