

July 3, 2018

Mr. Jeff Walker
Executive Administrator
Texas Water Development Board
1700 North Congress Avenue
Austin, Texas 78701

Re: Request for Modifications to Water Availability Models for Planning Purposes
in the East Texas Regional Water Planning Area

Dear Mr. Walker,

On May 16, 2018, the East Texas Regional Water Planning Group (ETRWPG) considered and approved an approach to water availability modeling for surface water supplies for the current round of planning. The purpose of this letter is to inform the Texas Water Development Board (TWDB) of the approach approved at that time.

The East Texas Regional Water Planning Area (ETRWPA) uses supplies from four river basins, Trinity, Neches, Sabine, and Neches-Trinity. Following are highlights of the four basin models and the changes made to the models to determine the available surface water supplies for the ETRWPA in this round of regional water planning:

- All models will incorporate updated area-capacity relationships to account for sedimentation in major reservoirs, as required by “Exhibit C: General Guidelines for Fifth Cycle of Regional Water Plan Development.”
- The ETRWPG will use the Neches-Trinity Coastal Basin WAM Run 3, as developed by TCEQ, for surface water supplies in that basin. No changes are proposed to the Neches-Trinity WAM.
- Changes to the Trinity WAM were made as part of the Region C planning efforts. The ETRWPG adopted and retained the changes made to the Trinity WAM. For surface water supplies located in the Trinity River Basin, the ETRWPG will use the updated Trinity Basin WAM developed for Region C.
- The TCEQ updated the Neches River WAM in 2012. Following review of the Run 3 WAM files for the basin, the ETRWPG requests approval to update the Neches River WAM to more accurately represent current operating conditions in the basin. The ETRWPG intends to use the Neches River WAM Full Authorization run (Run 3) as developed by TCEQ in 2012 with modifications to address the following:



- Subordination of rights associated with Sam Rayburn Reservoir and Lake B.A. Steinhagen.
 - Hydropower generation at Sam Rayburn Reservoir and regulation of releases by Lake B. A. Steinhagen.
 - System operations, where appropriate.
 - Incorrect representation of environmental flow standards related to Permit No. 5585.
 - Minimum operating elevation in Sam Rayburn Reservoir.
- The TCEQ updated the Sabine River WAM in 2015. Following review of the Run 3 WAM files, the ETRWPG requests approval to update these models to more accurately represent current operating conditions in the basin. The ETRWPG intends to use the Sabine River WAM Full Authorization run (Run 3), as developed by TCEQ in 2015, to determine surface water supplies in that basin. The changes made to the TCEQ-approved WAM by the ETRWPG include the following:
 - Area-capacity relationships updated to reflect current and future sedimentation conditions for major reservoirs in the basin.
 - The canal water rights owned by Sabine River Authority (SRA) in the lower basin were modeled as being backed up by releases from Toledo Bend Reservoir.
 - The remainder of the yield of Toledo Bend evaluated assuming all diversions were taken lakeside.
 - Hydropower operations at Toledo Bend were excluded during the determination of total available supply from the lake. Hydropower operations, as modeled by TCEQ, were included in the evaluation of supplies for all other reservoirs and run-of-river supplies.

Supplies for Lake Pinkston in the Neches River Basin and Lake Center in the Sabine Basin were determined separately from the WAMs; instead, the supplies are based on the 2016 study completed by the City of Center.

- For the City of Beaumont, available supply will be evaluated based on daily time-step maximum diversion rates and current infrastructure. The City of Beaumont is the only major municipal water user with a run-of-the river water right. Other major users that receive water from run-of-the river water rights purchase water either from the Lower



Neches Valley Authority or the Sabine River Authority, or they use saline water. The purchased water is backed up by stored water that is owned and operated by the river authorities, making this supply less vulnerable to drought. This approach was applied in the development of supplies for the 2016 East Texas Regional Water Plan.

As intended by Senate Bill 1, the assessment of surface water availability in the ETRWPA will be conducted to accurately reflect water supplies that are available for use. Should new information become available within the project timeline, this will be incorporated into the supply analyses. Examples of such changes include new water supply studies for specific sources, updates to the area-capacity relationships for reservoirs with new volumetric surveys, new water rights permits, and revised operating policies and/or contractual agreements.

Thank you for your attention to this matter. Please call me if you have any questions regarding our request.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelley Holcomb".

Kelley Holcomb, Chair
East Texas Regional Water Planning Group

cc: Mr. Lann Bookout, Texas Water Development Board
Ms. Stacy Corley, City of Nacogdoches
Mr. Rex Hunt, PE, Alan Plummer Associates, Inc.
Ms. Cynthia Syvarth, PE, Alan Plummer Associates, Inc.
Ms. Spandana Tummuri, PE, Freese and Nichols, Inc.