

LAVACA REGIONAL WATER PLANNING GROUP

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Counties

June 21, 2018

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Subject: Request by the Lavaca Regional Water Planning Group (Region P) to use a modified TCEQ WAM Run 3 for surface water availability modeling in the 2021 Lavaca Regional Water Plan development (Hydrologic Variance Request)

Jack Maloney
Municipalities

Dear Mr. Walker:

Ed Weinheimer
Small Businesses

On June 18, 2018, the Lavaca Regional Water Planning Group (Region P) authorized submitting this request to you for approval to use a modified version of the TCEQ Lavaca WAM Run 3 Model (version date of 9/2/2014) in determining availability of surface water resources for development of the 2021 Lavaca Regional Water Plan (RWP). This request to use the modified model is for both surface water supply availability and for evaluating water management strategies. For water management strategies requiring a new water right appropriation, if the modified model is not accepted by TCEQ during the current planning cycle, the unmodified TCEQ Lavaca WAM Run 3 model will be used per TWDB requirements.

MEMBERS

John Butschek
Municipalities

This request is based on a review of the Lavaca River WAM Run 3 model, version date of 9/2/2014, which Freese & Nichols, Inc. (FNI) performed in 2016. The WAM had been updated by TCEQ in 2014 to include new code for modeling the Senate Bill 3 (SB3) environmental flows. During the review, FNI observed a few issues with the model related to the SB3 pulse flows, consistency with standard Run 3 assumptions, and consistency with water right permit terms. FNI proposed revisions to address the issues and prepared a memo to TCEQ detailing the revisions. The FNI memo is included as Attachment A to the request. Region P agrees that these revisions create a more accurate model.

Tom Chandler
Water Utilities

Steve Cooper
Agricultural

Robert Martin
Agricultural

Bart J. McBeth
Agricultural

Richard J. Ottis
Industries

Com. Edward Pustka
Counties

TCEQ has reviewed the proposed revisions from FNI, but they have not yet made the revisions to the TCEQ model and adopted it. A summary of the proposed revisions to the TCEQ Lavaca WAM Run 3 includes:

Robert Shoemate
Environmental

Dennis Simons
Counties

Gary Skalicky
Agriculture

1. Several changes to the existing code used to model SB3 pulse flow requirements in the Lavaca WAM.

Michael Skalicky
Water Districts

2. Addition of missing SB3 pulse flow code for the Navidad River at Strane Park near Edna.

David Wagner
Public

Mr. Jeff Walker

June 21, 2018

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3. Revisions to Lake Texana SV SA records
 - These records will also then update for 2020-2070 sedimentation for regional water planning analysis, as required by TWDB guidelines.
4. Addition of a synthetic primary control point to correct a naturalized flow calculation.
5. Revisions to modeling of Lake Texana interruptible diversions
 - 3 authorizations split out rather than lumped under one diversion
 - Include annual diversion limit (simplifies the coding)
 - Pattern change to allow more water to be diverted in the last three months of the year (if available)
6. Revisions to Stage 2 of the Palmetto Bend Project location and SV SA records to model it as described in COA 16-2095.

The FNI modified model and the TCEQ WAM Run 3 were both adjusted for 2020-2070 sedimentation and run to see how the surface water available supply results compared for the two model versions.

There was no change to the firm availability of the interruptible water rights – they remained at 0 acre-foot/ year for both model versions for all decades.

In the FNI modified model, the firm yield of Lake Texana was 74,500 acre-feet/year for all decades. In the TCEQ WAM Run 3, the firm yield of Lake Texana was 74,500 acre-feet/year for the 2020 decade but decreases each decade down to 73,290 acre-feet/year by 2070, due to sedimentation.

Overall, the use of the modified model increases the firm yield availability of Lake Texana in the 2030-2070 decades.

Region P believes the modifications to the TCEQ Lavaca WAM Run 3 listed above create a more accurate model for use in analyzing surface water availabilities. We respectfully request to use this modified version of the TCEQ Lavaca WAM Run 3 Model (version date of 9/2/2014) in determining availability of surface water resources for development of the 2021 Lavaca Regional Water Plan (RWP). We appreciate your consideration of this request. Should you have any questions regarding this submittal, please contact our Consultant, Jaime Burke, via phone at (512) 457-7798 or via email at jaime.burke@acem.com.

Sincerely,



Phillip Spenrath, Chairman
Lavaca Regional Water Planning Group

Enclosures: Attachment A – FNI Memo to TCEQ

C: Ms. Elizabeth McCoy, TWDB (electronically)