

Additional FRAT and Compliance Frequency Analysis Results
Brazos BBASC
June 27, 2012

At its May 30-31 meeting the Brazos Basin Bay Area Stakeholder Committee (Brazos BBASC) requested from the technical subcommittee additional Flow Regime Analysis Tool (FRAT) runs for the Allens Creek and Double Mountain Fork projects assuming a modified version of the Basin Bay Expert Science Team Environmental Flow Regime (BBEST EFR). The BBEST EFR was modified by deleting high flow pulse events greater than the National Weather Service flood action stage, pulses that are longer than 30 days and the 3 and 4 per season pulses. This is consistent with the modifications made by TCEQ in the rules proposed for the Colorado-Lavaca Bay Basin.

The Brazos BBASC also requested compliance frequency analyses for Allens Creek and Double Mountain Fork under historical conditions, WAM 3, Lyons, BBEST EFR, and modified BBEST EFR consistent with Colorado-Lavaca proposed rules. The technical subcommittee also analyzed the "infinite infrastructure" scenario, a scenario that would result if reservoirs and/or diversions existed that were large enough to divert all water except the BBEST EFR. The compliance frequency results compare how much of the time environmental flows are met under each scenario. The percent of time flow equals or exceeds the BBEST EFR recommendations is the metric for non-pulse flows (subsistence, base low, base medium and base high). The total number of high flow pulse (HFP) events occurring over the analysis period is the metric for seasonal and annual pulses.

The Brazos BBASC also requested additional compliance frequency analysis for two other gages, if time permitted. These analyses would potentially provide additional perspective regarding flow regimes in other parts of the basin. These analyses would not include projects, but just historical gaged flows and WAM 3 simulated flows. The technical subcommittee reviewed the additional gages and decided that the best gage to analyze next is the Brazos near Palo Pinto. This analysis will be conducted if desired by the BBASC after its June meetings.