

**Lower Colorado Regional Water Planning Group
Water Modeling Committee Meeting
LCRA, Redbud Center
June 27, 2018**

1. Teresa Lutes called meeting to order at 10:02 a.m.

2. Attendees (31)

Committee Members:

Teresa Lutes – Region K Water Modeling Committee Chair, Municipalities Rep

David Wheelock –Region K, River Authority Rep

Mike Reagor – Region K, Small Municipalities Rep

Doug Powell – Region K, Recreation Rep

Jason Ludwig – Region K, Electric Utilities Rep

Jim Brasher – Region K, GMA-12 Rep

Ron Fieseler – Region K, GMA-9 Rep

Ann McElroy – Region K, Environmental Rep

David Bradsby – Region K, TPWD Rep

Lann Bookout – TWDB

Additional Attendees:

Jaime Burke – AECOM

Alicia Smiley – AECOM

Joe Trungale – Trungale Engineering

Richard Hoffpauir – Hoffpauir Consulting

James Kowis – J Kowis Consulting, LLC

Andrew Austin-Petersen – LCRA

Lauren Graber – LCRA

Ron Anderson – LCRA

Helen Gerlach – Austin Water

Ross Crow – City of Austin

Christianne Castleberry – Castleberry Engineering, Region K Water Utilities Alternate

Cindy Smiley – Smiley Law Firm

Jo Karr Tedder – CTWC

Tom Harrison

Richard Golladay

Paul King – Rancher, Burnet County

Norman Johns – National Wildlife Federation

Dan Roark – PLTA

Andy McConnell – Sunset Commission

Danielle Nasr – Sunset Commission

Mikayla Garrison – Sunset Commission

Erick Fajardo – Sunset Commission

3. Public Comments

- a. None.
4. Minutes Approval
- a. Draft of April 5, 2018.
 - i. David Wheelock requested changes to 6.a. and 6.b.i.
 - 1. 6.a. Change “Riparian water rights are the most senior water right...” to “Riparian water rights are superior water rights...”
 - 2. 6.b.i. Add the word ‘historic’ to read, “Naturalized flows in the modeling account for the *historic* removal and capture of river water...”
 - ii. David Wheelock motioned to approve minutes. Jim Brasher seconded. Committee approved minutes.
5. Region K Cutoff Model
- a. Background and effort-to-date
 - i. Hydrologic variance is approved by TWDB
 - ii. LCRA’s consultant developed Cutoff Model with assumptions. Initial numbers need to be entered in Database before technical memorandum is due in September.
 - b. Presentation and discussion of initial results
 - i. Assumptions incorporated in Cutoff Model
 - ii. The new drought of record begins with 10/07. The lowest combined storage in Lakes Buchanan and Travis is reached in 4/15. The hydrologic record ends with 12/16. However, reservoir combined storage does not completely return to full in the last month of the hydrologic record. Use the available data for estimating reservoir firm yield over the new drought of record, 10/07 through 12/16. Additional hydrologic data may be available in the next regional planning period. Full storage is based on reservoir elevation-volume studies for the Highland Lakes.
 - iii. Firm yield for Highland Lakes is averaged over drought-of-record.
 - iv. Lower sedimentation rate in the Highland Lakes than last cycle based on most recent surveys, completed in 2006 and 2008.
 - v. Presentation of preliminary results based on 1950s drought
 - vi. Presentation of preliminary results based on recent drought
 - vii. Preliminary HL firm yield for new plan compared with 2016 plan: Decrease in firm yield in 2020 (-26,548) due to new drought of record but reduced decrease in storage over time offsets firm yield in 2070 (-343)
 - viii. Major Run-of-River Rights
 - 1. Arbuckle Reservoir is providing an increase in availability for Gulf Coast Sr. water rights.
 - 2. STP shows more run-of-river water in recent drought than 50s drought.
 - 3. Overall increase of about 50,000 acre-feet for major run of river water rights as compared to last cycle.
 - c. Path forward
 - i. Pending update to evaporation file by TCEQ.
 - ii. David Wheelock suggests running from full-to-empty reservoir drought period rather than full-to-full. Joe Trungale showed the committee the full-to-empty analysis. The firm yield increased as compared to full-to-full. Committee preferred the more conservative full-to-

full. Can include explanation of both methods and reasons for choosing one over the other in Drought Chapter of 2021 Plan (Ch. 7).

- iii. Teresa Lutes suggests it would be helpful (over time) to consider a more conservative model where reservoirs do not empty all the way (safe yield approach). This would be in future cycles.
 - iv. Teresa Lutes asked about the use pattern assumption used for LCRA's lower basin water rights in the preliminary numbers shown at the meeting. The monthly demand pattern was changed from a multi-use pattern, as was used in the last Region K planning round, to an industrial pattern. The group discussed this and it was decided to have the consultant run the WAM with the multi-use pattern for consistency with the last planning round. Making a change to the pattern had not been previously discussed or sought in the hydrologic variance. The group decided to hold a Water Modeling Committee meeting briefly before the July 11th meeting to review the water availability estimates with the multi-use pattern, which are anticipated to be more conservative. The committee will plan to review the new numbers at the meeting and consider making a recommendation to the full Region K group.
- d. Ann McElroy asked how much water is lost to Region F from subordination. David Wheelock responded that 90,000 acre-feet is the estimated effect of the subordination on the Highland Lakes firm yield, based on a legal agreement between CRMWD and LCRA. TCEQ uses the full-basin model for permitting purposes. Teresa replied Cutoff Model is more reflective of conservative planning due to contractual commitments.
6. City of Austin hydrologic conditions presentation – Richard Hoffpauir
- a. COA has been working on a 100-year integrated water resources plan in a process called Water Forward. The plan will be updated every five years. The presentation's purpose is to provide an overview of the hydrologic modeling for COA's plan and food-for-thought for Region K.
 - b. Teresa Lutes: In future meetings, Water Modeling Committee can discuss how ideas from COA's studies could be integrated into Region K process.
7. Modeled Available Groundwater (MAG) Peak Factor
- a. MAG peak factor can be used this cycle to expand groundwater availability during times of drought, if able to show that less is used during wetter periods and Desired Future Condition is not exceeded.
 - b. Discussion is postponed to next meeting.
8. New / Other Business
- a. None.
9. Next meeting
- a. July 11, 2018 – Proposed times
 - i. Prior to Region K meeting ~ 9:30 am – Water Modeling Committee Meeting
 - 1. Committee Chair Teresa Lutes will not be at meeting – Helen Gerlach will act as alternate.
 - 2. Review new numbers and approve to recommend to Region for inclusion in Tech Memo.
10. Public Comments

- a. Jo Karr Tedder asked that if there are low inflows, does the RWPG adjust the WAM to adjust for changes in the watershed? Looking at the historical averages, how do we end up with more stored water in 2070?
 - i. Lann Bookout responded, saying that modeling incorporates additional years of data as able.
 - ii. Combined storage still decreases over time, but is greater than last cycle due to the updated sedimentation rates.
- b. Tom Harrison commented that small impoundments keep water from flowing downstream. The RWPG should make the effort to ensure those and alluvial wells are accurately tracked.
- c. Cindy Smiley asked when the draft of Technical Memorandum comes out for review.
 - i. The draft Technical Memorandum is scheduled to come out on August 22. There is a 14-day comment period.
 - ii. The RWPG meeting is scheduled for August 29.

11. Teresa Lutes adjourned at 12:12 p.m.