

OVERBANK FLOWS DISCUSSION

The Stakeholder Committee acknowledges the critical importance of overbank flows, which are considered here to be those flows that exceed the National Weather Service flood stage, in supporting a sound ecological environment. As noted by the BBEST, overbank flows provide important ecological functions, such as clearing large or accumulated in-channel debris, allowing access to the flood plain for organisms and seeds, and providing energy of the upper range of geomorphic activity. The Texas Environmental Flows Science Advisory Committee (SAC) also noted the importance of overbank flows in providing connections for aquatic organisms to move into floodplain areas and in maintaining the balance and diversity of organisms in riparian zones along rivers and streams. Similarly, the Stakeholder Committee recognizes that overbank flow events provide important inputs of sediment and nutrients to estuaries.

The Committee strongly believes that those functions are critically important and should be maintained. The Committee also believes that overbank flows are likely to continue to occur with relatively little impact from the types of future water development projects that are expected to occur in the Colorado and Lavaca River basins. Finally, the Committee also acknowledges that overbank flows can result in damage or harm to critical infrastructure and buildings and can imperil human life. Accordingly, the Committee is not recommending specific restrictions on diversions that would apply to protect overbank flows. As is true for all pulse flows, the Stakeholder Committee also is not recommending that any permittee should be required to make releases from storage or to otherwise seek to create a pulse flow that would not occur naturally.

The Committee urges public and private entities to consider the ecological benefits of overbank flows in developing policies and taking actions that might adversely impact riparian communities in the Colorado and Lavaca River Basins. Further we believe that, as part of adaptive management activities in these river basins, the frequency, magnitude, and volume of overbank flows should be monitored and compared to the overbank flow recommendations of the BBEST to determine if significant changes in such flows are occurring over time and, if so, how such changes might be affecting the ecology of the river basins.

Where the BBEST environmental flow regime recommendations included pulse flow levels that were expected to produce overbank flows, the Stakeholder Committee requested that the BBEST recalculate pulse flows to identify a bank-full flow level. In instances when only the largest pulse flow recommendation at a given location was identified as producing overbank flows, the Stakeholder Committee simply adjusted the parameters of that pulse flow to result in a bank-full flow. However, at some locations, more than one level of pulse flows included in the BBEST's environmental flow regimes were identified as producing overbank flows. In those instances, the Stakeholder Committee ...

The sections of this report addressing environmental flow standard recommendations for individual locations provide additional detail about adjustments made by the Committee to address issues associated with overbank flows.