

Minutes from Hydrology Committee of the Colorado/Lavaca BBEST  
10:00am at the Austin offices of PBSJ  
October 8, 2010

**1. Review of the current HEFR results and discuss possible baseflow separation by season.**

The group reviewed Joe Trungale's email describing the results of his additional work relating to changing the baseflow separation threshold per season. In addition the group discussed Thom Hardy's comments that a case by case screening might be a more logical and manageable way to proceed rather than additional parameterization attempts. While the additional revision to the baseflow separation threshold did result in some success, this approach did not solve all of the problems. There was group discussion as to whether it was necessary or even reasonable to continue to change the parameters for baseflow separation in order to force HEFR to produce high flow pulse results for gages that actually had very few pulse events in the first place and therefore probably did not have much environmental reliance on same. Finally, there was some discussion of perhaps recommending less frequent seasonal events, every few years, that the request for these types of statistics should come from the other ecological disciplines rather than something that the hydrology group randomly generate.

***The group agreed that the better way to proceed was to not generate any high pulse statistics for these gages unless the other disciplines on the BBEST team could justify an ecological basis for doing so.***

**2. Review the results of the initial geomorphic analysis.**

Nolan Raphelt gave an overview of his current geomorphic modeling activities and indicated that although his analysis is incomplete, there is likely going to be problems in that the current high pulse event recommendations in the initial HEFR results did not preserve enough of the higher end flows to protect channel conditions. Specifically, Nolan presented hydrographs of several years in which both the once per season and twice per season high pulse event was met but there was significant flow later in the season that was slightly less than the overbank requirement and thus was not protected by the HEFR matrix. Nolan noted that there is a large gap in flow magnitude between the initial HEFR results for high pulse events and overbanking events. The gap allows these extremely large magnitude pulse/flood events to evade protection and thereby substantially reduce the effective discharge in his model. The group discussed ways in which he could begin to alter the initial requirements to preserve more flow for channel maintenance. One of the ideas was to assume there is a reasonable limit of how much of these large unprotected flows could possibly ever be diverted or impounded and that perhaps a series of limits should be considered with regard to how much of these large events could be utilized even if they were not protected by specific requirements in the HEFR matrix. The other idea was that an additional high pulse event could be determined that had a frequency of

occurrence more on the order of once per year or once per multiple years in addition to the current pulses that are quantified for once and twice per season. Another possibility would be to increase the frequency of the existing high flow pulses, in other words for the 2 per season events perhaps pass the 3rd, 4th or 5th of these should they occur in a given season.

***The group agreed that the idea of testing the addition of additional pulse requirements quantified for a frequency of once per year or multiple years was a reasonable approach and Nolan agreed to begin testing this approach. The group also agreed that the idea of limiting the amount of water within these large flood events that could be diverted or impounded may be something that we consider later in the process.***

### **3. Discuss future conditions impact assessment. Discuss the results of the recent BBASC WAM Subcommittee meeting.**

Rubin Solis and Yujuin Yang detailed the results of their participation in the Colorado BBASC Stakeholder Subcommittee on September 28, 2010 in which they presented their ideas on how the TCEQ's RUN3 and RUN8 could be used to address stakeholder issues. The group discussed many of the things the stakeholder's were encourage to consider with regard to a creating a RUN9 of the WAM, which (in past BBEST/BBASC analysis) has elements of RUN3 and RUN8 and also considered conditions at some point in the foreseeable future along with some/all of the water management strategies identified in the Region K / Region F Water Plan. There was also discussion about whether the BBASC was interested in the Colorado WAM cutoff model, an approach in which the priority of water rights in the upper Colorado are simulated without call by the more senior water in the lower Colorado Basin. Kathy Alexander discussed latest WAM modifications that would more easily facilitate the implementation of some sort of priority cutoff, in the event the BBASC wanted to consider same. The group also discussed the need to develop an example WAM output of the BBEST initial recommendations being imposed in the various WAM model runs for the purposes of better demonstrating the types of results that will me made available to the BBASC and it was suggested that the Lavaca Basin might be a good choice to begin this process since this basin is smaller and less complicated than the Colorado River Basin.

***Another meeting of the Colorado BBASC Stakeholder Subcommittee will be held October 18, 2010 and the subject of RUN9 will be more clearly defined and discussed. Kirk Kennedy is planning on attending these meetings and he and Richard Hoffpauir will also explore the new options in WAM for addressing priority cutoff representations. The group also decided that the initial example cases the TWDB will work on for the BBASC should be based on the Lavaca WAM models.***

### **4. Other issues as time allows.**

*None.*