TEXAS LIVING WATERS

Texas Environmental Flows Dashboard

Trinity and San Jacinto river basins and Galveston Bay *as of Aug 2023*

Instream flows, number of measurement points: The expert science team did not reach consensus, providing competing recommendations with just less than half of members recommending flow levels at 4 measurement points in the Trinity River Basin and 2 in the San Jacinto River Basin and the majority recommending use of 6 in the Trinity, 3 in the San Jacinto, and 2 in smaller bayous. TCEQ adopted flow standards for 4 measurement points in the Trinity basin and 2 in the San Jacinto basin. 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, 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 allow diversions down to subsistence flow levels whenever flows at the measurement point are below the seasonal baseflow level. Because subsistence flows represent very low levels intended to be reached only rarely during drought periods, aquatic species are at risk at those levels. If impoundment or diversion under older permits that lack any flow protections causes flows to drop below baseflow level, flow protections applicable for new permits also drop, just when better protection under new permits is most needed.

Instream flow, levels of baseflows: There were competing science team recommendations. A portion of the expert science team recommended only a single baseflow level, with the majority of the members recommending three different levels of baseflows, representing dry, average, and wet conditions, because different species do better with different flow levels. The adopted flow standards only protect a single level of baseflows slightly above the single level recommended by the minority of the expert science team, which approximates the levels recommended by the majority for use in dry conditions.

Instream flows, levels of pulse flows: The majority of the expert science team recommended four different levels of pulse flow protections. The remaining members "conditionally" recommended one level of small pulses. The flow standards adopted by TCEQ protect a single level of pulse flows that is reasonably close to the lowest levels recommended for protection by the members of the expert science team.

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 or freshwater inflows in these flow standards.

Freshwater inflows, drought period criteria: The expert science team split on its recommendations for inflows to Galveston Bay. TCEQ developed its own approach that is less protective than either recommendation. The adopted standards do not include criteria for the driest 40% of seasons or the driest 25% of years. That means there are no inflow protections during drought periods.

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

Freshwater inflows, strategy targets: There are no targets to guide voluntary proactive strategies, such as purchases of existing water rights, to increase bay inflows.

Overall: match with science team recommendations: The expert science team was charged with developing recommendations adequate to protect a sound ecological environment. Because of split recommendations by the science team, there is no easy answer: various aspects of the adopted standards are more protective than some members recommended and less protective than what the majority of members recommended.