Draft Agenda

Colorado/Lavaca BBEST Meeting,

January 18, LCRA Redbud Center, Rm 108 N, from 8:30 until at least 4:30 pm
January 19, LCRA Shapiro Building, Rm S433, from 8:30 until at least 3 pm

The primary goal of this meeting: Reach consensus on the final environmental flow recommendations for the selected sites in our basin.

During meeting:

- Focus thoughts and comments on our goal. Be concise in comments and ready to decide.
- Flip charts
    - Record future data, analysis, information needs that may be addressed by the adaptive management/work plan
    - Record assignments before the end of January and submittal of the draft report to TWRI.

8:30 Review agenda. Decide lunch plans (Shapiro Bldg cafeteria will be open, LCRA support staff may be able to take lunch orders for Jason's Deli)
Review and act on the Dec. 21, 2010 consensus points and action items

8:45 No-flow environmental flow component at all sites

9:00 Pedernales subsistence flows.
Melissa – (5 min) reviews the analysis in her detailed summary that relates specifically to subsistence flows
Thom – (1 min) reviews habitat suitability results for Pedernales River relevant to subsistence flows
Bryan – (5 min) reviews water quality results for Pedernales River relevant to subsistence flows
Nolan – (1 min) reviews geomorphology results for Pedernales River relevant to subsistence flows
Team discusses possible flow values appropriate for subsistence flow (10 min)
Team reaches consensus on subsistence flow values (4 numbers) for the Pedernales River (5 min)
Team reviews and reaches consensus on the principles involved in determining subsistence values

9:30 Colorado @ Ballinger subsistence flow
9:50 Lavaca @ Edna

10:10 Sub-basin teams split and develop subsistence flow for 2 sites

10:40 BBEST has 5 minute process check – are we following the same process for subsistence flows?

10:45 Sub-basin teams split and complete identification of subsistence flows for their sub-basins

Noon Lunch

12:30 Pedernales base flows

1:10 Colorado @ Ballinger base flows

1:40 Lavaca @ Edna base flows

2:25 Sub-basin teams split and develop base flows for 2 sites

3:25 BBEST has 10 minute process check – are we following the same process for base flows?

3:35 Sub-basin teams split and complete identification of base flows for their sub-basins

5:00 BBEST reconvenes and reviews process and results. Develops recommendations for Jan. 19

5:30 Adjourn

Jan. 19, 2011, Wednesday, Shapiro 433

8:30 Questions/comments about Jan. 18 activities

9:00 Pedernales pulse/overbank flows

9:30 Colorado @ Ballinger pulse/overbank flows

9:50 Lavaca @ Edna pulse/overbank flows

10:10 Sub-basin teams split and develop pulse/overbank flows for 2 sites

10:40 BBEST has 5 minute process check – are we following the same process for pulse/overbank flows?

10:45 Sub-basin teams split and complete identification of pulse/base flows for their sub-basins

11:30 Report preparations discussion with Kathy Wythe

12:30 Lunch

1:00 Bryan and Dave present Lavaca Bay draft freshwater inflow recommendations

2:00 Review freshwater inflow recommendation for Matagorda Bay, Bryan/Melissa

2:15 Team discusses and reaches consensus on freshwater inflow recommendations

3:00 Review remaining assignments and decisions to be made and reach consensus on how they will be completed by January 30.

3:30 Adjourn (please be flexible in regard to continuing to work as necessary)

Meeting Guidance
Teams:

- Upper Colorado, Silver downstream to San Saba – Okla, Richard, Dave
- Lower Colorado, Colorado @ San Saba downstream to Wharton, including tribs – Bryan, Melissa, and Joe
- Lavaca/Navidad – Cathy, Thom, Steve, and Kirk

Environmental flow regime components: No-flow periods and subsistence flows

1. No-flow – this may not be applicable to all stream reaches.
    a. Recommended approach –

i. Narrative statement that the frequency and duration of no-flow periods should not be artificially increased.
ii. Description by season, of the frequency and max. duration of no-flow periods in each season.

2. Subsistence flow:
    a. Prevent lethal water quality conditions
    b. Maintain upstream-downstream connectivity in the stream
    c. Maintain critical habitat
    d. Infrequent and relatively short duration
    e. Possible approaches
        i. Did review of water quality data show flows related to dissolved oxygen below 2 mg/l or temperature exceeded 35°C?
            1. If yes, choose flow above that flow.
            2. If no, go to iv.
        ii. Did review of aerial photography indicate a flow at which the upstream-downstream connection was broken?
            1. If yes, choose a value above that flow.
            2. If no, go to iv
        iii. Did……?
            1. If yes, choose value above that flow.
            2. If not, go to iv
        iv. TCEQ Critical Low Flow for summer and 5th percentile for other seasons.

3. Base flows
    a. Maintain habitat diversity, velocity and depth, which provides habitat for the diversity of aquatic life present
    b. Maintain water table and in riparian zone and flood plains
    c. Assumptions
        i. Multiple levels (2 or 3) of base flow are appropriate to represent diverse and variable needs of the species and their different life stages. Levels would represent base flows in wet periods, base flows in moderate/normal rainfall periods, and base flows in dry periods
    d. Process
        i. Are published, valid base flow values available?
            1. If yes, consider those values.
            2. If no, go to ii
        ii. Are habitat/flow curves available?
            1. If yes, estimate flow ranges or identify levels of habitat availability for dry, normal, and wet periods
            2. In no, go to iii
        iii. Are habitat/flow curves available for nearby streams (same watershed, same ecoregions)
            1. If yes, identify base flows by choosing comparable flow percentiles to those where base flows were determined for the dry, normal, and wet periods,
            2. If no, go to iv
        iv. Choose the 25th, 60th and 80th percentile of the flows below the 75th percentile flow of all flows

4. Pulse flows
    a. Shape the river channel, flush silt and fine sediment
    b. Wash vegetation out of the channel
    c. Provide spawning cues
    d. Connect river to backwaters, sloughs and tributaries
    e. Reset water quality conditions
    f. Process
        i. Are published, valid pulse and overbank flow values available?
            1. If yes, consider those values.
            2. If no, go to ii
        ii. Are estimates of effective discharge available?
            1. If yes, estimate pulses that move the greatest amount of sediment
            2. In no, go to iii
        iii. Are riparian and flood plain data available that indicate pulse flows?
            1. If yes, identify pulse flows that maintain riparian/flood plain, water dependent features.
            2. If no, go to iv
        iv. Choose pulse and overbank flow magnitudes, durations and frequencies calculated from historical hydrology
5. Don't sweat the small stuff: For all flow values in the environmental flow regimes, suggest:
    a. Calculate the average of all adjacent values that are within ± 10% of each other, calculate the average of those values
    b. Consider rounding all flow values ≥100 cfs to 2 significant figures and all flow values <100 cfs to 1 significant figure