



Texas Environmental Flows Dashboard

Guadalupe, San Antonio, Mission and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays *as of Aug 2023*

Instream flows, number of measurement points: The expert science team provided recommendations for flow levels at 9 measurement points in the Guadalupe River Basin, 6 in the San Antonio River Basin and 1 in Mission River basin. TCEQ adopted flow standards for all those measurement points. Unfortunately, TCEQ does not require the use of the flow regimes at those points to calculate protection levels to be applied at additional flow gages. As a result, even with those measurement points, compliance with flow protections for individual permits often is based on flow levels at very distant gages, sometimes on a different stream. That means a diversion that dries up a local stream may “comply” with flow standards if there is flow at the distant measurement point.

Instream flows, diversions down to subsistence levels: The adopted flow standards for the San Antonio and Mission river basins only allow diversions down to subsistence flow levels during hydrological conditions representing the driest 25% of the time. Because subsistence flows represent very low levels intended to be reached only rarely during drought periods, aquatic species are at risk at those flow levels. In the Guadalupe River Basin, diversion down to subsistence is allowed, subject to the 50% rule, anytime flow falls below the baseflow level. The expert science team recommended the same approach for the Guadalupe Basin as adopted for the San Antonio and Mission basins. Under the adopted standards, however, in the Guadalupe Basin when diversion under older permits without flow protections causes flows to drop below baseflow level, flow protections applicable for new permits also drop, just when more protection under new permits is most needed. The flow standards in that basin do apply a “50% rule” to limit the drop in flow levels: the permit holder can divert or impound half of the flow above the subsistence level. So, if flow at the measurement point is 100 cfs, the baseflow level is 150 cfs, and the subsistence level is 50 cfs, in theory, the permit holder only gets 25 cfs. However, the 50% rule really can only work where there is a nearby measurement point, which is rare.

Instream flow, levels of baseflows: The expert science team recommended three different levels of baseflows, representing dry, average, and wet conditions, for all locations because different species do better with different flow levels. The flow standards adopted by TCEQ match the expert science team recommendations for the San Antonio and Mission basins, but include only one level of baseflow for the Guadalupe Basin, although it is fairly high.

Instream flows, levels of pulse flows: The expert science team recommended five different levels of pulse flow protections at most locations. The adopted flow standards generally protect only the lowest two levels of those pulse flows, and with exceptions that allow some new permits to avoid, based on diversion rate, complying with pulse flow protections.

Instream flows, strategy targets: Under the applicable statute (SB 3), flow standards, in addition to establishing criteria for new permits, are intended to establish target levels of river flows and freshwater

inflows to bays and estuaries to be met through the implementation of voluntary proactive strategies, such as purchases of water rights, to improve impaired flow levels. There are no strategy targets for instream flows in these flow standards.

Freshwater inflows, drought period criteria: The expert science team recommended annual flow regimes for dry periods for San Antonio Bay with accompanying attainment frequencies. Attainment frequencies define how often levels are allowed to be reduced below the recommendations. The adopted flow standards only use the science team recommendations for attainment frequency as targets for voluntary protection efforts. Adopted standards applicable for new permits use much less protective attainment frequencies than those identified by the science team as adequate to protect a sound ecological environment. They also fail to identify minimum flows for drought periods. There are no drought period criteria for Mission Bay, only a single criterion for rare high inflow events.

Freshwater inflows, reopener mechanism: Senate Bill 3 directs that permits issued after Sept. 1, 2007, can be reopened to increase inflow protection by a limited amount if flow standards are amended to be more protective. TCEQ implementation does not provide a mechanism for reopening the freshwater inflow component.

Freshwater inflows, strategy targets: There are broad attainment frequency targets to guide voluntary proactive strategies, such as purchases of existing water rights, to increase bay inflows. Because strategies to increase inflows likely will provide relatively small volumes of water, broad targets for attainment frequencies of large volumes, although conceptually important, may have limited utility.

Overall, match with science team recommendations: The expert science teams were charged with developing recommendations adequate to protect a sound ecological environment. The instream flow component matches expert science team recommendations for the San Antonio and Mission basins except that protections for most larger pulse flows were omitted or reduced in size. Instream flow components for Guadalupe Basin are less protective than science team recommendations in multiple ways. The freshwater inflow components of the adopted standards, although reflecting the structure of science team recommendations, protect much lower attainment frequencies.