MEETING AGENDA
(The complete agenda packet will be available at https://www.nueces-ra.org/CP/RWPG/ on
February 1, 2018)

I. Call to Order
II. Roll Call
III. ACTION ITEM: Consider Approval of Minutes of the 11/09/2017 Meeting of the Coastal Bend Regional Water Planning Group (Attachment A)
IV. ACTION ITEM: Elect Officers for Calendar Year 2018 (Attachment B)
V. ACTION ITEM: Consider Authorizing NRA to Disseminate Requests for Local Funding for Calendar Year 2018 Administrative Activities (Attachment C)
VI. ACTION ITEM: Consider Authorizing NRA to Execute Amendment #2 to the TWDB/NRA Regional Water Planning Contract for the Development of the 2021 Regional Water Plan. (Attachment D)
VII. RWPG/TWDB Administrative and Other Issues (Attachment E)
   • TWDB response to Requests for Hydrologic Variance in the Development of the 2021 Regional Water Plan
   • TWDB update on Region N’s request for consideration of alternate projections for 2021 Regional Water Plan
   • TWDB update on proposed revisions to RWP rules and guidance document for use in developing the 2021 Regional Water Plan
   • Resignation of Martin Ornelas, public representative
   • MAG Peak Factor Subcommittee Meeting Scheduled for February 28, 2018
VIII. General Public Comment
   Citizens may address the Planning Group concerning an issue of interest that is not listed on the agenda. Agenda item comments must be made when the item comes before the board. The planning group may place a time limit on all comments.
IX. Confirm Next Meeting Date
X. Adjourn

FOR MORE INFORMATION, CONTACT: Nueces River Authority, Coastal Bend Division,
602 N. Staples Street St., Suite 280., Corpus Christi, Texas 78401 361-653-2110 http://www.nueces-ra.org
<table>
<thead>
<tr>
<th>Item:</th>
<th>Attachments for Coastal Bend RWPG Meeting Agenda for February 8, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>III.</td>
<td>Minutes of the November 9, 2017 Coastal Bend RWPG Meeting A</td>
</tr>
<tr>
<td>IV.</td>
<td>Officers for Calendar Year 2018 B</td>
</tr>
<tr>
<td>V.</td>
<td>Local Funding Requests for Calendar Year 2018 Administrative Activities C</td>
</tr>
<tr>
<td>VI.</td>
<td>Amendment #2 to the TWDB/NRA Regional Water Planning Contract for the Development of the 2021 Regional Water Plan D</td>
</tr>
<tr>
<td>VII.</td>
<td>TWDB Response to Requests for Hydrologic Variance in the Development of the 2021 Regional Water Plan E</td>
</tr>
</tbody>
</table>
ATTACHMENT A

Agenda Items III

Minutes of the November 9, 2017 Coastal Bend RWPG Meeting
The meeting of the Coastal Bend Regional Water Planning Group (RWPG) was held at the Johnny Calderon County Building, 710 E. Main Street, Robstown, Texas 78380.

**Agenda Item I – Call to Order:** Ms. Carola Serrato called the meeting to order at 1:33 pm.

**Agenda Item II – Roll Call:** Voting members of the Coastal Bend RWPG in attendance included:

- Mr. Chuck Burns (Agriculture)
- Mr. John Burris (Other)
- Mr. Carl Crull (Other)
- Mr. Bill Dove (Small Business)
- Mr. Lavoyger Durham (Counties)
- Mr. Gary Eddins (Electric Utilities)
- Mr. Andy Garza (GMA 16)
- Mr. Lindsey Koenig (Public)
- Dr. Jim Tolan (Texas Parks and Wildlife Department)

Dr. Jim Tolan (Texas Parks and Wildlife Department) was a proxy for Ms. Teresa Carrillo (Environmental) and Mr. Steve Ramos (City of Corpus Christi) was a proxy for Mr. Mark Scott (Municipalities).

Mr. Joe Almaraz (Industries), Mr. Scotty Bledsoe (Water Districts), Dr. Pancho Hubert (Small Business), Mr. Martin Ornelas (Public), and Mr. Bill Stockton ( Counties) had excused absences.

A quorum was determined to be present. The members introduced themselves and said the interest category they represent.

Ms. Rocky Freund represented the Nueces River Authority (NRA) and Ms. Kristi Shaw represented HDR Engineering, Inc.

Non-voting members in attendance included:

- Ms. Jami McCool, TDA
- Ms. Connie Townsend, TWDB

Guests included:

- Mr. Brian Bresler, Freese & Nichols
- Mr. Tom Callan, City of Rockport
- Mr. James Dodson
- Mr. Demetrio Duarte, City of Alice
- Mr. Rocky Mendez, City of Three Rivers
- Mr. Rudy Mora, City of Alice
- Mr. Luis Peña, Duval GCD
- Mr. Ruben Saenz
- Mr. Thomas Salazar, City of Three Rivers
- Mr. Greg Smith, Corpus Christi City Council
- Mr. Brian Williams, SPMWD

**Agenda Item III – Approval of Minutes of the 08/10/2017 RWPG Meeting:** Ms. Serrato asked for approval of the minutes of the August 10, 2017 meeting of the Coastal Bend RWPG for the Senate Bill 1 Regional Water Planning Program. Ms. Serrato pointed out a correction to Mr. Garza’s affiliation – it should read GMA 16. There was a motion by Mr. Burris to approve the minutes as corrected. It was seconded by Mr. Garza. There was no further discussion, and the minutes were approved by a unanimous voice vote.

**Agenda Item IV – Subcommittee’s Review and Recommendations for Steam-Electric, Manufacturing, Livestock, and Irrigation Water Demand Projections:** Ms. Shaw provided background on what has happened since the August 10, 2017 meeting. At that meeting, Mr. Bledsoe, Mr. Burris, Dr. Hubert, Mr. Kunkel, Mr. Ring, Mr. Scott, and Ms. Serrato volunteered to serve on a subcommittee to review the draft water demand projections provided by TWDB. They met on September 7, 2017. Additional stakeholders
Minutes of the November 9, 2017 Meeting of the Coastal Bend Regional Water Planning Group (Region N) for the Senate Bill 1 Regional Water Planning Program

attended the meeting and provided input. Additional input from local stakeholders included following up with local industries and new facilities and expansions since 2016 and feedback was requested from the Corpus Christi Regional Economic Development Corporation, Port Industries, Port Authority of Corpus Christi, and others on potential new industries.

With respect to adding new industries for planning purposes, TWDB has very strict criteria for allowing changes to the draft projections. Only those that can show concrete support, such as press releases or negotiations with wholesale water providers, will be considered.

The subcommittee’s recommendations are:
- Steam-Electric – no changes
- Manufacturing – revisions requested for Nueces and San Patricio counties
- Livestock – no changes
- Irrigation – revisions requested for all counties with projected irrigation water demands

For manufacturing, TWDB used the highest historical use from 2010 – 2015 for estimating Year 2020 demands. The 2030 demands were estimated by applying growth rate multipliers of 10.9% for Nueces County and 11.28% for San Patricio County to 2020. The 2030 estimate was carried forward for 2040 through 2070. Based on the feedback from the subcommittee and local stakeholders, an alternative 2020 demand was calculated to account for new industries and facility expansions since 2016, and then the same methodology for 2030 through 2070 was applied. 5,840 AF/year was added for Nueces County and 26,516 AF/year was added for San Patricio for 2020.

Mr. Crull asked if water demand projections for Cheniere Energy in San Patricio County were included. Mr. Williams explained that it was not included because they have changed their technology such that their demand has been reduced from 4 mgd to 0.4 mgd.

Ms. Shaw showed a chart with the revised estimates. Using the increase noted above, the revised 2020 manufacturing demand estimate for the entire region is 88,634 AF/year and 98,479 AF/year for 2030 through 2070.

For irrigation, TWDB used the average historical use for each county from 2010 through 2014 to estimate the 2020 demand, then held that number constant for 2030 through 2070. The subcommittee’s recommendation is to use the highest historical use from 2010 to 2014 for each county, then hold that number constant for 2030 through 2070. This resulted in an increase for each county and a regional increase of approximately 10,000 AF/year.

Dr. Tolan commented that the proposed revisions are approximately a 50% increase from the TWDB draft projections. Ms. Shaw replied that it is because of the information about the new plant in San Patricio County and using the highest water use for irrigation. Ms. Serrato added that based on the 2011 and 2012 actual use, the increase is less than 50%.

Mr. Koenig asked about the proposed Raven plant in Duval County. Mr. Peña replied that while it has been proposed, they have not applied for permits with either the Duval County Groundwater Conservation District (GCD) or with the Texas Commission on Environmental Quality (TCEQ). They have purchased 800 acres. Mr. Peña added that they have not acknowledged receipt of the information that the GCD has provided concerning the permits that would be required. Their website shows an estimated use 10 mgd of brackish groundwater. Ms. Shaw commented that depending on the level of development, Raven may be included in the next planning cycle.
Mr. Dove asked what percentage of the irrigation use is groundwater and what percentage is surface water. Ms. Shaw explained that once the projections are finalized, then those numbers will be determined based on supplies. In general, irrigation water is about 95% groundwater and manufacturing is about 95% surface water.

Ms. Shaw showed the TWDB draft projections for steam-electric and livestock.

**Consider Approval of Recommendations for Steam-Electric, Manufacturing, Livestock, and Irrigation Water Demand Projections and Authorizing NRA to Submit the Recommendations to TWDB:**

Mr. Crull made a motion to accept the subcommittee’s recommendation for steam-electric, manufacturing, livestock, and irrigation and authorize NRA to submit the recommendations to TWDB. It was seconded by Mr. Stewart. There was no further discussion and the motion carried by a unanimous voice vote.

**Consider Authorizing the Executive Committee and/or HDR to Adjust RWPG-Approved Revisions as Needed Based on TWDB Feedback:**

Mr. Stewart made a motion to authorize the executive committee and/or HDR to adjust the proposed revisions based on TWDB feedback. It was seconded by Mr. Ramos. Mr. Ring asked why the need for the subcommittee if TWDB doesn’t accept the proposed revisions. Ms. Townsend explained that the TWDB will review the proposed revisions and determine if the calculations were done correctly and also check for reasonableness. If TWDB disagrees, they will work with the consultants to reach an agreement.

Ms. Shaw added that for the 2016 Plan, TWDB accepted the region’s manufacturing and irrigation revisions. They did not accept the municipal water demand revision.

Ms. Serrato and Ms. Shaw explained that the TWDB is requiring the revision requests by January 12, 2018, and that this motion is needed so that another meeting before the deadline can be avoided. Ms. Shaw will share the feedback to the subcommittee and work with them to revise the numbers, if necessary. There was no further discussion and the motion carried by a unanimous voice vote.

**Agenda Item V – Consider Approval of Safe Yield Reserve in the Choke Canyon Reservoir/Lake Corpus Christi System for Determining Water Availability from the Corpus Christi Regional Supply System for the 2021 Plan:**

Mr. Ramos explained that the City of Corpus Christi met with a few of the RWPG members to discuss and appropriate safe yield for the region. They considered all available water supplies and agreed on 75,000 AF. The safe yield used for the 2016 Plan was 125,000 AF, and 75,000 AF for the 2006 and 2011 Plans. It was raised in 2016 due to the drought and the hydrology for the water supply model only included data through 2003. The model has since been updated through 2015 and Mary Rhodes Phase II is now online.

Mr. Crull made a motion to approve the safe yield of 75,000 AF. It was seconded by Mr. Burns. The motion passed with all but Mr. Dove voting in the affirmative.

**Agenda Item VI – Consider Approval of Meeting Schedule for 2018:**

The proposed meeting dates for 2018 are February 8, May 10, August 9, and November 8. Mr. Stewart made a motion to approve the schedule. It was seconded by Mr. Burns. There was no further discussion and the motion carried by a unanimous voice vote.

**Agenda Item VII – Consider Authorizing NRA to Increase the Local Funding for Calendar Year 2018 Administrative Activities:**

Ms. Freund explained that the funds are solicited to pay for the expenses associated with the regional water planning administration. Since 1999, the requested amount has been $60,000. NRA is requesting a 10% increase to $66,000 and does not expect to ask for additional increases in the near future. The City of Corpus Christi pays approximately 75% of the total requested amount.
Mr. Crull asked if NRA receives all the requested funds. Ms. Freund explained that for about the past ten years through 2016, all funds were received. She makes an effort to collect all the funds and follows up with thank you’s. This past year included the new entities that will be identified in the 2021 Plan, some of which are not able to contribute and some have not yet responded.

Mr. Dove made a motion to approve the increase for the funding. It was seconded by Mr. Sugarek. Ms. Freund will have the actual allocation table for the February meeting. There was no further discussion and the motion carried by a unanimous voice vote.

**Agenda Item VIII – Consider Identifying Major Water Providers for the 2021 Plan:** Ms. Shaw explained that the previous plans identified wholesale water providers (WWP) based primarily on volume. A new category, Major Water Provider (MWP), is being added for the 2021 in response to concerns from several regions. Issues presented by planning groups over past planning cycles included:

- Smaller regions only had one WWP in the entire region due to the previous volumetric threshold, yet they felt that there were other significant water providers in the region that were not recognized;
- Some larger regions had several WWP entities that would fall on and off the list during or between planning cycles due to reported historic use, resulting in a lack of consistency in reporting between plans; and,
- Some regions had some WWPs that met the 1,000 AF/YR threshold, so they were required to report on the entity, even though the RWPG did not consider the entity a particularly significant water provider in the region.

A MWP is defined as a water user group or a WWP of particular significance to the region's water supply as determined by RWPG. This may include public or private entities that provide water for any water use category. The addition of the MWP category gives RWPGs more flexibility in deciding on which large water providers they want to report information for in their regional water plans and facilitates the use of a single, stable list of entities. For Region N, the four WWPs are the City of Corpus Christi, San Patricio Municipal Water District (SPMWD), South Texas Water Authority (STWA), and Nueces County Water Conservation and Improvement District #3 (NCWCID #3).

Ms. Townsend added that the TWDB will use the information to identify all the major entities in each region and will be able to provide specific information for them. HDR’s recommendation is to identify the four WWPs, the City of Corpus Christi, SPMWD, STWA, and NCWCID #3 as MWPs for the 2021 Plan. These entities provide about 75% of the total water for Region N.

Dr. Tolan asked how this information will be presented in the State Water Plan (SWP) since the volume of water supplied by the MWPs will vary by orders of magnitude between the regions. Ms. Townsend doesn’t know yet how the SWP will present the information. Ms. Serrato said that she hopes that SWP will provide this information to reflect the differences between the regions.

Mr. Kunkel made a motion to accept and approve HDR’s recommendation. It was seconded by Mr. Crull. There was no further discussion and the motion carried by a unanimous voice vote.

**Agenda Item IX – Modeled Available Groundwater (MAG) Projections for Determining Groundwater Availability for the 2021 Plan:** Ms. Shaw explained that after water demand projections have been submitted to TWDB, the surface and groundwater supplies will be reviewed for how they can be allocated to meet those demands. She expects to have the preliminary groundwater numbers available by the May meeting.

The 2016 Plan used the MAG data developed by the Groundwater Management Areas (GMA) and GCDs. Desired Future Conditions (DFC) were submitted to the TWDB that were then used in the groundwater
modeling to determining the MAG supply. Since the 2016 Plan, the three GMAs in Region N have adopted DFCs and received MAGs from the TWDB:

- GMA 13 (northwest portion of McMullen County) adopted their DFCs for the Carrizo-Wilcox, Queen City, and Sparta Aquifers on November 21, 2016 and the MAGs on October 27, 2017.
- GMA 15 (eastern portion of Bee County and Aransas County) adopted their DFCs for the Gulf Coast Aquifer on April 29, 2016 and the MAGs on March 22, 2017.
- GMA 16 (western portion of Bee County, southeastern portion of McMullen County, and Live Oak, Duval, Jim Wells, San Patricio, Nueces, Kleberg, Brooks, and Kenedy Counties) adopted their DFC for the Gulf Coast Aquifer on January 17, 2017 and the MAGs on May 19, 2017.

Ms. Shaw reviewed a table of the DFCs for 2020 through 2070. They differ from the MAGs identified in the 2016 Plan, which remained constant, but higher, for the entire period, and were based on the 2060 DFCs.

TWDB is now allowing the RWPGs discretion to use MAG Peak Factors for the 2021 Plan. This will allow for planning not only for drought, but for wet times when not as much water is used, and allows for temporary relief, i.e., more pumping in dry times, which will be offset by less pumping in wet times.

**Agenda Item X – Consider Exercising the Option to Use MAG Peak Factor(s) or Appointing a Subcommittee to Consider Use of MAG Peak Factor for the 2021 Plan:** RWPGs need to decide if they want to use MAG Peak Factors, and if so, coordination with and written approval from the GMAs and GCDs will be required. Ms. Shaw recommends a subcommittee be formed to discuss this option. The total volumes estimated in the 2016 Plan for 2020 are greater than those now estimated for the 2021 Plan. However, each aquifer in each county will need to be evaluated to better assess the supply and demand estimates.

Ms. Serrato commented that the additional pumping in dry times can exceed the MAG because in the long term, recharge exceeds the pumping. Mr. Dove asked if cities that rely on groundwater should have a say since drawdowns could affect their water quality. Ms. Shaw replied that with enough recharge, the water quality may not degrade. Public Waters Suppliers that rely on groundwater are required to report water quality information to TCEQ. The Groundwater Availability Models (GAM) do not have the ability to differentiate between fresh and brackish water, therefore, the MAGs are based on the DFCs. Mr. Stewart added that the models are designed for 0 mg/l to 10,000 mg/l Total Dissolved Solids.

Ms. Serrato asked if the MAG Peak Factor provision will be carried forward into the 2026 Plan. Ms. Townsend replied that the TWDB will be reviewing the information and the decision to carry forward has not yet been determined. Ms. Serrato added that the use of the MAG Peak Factor will allow time to develop an alternate Water Management Strategy (WMS), and Ms. Shaw replied that its use is also as an alternate to a WMS that may be impractical, such as connecting to another supply. Ms. Townsend added that DFCs will need to be met at the end of the planning cycle, and the use of MAG Peak Factors would reflect how GCDs actually operate.

A subcommittee would need to review the MAGs, the Peak Factors, and demands on a by county / by aquifer basis. Participation of the GMAs and GCDs will be needed. The subcommittee’s recommendation will be brought back to the group at the May meeting. A written letter from the GMAs and GCDs will be needed to be submitted to TWDB if MAG Peak Factors are recommended.

Mr. Crull made a motion to exercise the option to use MAG Peak Factors. It was seconded by Mr. Ramos. Dr. Tolan commented that as the environmental representative, he’s not convinced that the use of MAG Peak Factors is in the spirit of SB 1. A subcommittee is now needed to determine what the MAG Peak Factors should be, or decide not to recommend the use of them. If MAG Peak Factors are not used, the water supply estimates for the 2021 plan will be constrained by the MAGs approved by the GMAs, as previously discussed.
Ms. Serrato said that if there is a strong feeling not to use MAG Peak Factors, then a subcommittee is not needed. Mr. Crull asked if the 137,900 AF for 2020 meets the demands. Ms. Shaw replied that we don’t that answer yet since the plan will be considering an increase in irrigation.

Mr. Dodson added that all models have flaws, and the use of MAG Peak Factors will add flexibility to the Plan. GAMs may be improved in the future.

Mr. Saenz asked how the Beeville and Goliad wells are affecting the City of Kenedy and Karnes County. Ms. Shaw replied that all RWPGs, GMAs, and GCDs will be addressing this issue. Mr. Sugarek asked that if MAG Peak Factors are not used, could the MAGs be amended. Ms. Shaw said that they could be amended in the next planning cycle, adding that amending a Plan to revise MAGs and DFCs is very time and labor extensive. Ms. Townsend added that the DFCs can and do change each cycle. The approval of the DFCs is now synced with the planning cycle. Mr. Stewart added that the GCDs manage to the DFCs, not the MAGs.

Ms. Serrato asked if the DFCs are being reconciled with actual groundwater usage. Ms. Shaw said that she didn’t think it had been done yet. This could be done by correlating water well levels, but the DFC is county-wide.

Mr. Crull made a motion to establish a subcommittee to work with the GMAs and GCDs to consider MAG Peak Factors. It was seconded by Mr. Garza. The motioned passed by a unanimous voice vote. Mr. Garza, Ms. Serrato, Mr. Peña, Mr. Ring, Mr. Burns, and Mr. Stewart volunteered to serve on the subcommittee. Mr. Garza recommended that Mr. Felix Saenz, Brush Country GCD be included, and Mr. Stewart recommended that Mr. Bledsoe be included.

**Agenda Item XI – RWPG/TWDB Administrative and Other Issues:** Ms. Townsend gave an update on the 2016 Rule Revision Process. Draft rules are being developed. SB 347 has a direct and immediate effect for planning group members. All members are required to complete the Public Information Act and Open Meetings Act training, available online on the TWDB’s website, due by 90 days from September 1, 2017.

The 2017 SWP is being amended to identify the Cross Timber Aquifer for Regions B and C.

The next round of State Water Implementation Fund for Texas (SWIFT) will open in December. The City of Corpus Christi has received SWIFT funding for their desalination project.

Ms. Townsend recognized all the work that Ms. Shaw has done in providing proposed projection revisions information to the TWDB in a timely manner. TWDB anticipates finalizing the numbers in March or April. Region N is on schedule for identifying MWPs. Ms. Townsend noted that the planning timeline is on the TWDB website and also encouraged members to use the interactive SWP to review the 2016 regional information.

The hydrologic variance requests are being reviewed. Ms. Shaw is working with TWDB to clarify some issues and answer their questions.

There was no report on the October 17, 2017 TWDB work session since Mr. Bledsoe was not able to attend today’s meeting.

**Agenda Item XII – General Public Comment:** There was no public comment.

**Agenda Item XIII – Confirm Next Meeting Date:** The next meeting is scheduled for February 8, 2018.

**Agenda Item XIV – Adjourn:** Ms. Serrato adjourned the meeting at 3:36 pm.
Minutes of the November 9, 2017 Meeting of the
Coastal Bend Regional Water Planning Group (Region N) for the
Senate Bill 1 Regional Water Planning Program

Minutes prepared by: Ms. Rocky Freund.

Minutes Submitted by:

 Lonnie Stewart  Date
 Secretary, Coastal Bend RWPG
The following email was sent to all voting members on January 8, 2018:

The Bylaws for the Coastal Bend RWPG require that officers be selected at the first meeting of each calendar year and that written notice be mailed to all members at least thirty days in advance of the meeting at which the selection of officers will occur. The selection of officers for 2018 will be held at the next Coastal Bend RWPG meeting scheduled for Thursday, February 8, 2018 at 1:30 pm.

The current officers are Co-Chairs Bledsoe and Serrato, Secretary Stewart, and Executive Committee Reding and Hubert. All current officers are willing to continue to serve, if the group so desires, but are also willing to relinquish their position if someone else wants to serve.

Nominations may be made prior to the meeting to Rocky Freund (rfreund@nueces-ra.org) or to Mr. Stewart (louwcd@yahoo.com). Nominations will also be accepted from the floor.
Local Funding Requests for Calendar Year 2018 Administrative Activities

At the November 9, 2017 RWPG meeting, the group approved NRA’s request to increase the administrative annual funding requested of the water user groups included in Region N planning from $60,000 to $66,000.

On the following page is the 2018 Allocation table. The total for 2017 was less than $60,000 because the initial amount allocated to McCoy WSC included their entire population instead of just the Region N population. The other difference from the 2017 Allocation table is that the populations / allocations assigned to Corpus Christi NAS and NAS Kingsville have been reassigned to Nueces County and Kleberg County, respectively. These two federal entities are unable to contribute funds because NRA does not have a contract with them.

NRA is requesting authorization from the RWPG to solicit 2018 local administrative costs as per the attached table.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ALICE</td>
<td>19,104</td>
<td>$2,213.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARANSAS PASS</td>
<td>8,204</td>
<td>$950.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEEVILLE</td>
<td>12,863</td>
<td>$1,490.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BISHOP</td>
<td>3,134</td>
<td>$363.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORPUS CHRISTI</td>
<td>305,215</td>
<td>$35,369.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRISCOLL</td>
<td>739</td>
<td>$85.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GREGORY</td>
<td>1,907</td>
<td>$220.99</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INGLESIDE</td>
<td>9,387</td>
<td>$1,087.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KINGSVILLE</td>
<td>26,213</td>
<td>$3,037.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATHIS</td>
<td>4,942</td>
<td>$572.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUECES COUNTY WCID 4</td>
<td>3,480</td>
<td>$403.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ODEM</td>
<td>2,389</td>
<td>$276.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PORTLAND</td>
<td>15,099</td>
<td>$1,749.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROCKPORT</td>
<td>10,124</td>
<td>$1,173.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAFT</td>
<td>4,508</td>
<td>$522.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$49,518.77</td>
<td>$5,007.75</td>
<td></td>
<td></td>
<td>$44,511.02</td>
</tr>
</tbody>
</table>

| BAFFIN BAY WSC | 683 | $79.15 | $8.00 | $71.15 |
| DUVAL COUNTY CRD | 1,362 | $157.84 | $15.96 | $141.87 |
| EL OSO WSC | 1,019 | $118.09 | $11.94 | $106.15 |
| FALFURRIAS WSC | 4,981 | $577.23 | $58.37 | $518.85 |
| FREER WSC | 2,818 | $163.28 | $16.51 | $146.77 |
| GEORGE WEST | 2,445 | $283.34 | $28.66 | $254.68 |
| JIM WELLS COUNTY FWSD 1 | 1,906 | $220.88 | $22.34 | $198.54 |
| MCCOY WSC | 170 | $19.70 | $1.99 | $17.11 |
| NUECES COUNTY WCID 3 | 12,382 | $1,434.89 | $145.11 | $1,289.78 |
| NUECES WSC | 2,322 | $269.09 | $27.21 | $241.87 |
| ORANGE GROVE | 1,318 | $152.74 | $15.45 | $137.29 |
| POTTUS MUD WSC | 524 | $60.72 | $6.14 | $54.58 |
| PREMONT | 2,653 | $307.44 | $31.09 | $276.35 |
| RICARDO WSC WSC | 2,631 | $304.89 | $30.83 | $274.06 |
| RINCON WSC | 3,243 | $375.82 | $38.01 | $337.81 |
| RIVER ACRES WSC | 2,283 | $264.57 | $26.76 | $237.81 |
| SAN DIEGO MUD 1 | 4,488 | $520.09 | $52.60 | $467.50 |
| SINTON | 5,665 | $656.49 | $66.39 | $590.10 |
| THREE RIVERS | 1,848 | $214.16 | $21.66 | $192.50 |
| VIOLET WSC | 2,016 | $233.64 | $23.64 | $210.00 |
| RIVIERA WATER SYSTEM | 562 | $65.13 | $6.59 | $58.54 |
| TDCJ CHASE FIELD | 3,227 | $373.96 | $37.82 | $336.14 |

| ARANSAS COUNTY OTHER | 12,310 | $1,426.55 | $144.26 | $1,282.28 |
| BEE COUNTY OTHER | 18,107 | $2,098.34 | $212.20 | $1,886.14 |
| BROOKS COUNTY OTHER | 2,242 | $259.82 | $26.76 | $233.54 |
| DUVAL COUNTY OTHER | 4,014 | $465.16 | $47.04 | $418.12 |
| JIM WELLS COUNTY OTHER | 14,957 | $1,733.30 | $175.29 | $1,558.01 |
| KENEDY COUNTY OTHER | 416 | $48.21 | $4.88 | $43.33 |
| KLEBERG COUNTY OTHER | 2,581 | $299.10 | $35.14 | $263.96 |
| LIVE OAK COUNTY OTHER | 6,417 | $743.64 | $75.20 | $668.43 |
| McMULLEN COUNTY OTHER | 707 | $81.93 | $8.29 | $73.65 |
| NUECES COUNTY OTHER | 9,389 | $1,088.05 | $193.99 | $894.06 |
| SAN PATRICIO COUNTY OTHER | 10,534 | $1,220.74 | $123.45 | $1,097.29 |

| Total | $569,528 | $66,000.00 | $6,763.32 | $59,236.68 |
Amendment #2 to the TWDB/NRA Regional Water Planning Contract for the Development of the 2021 Regional Water Plan

TWDB anticipates contract amendments to commit additional funds for FY 2018 – 2019 to be issued in late March or early April. The amendment will incorporate updated versions of the contract Scope of Work, Guidelines for Regional Water Plan Development (Exhibit C), and Guidelines for Regional Water Planning Data Deliverables (Exhibit D) based on the revised TAC 357 rules.
At the August 10, 2017 RWPG meeting, the group authorized NRA to:

- Submit a Request for Hydrologic Variance to TWDB Requesting Approval to use Safe Yield and the City's Reservoir System Operations Policy for the Corpus Christi Regional Water Supply System for the 2021 Plan, and
- Submit a Request for Hydrologic Variance to TWDB Requesting Approval to use the Corpus Christi Water Supply Model to Evaluate Water Availability from the Corpus Christi Regional Supply System for the 2021 Plan.

The letters were submitted to TWDB on September 22, 2017. Copies of those letters and the TWDB response letter is attached. Also attached is a follow up response letter from TWDB addressing a clarification asked by our technical consultant.
September 22, 2017

Jeff Walker
Executive Administrator
Texas Water Development Board
Stephen F. Austin Bldg.
P.O. Box 13231
Austin, Texas 78711-3231

RE: Request for Approval to Use Safe Yield as the Basis for Determining Available Surface Water Supplies from the Choke Canyon Reservoir/ Lake Corpus Christi/ Lake Texana/Colorado River (CCR/LCC/Lake Texana/MRP Phase II) System for the 2021 Coastal Bend Regional Water Plan

Dear Mr. Walker:

The Coastal Bend Regional Water Planning Group (CBRWPG) requests TWDB approval of a hydrologic variance to grant the use of safe yield for planning and determining surface water availability from the Choke Canyon Reservoir/ Lake Corpus Christi/ Lake Texana/Colorado River (CCR/LCC/Lake Texana/MRP Phase II) System. The CBRWPG approved submittal of this request at its regularly scheduled, public meeting on August 10, 2017.

According to TWDB Guidelines\(^1\) for 2021 Regional Plan Development, “planning groups should analyze existing available surface water supplies based on firm yield for reservoirs and run of river diversions, unless otherwise approved by the TWDB’s Executive Administrator.” In accordance with TWDB guidance, firm yield will be reported in the technical memorandum, Initially Prepared Plan, and 2021 Regional Water Plan. However, if the hydrologic variance requested by this letter is granted, then safe yield will be used to evaluate existing water supply availability from the CCR/LCC/Lake Texana/MRP Phase II System for development of the Coastal Bend Regional Water Plan. All other surface water supplies will be reported based on firm yield.

Choke Canyon Reservoir and Lake Corpus Christi in the Nueces Basin operate together in a system to provide water supplies to the City of Corpus Christi (City) and their customers. Together with Lake Texana and Colorado River supplies, the CCR/LCC/Lake Texana/MRP Phase II system provides surface water supplies to meet nearly 90% of the overall water demands in the Coastal Bend Region. The Nueces Basin portion of the regional water supply system is prone to severe drought. Average annual inflows to the Lake Corpus Christi and Choke Canyon System in the Nueces Basin is lower with each successive

drought. The single lowest inflow year was 2011, however based on calendar year the most recent average three year inflow was comparable to the 1990s, as shown in the Attachment. When the minimum 3 year inflow periods (not constrained by calendar) are considered, less inflow is observed during more recent times. If we look at two year inflow minimums, there are two, two-year events during the most recent decade where inflows were less than 50% of the historical minimum two year average (from 1934-2013).

A recent hydrology update to the Corpus Christi Water Supply Model (through 2015) shows that the current drought is a new drought of record for the region. Choke Canyon Reservoir and Lake Corpus Christi have not been full (i.e. 100% conservation pool) since September 2007. For this reason, safe yield is more reasonable than firm yield for drought planning purposes as a provision for climate uncertainty. Safe yield planning reduces the annual availability volume from the CCR/LCC/Lake Texana/MRP Phase II System as compared to the firm yield availability estimate, and will consequently move up any identified water needs to earlier decades than with use of firm yield.

The Coastal Bend Regional Water Planning Group requests that the TWDB approve the use of safe yield analyses for the CCR/LCC/Lake Texana/MRP Phase II System for developing the 2021 Coastal Bend Regional Water Plan. The previous Coastal Bend Regional Water Plans (2006, 2011, and 2016) have all used safe yield for water supply planning for the multi-basin regional water supply system.

Thank you for your consideration of this important request. Please contact me at 361-653-2110 with any questions or comments.

Sincerely,

Rocky Freund
Deputy Executive Director
Nueces River Authority

CC: Carola Serrato, Co-Chair CBRWPG
    Scott Bledsoe, Co-Chair CBRWPG
    Temple McKinnon, TWDB
    Connie Townsend, TWDB
    Kristi Shaw, HDR Engineering
Historical 3 Year Reservoir Inflows

Source: 2016 Coastal Bend Regional Water Plan
September 22, 2017

Jeff Walker
Executive Administrator
Texas Water Development Board
Stephen F. Austin Bldg.
P.O. Box 13231
Austin, Texas 78711-3231

RE: Request for Hydrologic Variance to Use the Corpus Christi Water Supply Model to Evaluate Water Availability for the Choke Canyon Reservoir/ Lake Corpus Christi/ Lake Texana/Colorado River (CCR/LCC/Lake Texana/MRP Phase II) System AND Request for Approval to Report Water Availability for this Multi-Basin Regional Supply as a System rather than Individual Reservoirs

Dear Mr. Walker:

The City of Corpus Christi and other regional wholesale water providers supply nearly 90% of the Coastal Bend Regional water needs with supplies from the Choke Canyon Reservoir/ Lake Corpus Christi/ Lake Texana/Colorado River (CCR/LCC/Lake Texana/MRP Phase II) System. The multi-basin system presents a unique situation for managing reservoir operations and determining available supply based on permitting and contract relationships in conjunction with variable hydrology by basin. This complex system and the TCEQ Agreed Order (2001) that governs the passage of inflow through the system to the Nueces Bay and Estuary led to development of the Corpus Christi Water Supply Model, originally developed as the Nueces Bay and Estuary Model in 1991.

According to TWDB Guidelines1 for 2021 Regional Plan Development, “planning groups are required to use TCEQ’s unmodified WAM Run #3 to estimate surface water availability unless the TWDB Executive Administrator has approved use of other models.” On August 10, 2017, the Coastal Bend Regional Water Planning Group (CBRWPG) approved that a request be sent to the TWDB for approval to use the Corpus Christi Water Supply Model to estimate surface water availability for the CCR/LCC/Lake Texana/MRP Phase II System for the 2021 Coastal Bend Regional Water Plan. For all other water rights except the CCR/LCC/Lake Texana/MRP Phase II System, the unmodified WAM Run #3 would be used.

At the same meeting, on August 10th, the CBRWPG approved that a request be sent to the TWDB for approval to allow the CCR/LCC/Lake Texana/MRP Phase II System to be evaluated and reported as a reservoir system\(^2\) for the 2021 Coastal Bend Regional Water Plan. Reporting by individual reservoirs is problematic and misleading, since it does not appropriately reflect the City’s reservoir operation policy nor account for system gains.

The Corpus Christi Water Supply Model incorporates data from the Nueces WAM, however it also includes and operates the Lavaca, and portions of the Colorado in a conjunctive manner and includes extended hydrology through 2015. \textit{The use of the Corpus Christi Water Supply Model is important to the Region since it includes the most recent drought and enables the reservoirs to be operated as a system according to permit and contract allowances to calculate supplies made available by both firm and interruptible water from Lake Texana and supplies from the Lower Colorado River.}

All previous Region N Plans have used the Corpus Christi Water Supply Model to determine water availability for the multi-basin regional water supply system. The TWDB, City of Corpus Christi, and other stakeholders have continued to invest in the Corpus Christi Water Supply Model since inception of the model in 1991, including a recent update by the City of Corpus Christi to include:

- Hydrology through 2015 to include the most recent drought of record for a total model period of 82 years (1934 to 2015)
- New TWDB volumetric survey data for Lake Corpus Christi and Choke Canyon Reservoir with updated sedimentation rates
- Recent hydrology for Lake Texana and Colorado River (MRP Phase II)

\textit{The TCEQ Nueces River Basin WAM simulates hydrologic conditions from 1934 to 1996 and does not include the most recent drought of record.} Furthermore, the TCEQ Nueces Basin WAM Run # 3 does not accurately simulate the City’s reservoir operating system because it does not include existing water supplies from the east (i.e. Lake Texana and Colorado River).

\textit{The Coastal Bend Regional Water Planning Group requests (1) approval to use the Corpus Christi Water Supply Model for developing the 2021 Plan to estimate the yield of the CCR/LCC/Lake Texana/MRP Phase II System and (2) approval to report its supply as a reservoir system rather than individual reservoirs.}

The TWDB formula-based funding allocation for Task 3 included in the Regional Water Planning Grant Application published in the Texas Register provides suitable funds to use the Corpus Christi Water Supply Model to evaluate water supplies and water management strategies. If not approved, the surface water supply evaluation effort to use and adapt the WAM(s) for 2021 Coastal Bend Regional Water Plan development will require substantial cost revisions beyond the TWDB’s allocated budget.

Thank you for your consideration of this important request. Please contact me at 361-653-2110 with any questions or comments.

\(^2\) As specified in Attachment 1- Exhibit A TWDB- Fifth Cycle of Regional Water Planning First Amended Scope of Work, “Reservoir systems must be approved by TWDB.”
Sincerely,

Rocky Freund  
Deputy Executive Director  
Nueces River Authority  

CC: Carola Serrato, Co-Chair CBRWPG  
    Scott Bledsoe, Co-Chair CBRWPG  
    Temple McKinnon, TWDB  
    Connie Townsend, TWDB  
    Kristi Shaw, HDR Engineering
January 5, 2018

Ms. Rocky Freund
Deputy Executive Director
Nueces River Authority
602 N. Staples St, #280
Corpus Christi, Texas 78401

RE: Region N Regional Water Planning Group (RWPG) requests for approval to modify existing surface water availability hydrologic assumptions for development of the 2021 Region N Regional Water Plan (RWP)

Dear Ms. Freund:

The Texas Water Development Board (TWDB) has reviewed your requests dated September 22, 2017 for approval of alternative water supply assumptions to be used in determining existing surface water availability. This letter confirms that the TWDB approves the following:

1. Use of the Corpus Christi Water Supply Model to estimate surface water availability for the Choke Canyon Reservoir (CCR)/Lake Corpus Christi (LLC)/Lake Texana/MRP Phase II System.
2. Use of safe yield for planning and determining surface water availability from the CCR/LLC/Lake Texana/MRP Phase II System.

The RWPG also requested approval to report surface water availability for the CCR/LLC/Lake Texana/MRP Phase II System rather than by individual reservoirs. This assumption is allowable under existing regional water planning guidance.

We understand that for all water rights except those for the CCR/LCC/Lake Texana/MRP Phase II System, Region N will use the Texas Commission on Environmental Quality's (TCEQ) Water Availability Model (WAM) RUN3 with full diversions and no return flows and firm yields of reservoirs for evaluating the availability associated with these other water rights.

Although the TWDB approves the use of a one-year safe yield for developing estimates of current water supplies for the CCR/LCC/Lake Texana/MRP Phase II System, firm yield for the system must still be reported to TWDB in the online planning database and plan documents.

Our Mission
To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas

Board Members
Kathleen Jackson, Board Member | Peter Lake, Board Member
Jeff Walker, Executive Administrator
For the purpose of evaluating potentially feasible water management strategies, the TCEQ WAM RUN3 is to be used.

While the TWDB authorizes these modifications to evaluate existing water supplies for development of the 2021 Region N RWP, it is the responsibility of the RWPG to ensure that the resulting estimates of water availability are reasonable for drought planning purposes and will reflect conditions expected in the event of actual drought conditions; and in all other regards will be evaluated in accordance with the contract Exhibit C, General Guidelines for Fifth Cycle of Regional Water Plan Development.

If you have any questions, please do not hesitate to contact Connie Townsend, project manager for Region N, at 512-463-8290 or via email at connie.townsend@twdb.texas.gov.

Sincerely,

[Signature]

Jeff Walker
Executive Administrator

c: Carola Serrato, Co-Chair
Scotty Bledsoe, Co-Chair
Kristi Shaw, Consultant
Connie Townsend, Project Manager
January 31, 2018

Ms. Rocky Freund
Deputy Executive Director
Nueces River Authority
602 N. Staples St, #280
Corpus Christi, Texas 78401

RE: Region N Regional Water Planning Group verbal request for clarification on approved surface water availability hydrologic assumptions for development of the 2021 Region N Regional Water Plan

Dear Ms. Freund:

This letter is in response to a verbal communication from the Region N technical consultant in regard to the Texas Water Development Board (TWDB) hydrologic variance approval letter dated January 5, 2018. A request was made for the TWDB to provide clarification regarding the requirement to use the Texas Commission on Environmental Quality’s (TCEQ) WAM RUN3 for evaluating all potentially feasible water management strategies, as stated in the January 5 letter, and to discuss the potential appropriateness of utilizing the Corpus Christi Water Supply Model (CCWSM) for the evaluation of water management supplies for the City of Corpus Christi.

It is the TWDB’s understanding that use of WAM RUN3 to evaluate new surface water diversions within the City of Corpus Christi’s system would result in less conservative supply yields (e.g., greater) than yields determined by the CCWSM given the updated hydrology through 2015 in the CCWSM. While the use of the CCWSM may be reasonable for planning purposes, WAM RUN3 would be utilized by TCEQ for analyzing permit applications. That said, it is acceptable to use the CCWSM for water management strategy supply evaluations only for strategies relying upon the City of Corpus Christi’s water supply system if the CCWSM is expected to produce more conservative yields for surface water appropriations than WAM RUN3. WAM RUN3 is to be used for evaluating all other potentially feasible water management strategies.

If you have any questions, please do not hesitate to contact Connie Townsend, project manager for Region N, at 512-463-8290 or via email at connie.townsend@twdb.texas.gov.

Sincerely,

Jeff Walker
Executive Administrator

c: Carola Serrato, Co-Chair
    Scotty Bledsoe, Co-Chair
    Kristi Shaw, Consultant
    Connie Townsend, Project Manager