

Colorado-Lavaca BBASC Example Application of Flow Chart: Lavaca River at Edna

Step 1: Unappropriated water is available (based on Water Availability Modeling Run 3 analysis for 1940-1996)

- Annual average unappropriated water is 201,454 acre-feet
- 6 of 57 years had zero flows

Step 2: Lake Texana volume proposed by the BBEST as the hydrologic condition and reviewed by the stakeholder WAM subcommittee

Step 3: Hydrologic condition triggers proposed by the BBEST. Base flow condition determined by:

- High base flow protected when Lake Texana full, volume = 170,300 acre-feet
- Medium base flow protected when Lake Texana is less than 170,300 acre-feet and above 132,460 acre-feet (77.78% reservoir full)
- Low base flow protected when Lake Texana is below 132,460 acre-feet and above 93,298 acre-feet (54.78% reservoir full)
- Subsistence flow protected when Lake Texana is below 93,298 acre-feet

Step 4: An off-channel reservoir proposed project that would use a 200 cubic feet per second pump to divert water from the Lavaca River and which would provide up to 15,875 acre-feet

Step 5: BBEST calculated how much water would remain in the stream when considering the BBEST environmental flow regime for the Lavaca River, and the information in steps 2-4.

Step 6: BBEST calculated how frequently the different levels of base flow would occur and compared those frequencies to the HEFR/Hydrological Analysis table frequencies. For detailed comparison, see Kirk Kennedy's "Summary of Compliance Results With CL BBEST Eflow Recommendations" (5/24/2011).

	Historical Frequency	Frequency (applying steps 2-5)	Difference between frequency of occurrence historically and with project in place
High base flow	39	30	9% less
Medium base flow	55	48	7% less
Low base flow	73	67	6% less

Step 7: Stakeholders ask the BBEST to evaluate whether a sound environment would continue to exist if the base flow frequencies were reduced by the percents shown in the table above.