

Overbank Flows [Draft Stakeholder Committee Statement] – submitted by Ken Kramer

Both the Conditional Group and the Regime Group of the Bay/Basin Area Expert Science Team for the Trinity and San Jacinto River Basins and Galveston Bay recognized and discussed the essential role of “overbank flows” in maintaining a sound ecological environment. Overbank flows, as described by the Conditional Group, are “naturally driven, infrequent, high magnitude flow events that produce water levels that exceed channel banks and result in water entering the floodplain.”

The Regime Group, drawing from the discussion in the Biological Overlays Guidance Document developed by the Texas Environmental Flows Science Advisory Committee, described in some detail the specific ecological functions performed by overbank flows. These include, for examples, dispersal of seeds for bottomland hardwood tree species, transportation of terrestrial vegetation into a stream to increase concentrations of organic carbon to the food chain, and movement of aquatic organisms to and from aquatic floodplain habitats.

The Regime Group concluded that:

*“The overbanking flow components of a flow matrix...thus have important functions for the ecological system, and for some species this component is critical for completion of the life cycle (i.e., bottomland hardwood tree species) and/or support of significant population abundance (e.g., white and black crappies, gizzard shad). It is essential to recognize that overbanking flows are a part of the natural flow regime that maintains the native biodiversity of the two basins.”*

The Stakeholder Committee agrees that overbank flows are a critical component of an environmental flow regime to maintain a sound ecological environment for the Trinity and San Jacinto River Basins. The Stakeholder Committee does not recommend, however, that action be taken to produce such flows because of the possible consequences for property damage and loss of life that might result from deliberate creation of flood flows. We believe that overbank flows will continue to be produced as a result of natural occurrences.

The Stakeholder Committee does urge public and private entities to be attentive to the ecological benefits of overbank flows in developing policies and taking actions that might impact the floodplains in the Trinity and San Jacinto River Basins.

Further the Stakeholder Committee believes that, as part of adaptive management activities in these river basins, the frequency, magnitude, and volume of overbank flows as they occur should be studied in comparison to the overbank flow recommendations of the Regime Group 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.