

Section 10 Adoption of Plan

10.1 Public Participation

The Brazos G Regional Water Planning Group (BGRWPG) provided considerable opportunity for the public to participate in the planning process. Notices and meeting agendas were posted prior to each meeting in accordance with State law, and these and other meeting materials were posted on the BGRWPG website (www.brazosgwater.org) as they became available prior to each meeting. The public was invited to speak during public comment periods during each planning group and committee meeting. In addition, stakeholders were often invited to participate in planning group and committee meetings (as formal items of the meeting agenda) to present information to the planning group that was pertinent to issues the planning group was considering.

The BGRWPG held three sub-regional meetings in January 2010 to solicit comments on the draft WUG and WWP plans prior to development of the Initially Prepared Plan. These meetings were held in Abilene on January 12, 2010 (Upper Subregion), in Waco on January 13, 2010 (Middle Subregion), and in College Station on January 14, 2010 (Lower Subregion).

In addition to the regular planning group meetings, committee meetings, and the three subregional meetings, the BGRWPG held several public hearings to obtain input concerning amendments to the 2006 Brazos G Regional Water Plan and for other items as required by regional water planning rules, such as during the development of the scope of work to develop the 2011 Plan.

10.2 Brazos G Regional Water Planning Group Website (www.brazosgwater.org)

The BGRWPG has directed its consultant and the Brazos River Authority (BRA) to maintain a website where meeting notices, agendas, and presentation materials may be viewed by the public. In addition to meeting materials, the 2001, 2006 and 2011 planning documents are posted for public viewing and download. The website offers other features including member contact information, planning area maps, planning data, and audio transcripts of all meetings held since August 2004.

10.3 Coordination with Water User Groups and Wholesale Water Providers

The BGRWPG coordinated with multiple water user groups, wholesale water providers, county judges, and councils of governments in the region regarding population and water demand projections developed by the Texas Water Development Board (TWDB), groundwater and surface water availability estimates, proposed water management strategies, and recommendations for sites uniquely suited for reservoir construction. Draft plans for each water user group and wholesale water provider were presented to water user groups and wholesale water providers at the three subregional meetings held in January. In addition, the 2011 Initially Prepared Plan was provided to all county libraries and county clerks, and posted on the Brazos G website for public review and comment.

10.4 Coordination with Other Planning Regions

Coordination with other planning regions was accomplished primarily through the technical consultants, who coordinated data and shared information that was later reported to the planning groups. The Brazos G technical consultant presented results of the Brazos G water availability analysis, specifically focused on water available from the potential BRA System Operations Permit, to the Region H Water Planning Group on December 2, 2009.

10.5 Brazos G Regional Water Planning Group Meetings

The BGRWPG held 50 public meetings during the 2011 planning cycle, between January 1, 2006 and July 21, 2010, including regular meetings of the full planning group; periodic meetings of the Executive, Scope of Work, and Finance Committees; periodic meetings of the Groundwater Availability, Surface Water Availability, and Water Policy Workgroups; and public hearings to receive public comments concerning revisions to the 2006 Brazos G Regional Water Plan, development of the scope of work for developing the 2011 Brazos G Regional Water Plan, and the identification of potentially feasible water management strategies.

10.6 Public Hearing and BGRWPG Responses to Public Comments on Initially Prepared Plan

The BGRWPG held a public hearing on April 21, 2010 to receive comments concerning the Initially Prepared 2011 Brazos G Regional Water Plan. The oral comments received can be heard from the audio transcripts on the BGRWPG website (www.brazosgwater.org), and a

transcript of the public hearing can be viewed at the same location. At the public hearing, sixteen members of the public provided oral comments to the planning group concerning various aspects of the plan. Written comments were received from three of those individuals that mirror or expand upon their oral comments, including Representative Brown, Eric Swenson, and Joe Cunningham (Aquilla Water Supply District). In addition, written comments were received from the Guardians of the Navasota, an organization of which six of the speakers indicated they represented. Written and oral comments received from the same individual are responded to jointly.

Following the April 21, 2010 public hearing, written public comments were received by the planning group through June 25, 2010. Additional comments were received from the Texas Water Development Board and the Texas Parks and Wildlife Department. No comments were received from federal agencies. The following section summarizes the public comments received and the responses of the BGRWPG. Comments are summarized in *italics*, with the response from the BGRWPG following in regular type. When comments are numbered, the number refers to comment numbers in the written comments received. Copies of written comments received and a transcript of the public hearing are included in Appendix O.

Commenter — State Representative Fred Brown (oral and written comments)

Requested that Millican Reservoir (Panther Creek site) not be a recommended water management strategy.

Millican Reservoir will not be a recommended water management strategy in the 2011 Brazos G Regional Water Plan.

Commenter — Joe Cunningham, Aquilla Water Supply District (oral and written comments)

Mr. Cunningham comments that the population projections for Hill County and the areas served by the District are too low, and requested sufficient notice when the 2016 Plan is prepared to object to the projections if the District believes them to be too low.

The 2011 Plan is considered to be an update to the 2006 Plan and utilizes essentially the same population projections as the 2006 Plan, with a few exceptions in which State Data Center estimates indicated growth in 2007 to be 5 percent or more greater than the TWDB projections. This was the case for four Hill County water user groups – Hillsboro, Hubbard, Itasca and Whitney. The TWDB increased the population projections for those cities and reduced the Hill County-Other population projections accordingly for a zero net change in the total Hill County population projections.

The 2010 Census data will be utilized to develop new population projections for the 2016 Brazos G Regional Water Plan. We anticipate that the TWDB will provide ample opportunity for review and revision of those projections before they are adopted by the TWDB.

Table 4A-7 on page 4A-16 shows no increases in demands for the District's customers.

The demands shown in Table 4A-7 are what the planning group's data indicate are the current contractual commitments between the District and its customers. The contractual commitments are not necessarily the demands of those customers. The demands shown for the District's customers that are water user groups (Brandon-Irene WSC, Files Valle WSC and Hillsboro) are shown in Table 2-5, which begins on page 2A-24. The demands for the rest of the District's customers are grouped together within the Hill County-Other demands.

The water supply projections for Lake Aquilla are not consistent with the conclusions of a 2006 Brazos River Authority sediment study.

The water supply estimates for Lake Aquilla reflect a long-term average sedimentation rate of 429 acre-feet per year. This rate was provided to the Brazos G technical consultant by the BRA via an email dated February 3, 2009. The BRA subsequently updated the sedimentation rate to be 127 acre-feet per year, based on a 2008 survey of the reservoir. However this smaller rate was not provided in time to be used in the preparation of the 2011 Plan. If the smaller sedimentation rate had been used, the estimated supplies from Lake Aquilla would have been greater than they are currently shown.

Commenter — Nancy Bufkin (oral comments)

Ms. Bufkin expressed opposition to South Bend Reservoir being included in the 2011 Plan.

The South Bend Reservoir was evaluated for possible inclusion in the 2011 Plan, but is not a recommended water management strategy in the 2011 Plan.

Ms. Bufkin desires to see better representation of agricultural interests from the area near Possum Kingdom Lake.

A variety of interests are represented on the planning group, but unfortunately, not every community or county will have a direct representative on the group.

Commenter — Tom Welfelt (oral Comments)

Mr. Welfelt expressed concern about the impact of Cedar Ridge Reservoir on water levels in Possum Kingdom Lake.

The effects of the proposed Cedar Ridge Reservoir on downstream reservoir levels were not addressed specifically in the evaluation. However, the evaluation was completed assuming that Cedar Ridge Reservoir would have to pass all inflows which the reservoir would not be entitled to impound in order to honor downstream senior water rights. In addition, it is the planning group's understanding that agreements written between the BRA and the City of Abilene compensate the BRA for any yield impact of Cedar Ridge.

Commenter — Randy Rogers (oral comments)

Mr. Rogers noted differences between numbers in the 2011 IPP and another report, e.g., “Abilene’s study on Cedar Ridge”.

The City of Abilene’s studies regarding the Cedar Ridge Reservoir project will not necessarily match those found in the regional water plan. A local sponsor of a project may often utilize different basic assumptions when evaluating a project than are used for regional water planning. These include different hydrologic assumptions and costing methodologies, among others.

Mr. Rogers notes that the use of water from O.H. Ivie Reservoir could be increased by increasing treatment capacity.

The City of Abilene is not currently pursuing additional treatment capacity from O.H. Ivie Reservoir due to several factors, including brine disposal issues and uncertainty regarding the actual reliable supply available from that source.

Mr. Rogers notes that the quantity of water proposed to be used for a power plant planned by Tenaska in Nolan County will use substantially less water than the 20,000 acre-feet of steam-electric demand identified for Jones County that is planned for Abilene to meet.

The quantity of water planned to be used by Tenaska is, to the planning group’s knowledge, less than the 20,000 acre-feet per year identified in the 2011 IPP. However, the Nolan County demand for water should not be identified specifically as a “Tenaska” demand, but should instead be considered as a regional water demand for steam-electric power generation. The demand identified for Nolan County by the University of Texas Bureau of Economic Geology (BEG) and the TWDB was originally 94,298 acre-feet per year. The planning group requested that the TWDB adopt a smaller, more realistic demand projection.

Mr. Rogers commented that a previous speaker had noted that West Texas Utilities has 14,300 acre-feet of water that it is willing to sell.

The planning group can only consider current supplies as they are currently contracted, and makes every effort to only recommend strategies that water user groups and wholesale water providers are planning to pursue. The City of Abilene has given the planning group no indication that it is pursuing acquisition of the water supply mentioned by Mr. Rogers. If and when the City of Abilene informs the planning group that it is pursuing this supply, future regional water plans can be modified to reflect the new course of action planned by the City.

Mr. Rogers noted concerns that the Cedar Ridge Reservoir would adversely impact water quality in Possum Kingdom Lake, specifically dissolved minerals.

Analysis of the impact of Cedar Ridge Reservoir on salinity levels in Possum Kingdom Reservoir is beyond the scope of work authorized by the TWDB for developing the 2011 Brazos G Regional Water Plan. However, during development of the 2016 Brazos G Regional Water Plan, additional treatment of salinity issues could be added to the scope of work if requested by the planning group and approved by the TWDB.

Commenter — Leon Denena (oral comments)

Mr. Denena expressed support for the comments made by Representative Brown regarding his opposition to Millican Reservoir.

Millican Reservoir will not be a recommended water management strategy in the 2011 Brazos G Regional Water Plan.

Mr. Denena expressed concern that actions of the planning group could endanger water rights currently authorized for irrigation to be used for municipal supplies.

The Brazos G Regional Water Planning Group has no authority to transfer water rights between users. The sole responsibility of the planning group is to develop a plan for meeting future water needs, which include irrigation needs. Agricultural interests are well-represented on the planning group.

Commenters — Mark Dudley, Marvin Karsten, Leonard Cox, Cathy Cox, Samuel (Fr. Cassian) Sibley, Brad Ayers, Robert Averette, Sammy Catalena (oral comments)

Each speaker expressed opposition to Millican Reservoir.

Millican Reservoir will not be a recommended water management strategy in the 2011 Brazos G Regional Water Plan.

Mr. Dudley, Mr. Karsten, Mr. Cox, Mrs. Cox, Mr. Ayers, and Mr. Averette represented themselves as affiliated with and speaking for the Guardians of the Navasota.

Mr. Dudley requested that the planning group “send a message” to Region H that Brazos G will no longer sell them water if Region H moves forward with Millican Reservoir.

The Brazos G Regional Water Planning Group has no authority or capability to buy or sell water. The ability to sell water is held by those entities (individuals, corporations and governmental entities) that hold water rights.

Mr. Karsten commented that Lake Limestone appears to not be operated correctly and is causing flooding.

Lake Limestone is owned and operated by the Brazos River Authority for water supply and flood control. There is limited capability for the reservoir to control floods as it was not constructed for flood control purposes and has no dedicated flood control storage.

Mr. Cox noted an apparent discrepancy in the Initially Prepared Plan concerning the cost of Millican Reservoir shown on pages ES-17 and 4B.12-3.

The cost shown in the table on 4B.12-3 is a typographical error and will be corrected. The cost as shown on pages ES-17 and 4B.12-178 is correct.

Mr. and Mrs. Cox both requested that the planning group consider a portion of the Navasota River as a “unique ecological stream segment.”

While the planning group understands and respects Mr. Cox’s desire to designate the Navasota River as unique stream segment, the planning group has not opted to recommend that the Texas Legislature make such a designation. The planning group will consider recommending such designations in the next planning cycle.

Commenter — Janice Bezanson, Texas Conservation Alliance (oral comments)

Ms. Bezanson expressed opposition to Millican Reservoir.

Millican Reservoir will not be a recommended water management strategy in the 2011 Brazos G Regional Water Plan.

Ms. Bezanson expressed opposition to Cedar Ridge Reservoir, and stated that the steam-electric water demands in Nolan County that would be met by the City of Abilene are not correct now that Tenaska has agreed to utilize less water.

The quantity of water planned to be used by Tenaska is, to the planning group's knowledge, less than the 20,000 acre-feet per year identified in the 2011 IPP. However, the Nolan County demand for water should not be identified specifically as a "Tenaska" demand, but should instead be considered as a regional water demand for steam-electric power generation. The demand identified for Nolan County by the BEG and the TWDB was originally 94,298 acre-feet per year. The planning group requested that the TWDB adopt a smaller, more realistic demand projection.

Commenter — David Blackburn, City of Temple (written comments)

We therefore request that the City of Temple Treatment Capacity...should be 23,300 AF/Y.

As coordinated with City of Temple staff, the water supply available to Temple has been updated to 23,296 acft/yr to account for the membrane plant.

...we respectively submit that the City of Temple's rated capacity be adjusted...to 60% of capacity. This will change the figure in Table 4A-22 ...from 23,300 AF/Y to 27,960 AF/Y.

The supply shown in Table 4A-22 and used throughout the 2011 Plan will utilize 27,955 acft/yr as the supply available to Temple.

...yet, BRA could not deliver all the water contracted for if called upon...

The BRA has strategies included in the 2011 Plan to increase supplies available in the Little River System to adequately meet its contractual commitments.

Commenter — Steve Carpenter, City of Harker Heights (written comments)

...Therefore, the City of Harker Heights requests revising the 2011 Brazos G Regional Water Plan to reflect surpluses for the years 2030 and 2060 based on the City's Water Master Plan.

Unfortunately, the 2011 Plan cannot be revised to match the City's 2006 Water Master Plan, for several reasons. First, water demands shown in the regional plan are established by the TWDB and cannot be modified to match the City's 2006 Water Master Plan, because the planning group is required to use the population and water demand projections adopted by the TWDB. Second, while the information obtained by the Brazos G technical consultant does indeed show a total contracted supply from BRA sources of 8,800 acft/yr, the BRA Little River System currently is not capable of supplying the total contractual commitments through a repeat of the drought of record, which is the basis for determining available supplies. Because the City's demands are less than the projected supplies available from the BRA Little River System (through the Bell County WCID No. 1), the Plan shows no shortage for Harker Heights and therefore no change in water supply is recommended. However, a surplus cannot be shown, as one does not exist in the

Little River System at this time. The BRA is pursuing strategies to increase supplies in the Little River System that will alleviate the drought-year shortages.

The following text will be added to Section 4C.1.8: “The contracted supplies of 8,800 acft/yr would result in a surplus of 3,000 acft/yr in 2030 and a surplus of 1,985 acft/yr in 2060.”

Commenters — Stephanie Martin, Eastland County Water Supply District and Ron Holliday, City of Eastland (provided separate written comments)

Mr. Holliday noted that the City of Eastland is not in favor of the Eastland Water Supply District supplying water to the City of Strawn as shown in the 2011 IPP, and Ms. Martin noted that the Eastland Water Supply District has not considered this issue.

The concept for Eastland County WSD to supply the City of Strawn was obtained from “*West Central Brazos River Basin Regional Water Treatment and Distribution Facility Plan*”, August 2004. A supply from Eastland County WSD to the City of Strawn is identified as one of the strategies in the “preferred alternative” in the report. As the supply from the District to Strawn appears technically and economically feasible, the Brazos G Regional Water Planning Group will continue to recommend this future water supply strategy for Strawn. This recommendation in no way obligates the District to supply the water to Strawn. It is simply a recommendation of the Brazos G Regional Water Planning Group. Financial requirements for this project would be entirely the responsibility of Strawn.

The following text will be added to Section 4C.27.3: “The Eastland County WSD has not agreed to this recommended water management strategy.”

Commenter — Jayson E. Barfknecht, City of Bryan (written comments)

1. The City’s supply should be based on the total permitted well volume of 33,539.86 acft/yr.

Water supplies in the regional water plan are based on current infrastructure capacities when known, not permitted amounts. The total rated capacity of the City of Bryan’s wells was obtained from the water system data sheets maintained by the Texas Commission on Environmental Quality. These data were then adjusted to determine annual supplies to account for a 2.0 peaking factor and an assumed 5% per year maintenance downtime.

We are aware that you have recently obtained a tenth well that was formerly listed as a supply for the City of College Station. The 2011 Plan will be modified to reflect this additional supply of 2,124 acft/yr for the City of Bryan.

2. ...the City would like to have the projected water demands recalculated so these demands can be represented in the 2011 IPP.

The TWDB has established the population and water demand projections to be used for this round of regional water planning and the planning group is unable to modify the projections.

3. The City of Bryan is requesting that the 2011 IPP be modified to reflect the City of Bryan as a Wholesale Water Provider.

The supplies and demands for the City of Bryan, Wellborn SUD and Brazos County-Other will be adjusted to account for the two supply contracts. We will adjust the water management strategy for Wickson Creek SUD to include supplies from Bryan as a recommended water management strategy.

Commenter — Jerry Atkinson, Bell County WCID No. 1 (written comments)

The actual contractual demands should be 62,509 acft/yr not 59,509 acft/yr as listed in Table 4A-8.

The District's contractual demands will be updated.

The recommended strategy of reallocation of supplies is not necessary and should be removed from the Plan.

The recommended strategy will be changed to "Firm up Existing BRA Supplies with Lake Granger Augmentation", as suggested.

Additionally, the District requests that several reuse strategies we are pursuing be included in the Plan.

The requested reuse strategies will be included in the 2011 Plan as requested.

Commenter — J. Calvin Hodge, Hodge Properties (written comments)

While somewhat illegible, Mr. Hodge's comments apparently question the need for the planning process.

The regional water planning process is designed to help ensure the orderly, reasoned development of water supplies to meet the future water needs of Texas.

Commenter — Sheril Smith, Private Citizen, Lexington (written comments)

Letter expresses concern that large surface water projects (dams, impoundments, and reservoirs) will have negative effects on surrounding productive land, communities, and the environment. Environmental concerns include reductions in stream flows to bays and estuaries, channel degradation, and impacts to fish and wildlife. Notes that reservoirs are subject to massive evaporation losses and sedimentation issues.

Expresses concern that groundwater is not considered "state water" and that Texas should establish a consistent set of laws to manage both surface and groundwater. Asks if the Brazos River receives water from Simsboro or Carrizo Aquifers, or aquifers further upstream.

Expresses concern over dwindling water resources and suggests the language in the Plan be changed from "Evaluate water management strategies and select strategies to meet water needs" to "Evaluate sustainable water supplies and select management strategies to provide adequate water supplies to maintain healthy people, communities and ecosystems while reducing demand."

Suggests that the Water Planning Group focus more on involving the region's general public upfront, before any water management strategies are considered. Quotes a report titled "The Deliberative Agency, Opportunities to Deepen Public Participation" and suggests that the planning group employ a variety of the tactics described within it. The report can be found at www.deliebrative-democracy.net/index.php?option=com_docman@Itemid=93

Thank you for your thoughtful comments concerning the following:

- Surface water projects,
- Groundwater projects,

- Demand versus supply planning, and
- Public involvement.

No changes to the 2011 Brazos G plan were incorporated as a result of these comments. The plan was developed within the guidelines established by the TWDB as mandated by the Texas Legislature.

Commenter — Stephen Dorman, KSA Engineers, on behalf of the City of Marlin (written comments)

Concurs with the 2011 IPP water shortage and concurs that the Brushy Creek Reservoir is the best supply option. Offers comments on the cost estimate and the water supply available from the proposed Brushy Creek Reservoir, as well as on population estimates for Falls County.

The cost estimate contained in section 4B.12.10 for the Brushy Creek reservoir has been updated with the information provided by the City of Marlin's engineer. The supply available from the project was estimated using the Brazos G modified WAM as described in Section 3.2. The Brazos G WAM contains assumptions not included in the TCEQ WAM Run 3, which explain the reason for the different supply estimates between the 2011 IPP and *TWDB Report 370 Reservoir Site Protection Study*. The TWDB provides each planning region with the population estimates that are to be used during the planning process. The population numbers contained in the plan will not be revised by the TWDB until after the 2010 census for inclusion into the 2016 round of regional planning.

Commenter — Larry Gilley, City of Abilene (written comments)

The City provided various editorial comments for the planning group to consider. The City of Abilene also submitted responses to comments received during the public hearing and the public comment period for the 2011 IPP.

Thank you for the editorial comments. These have been incorporated into the Plan. The City's responses to public comments received on the 2011 IPP have been recorded.

Commenter — R. Brent Locke, Bistone Municipal Water Supply District (written comments)

The District submitted information about costs required to bring the additional well capacity online, including the necessary system improvements. Requests that the necessary pipelines and treatment plant improvements also be added to the description of the water management strategy.

The cost estimate in Volume II was updated with the information provided by the District.

Commenter — John Daniel, Bethany Water Supply Corporation (written comments)

States that the capitol cost for a water management strategy to obtain supply from Johnson County SUD is overstated and should be updated to match the Bethany engineer's cost estimate (attached to letter).

The cost estimate in Volume II was updated with the information provided by Bethany WSC.

Commenter — Ben White, City of College Station (written comments)

Requests that the College Station future water deficit be met with surface water from the BRA System Operations Permit, not the Millican Reservoir (Panther Creek) project.

The Millican Reservoir (Panther Creek) had been removed from the plan. The water supply plan for College Station has been updated to show the City's future shortage being met with water from the BRA System Operation Permit.

Commenter — Judy Greer, (written comments)

Comment is addressed to Governor Perry and the board members and Executive Administrator of the TWDB. Requests documentation on potential projects investigated by the TWDB to provide for the future needs of the densely populated regions of the state. Also requests documentation describing how costs have been estimated for the projects, including the costs to the tax bases of all citizens.

As this is an information request to the Governor's Office and the TWDB, no changes to the 2011 Brazos G plan were incorporated as a result of these comments. The plan was developed within the guidelines established by the TWDB as mandated by the Texas Legislature.

Commenter — Rex Bland, Adobe Wells, Inc., (written comments)

Expresses concern that groundwater from the Seymour Aquifer in Jones County is being ignored for planning purposes and offers to sell his well water to the City of Abilene and the West Central Texas Municipal Water District. Offers an ASR alternative to the City of Abilene at the well field for sewer effluent from the Abilene wastewater treatment plant in conjunction with the Cedar Ridge Reservoir or the Tenaska Coal Plant.

County-wide, the estimated available groundwater in Jones County from the Seymour Aquifer is 8,000 acft/yr. Approximately 3,633 acft/yr of that available supply (45.4 percent) is being utilized in the Plan as a current supply. No water management strategies were evaluated or updated to investigate utilizing the remainder of the available supply. It is the intention of the planning group to conform the strategies in the plan to what is requested by specific WUGs and WWPs, when those entities request specific strategies be put into the plan for them. No WUG or WWP has asked that additional groundwater supply from the Seymour Aquifer be evaluated as a potential water management strategy. This option has been previously studied in 2001 for the BGRWPG and in 2005 for the City of Abilene. If a municipal WUG or WWP requests that this source be considered as a water management strategy, or if the planning group is informed that two parties (buyer and seller) have established a level of commitment through a contract or memorandum of understanding to pursue the supply, then a Seymour Aquifer project in Jones County would be considered as a water management strategy in the plan. This can occur during the 2016 planning process if the planning group is notified of such a commitment.

Commenter — Sam Chase, (written comments)

Expresses concern that groundwater from the Seymour Aquifer in Jones County that is available from the Rex Bland/Adobe Wells water field is not being considered in the 2011 Plan.

No WUG or WWP has requested that groundwater supply from the Seymour Aquifer be evaluated as a potential water management strategy.

Commenter — Billy Jacob, The Water Broker, LLC, (written comments)

Mr. Jacob states that he believes that the groundwater from the Seymour Aquifer in Jones County should be considered as a water supply by the City of Abilene, and indicates that a supply of 2,200 acft/year could be delivered to the vicinity of Fort Phantom Hill at an estimated cost of \$850,000. An ASR alternative is also described.

No WUG or WWP has asked that groundwater supply from the Seymour Aquifer be evaluated as a potential water management strategy. The 8,000 acft of supply from the Seymour Aquifer in Jones County represents total supply and does not take into account existing demand on the aquifer.

Mr. Jacob states that the Plan does not specifically indicate that the Cedar Ridge Reservoir is a Wastewater Reclamation Project with the return flow being sewer effluent from the Abilene Wastewater Treatment Plant. He expresses concern that the Plan does not include any environmental issues concerning the effluent sewer capture in Cedar Ridge Reservoir or the use of Advanced Wastewater Treatment Methods or associated costs to approve a permit for the reuse of sewer water for municipal drinking water, or consider pharmaceuticals and their effect in the sewer effluent on the reservoir. Mr. Jacob also questions the computation of the shortages shown in Table 4C.38-11 for the City of Abilene. The commenter is directed to Table 4A-16 to review the computations of total supplies and total demands for the City of Abilene as a WWP.

Simply because Cedar Ridge Reservoir is located downstream of the City of Abilene's wastewater discharge location does not require that the Cedar Ridge Reservoir be categorized as a wastewater reclamation project. The Cedar Ridge Reservoir site is 69 river miles downstream from the City of Abilene's wastewater discharge location. Use of water from Cedar Ridge Reservoir will not require any additional authorization from the TCEQ other than a water right permit and TCEQ's approval of the drinking water treatment plant. Current State and Federal regulations would not require advanced treatment in order for Abilene to utilize its pending reuse permit to reclaim wastewater flowing into Cedar Ridge. However, the safe yield reported for Cedar Ridge Reservoir of 23,380 acft/yr does not include any return flows as inflows into Cedar Ridge Reservoir.

There are no math errors related to Abilene's portion of the plan, as reported by the commenter. The Region G Planning Group and the TWDB have approved the use of a 2-year safe yield for supply purposes for the City of Abilene and the WCTMWD. The supplies and demand calculations described in the letter are inconsistent with the methodology required by the TWDB for regional water planning.

Commenter — Eric Swenson, White River MWD (oral comments supplemented with handout)

Mr. Swenson provided several comments concerning the necessity and viability of Cedar Ridge Reservoir as a recommended water management strategy for the City of Abilene.

- The Region G Planning Group and the TWDB have approved the use of a 2-year safe yield for supply purposes for the City of Abilene and the WCTMWD to deal with the uncertainty of providing critical water supply to a drought prone region of Texas.
- No WUG, WWP, or "willing buyer" requested that groundwater supply from the Seymour Aquifer be evaluated as a potential water management strategy. This option has been previously studied in 2001 for the BGRWPG and in 2005 for the City of Abilene.

- To increase supply from O.H. Ivie would require an expansion of the Hargesheimer WTP. Approximately 15% of the Ivie supply is lost to the brine reject stream. The City of Abilene has reported that accommodating additional brine discharge is problematic.
- The City has an extensive reuse system in place and currently has a permit pending with the TCEQ to more effectively use its effluent in the overall supply scenario.
- The current state of the water right and water contract held by Eagle Construction is shown correctly in the Plan. The plan will be updated to indicate that the current owner is Eagle Construction Environmental Service, L.P.
- The Possum Kingdom supply to Abilene is listed as an alternative water management strategy for the City of Abilene. The costs from the City of Abilene November 2009 report are different from the costs represented in the 2011 Brazos G Plan because of the different assumptions used for the two independent studies.
- The needs of the residents in high-growth areas of the region, specifically Bell, Johnson, Coryell, McLennan, Williamson, Washington, Brazos, Bosque, Burleson, Hill and Robertson Counties have been addressed successfully by their own respective water supply plans as detailed in Section 4C.

Commenter — Scott A. Jones, Galveston Bay Foundation (written comments)

Mr. Jones' comments were addressed to Region H. The letter states that the Region H Water Plan should take freshwater inflow targets from the freshwater inflows standards to be developed by the TCEQ as mandated by Senate Bill 3. Mr. Jones suggests that water conservation goals and implementation be greatly increased in Region H, particularly in the Houston and Dallas metropolitan areas. Mr. Jones expresses concern that reservoir construction will cause destruction to the fragile riparian habitat and that interbasin transfers harm donor basin environmental flows. Mr. Jones suggests identifying additional appropriate ecologically significant stream and stream segments to the Region H Water Plan.

Thank you for your comment and we appreciate you copying Brazos G on your correspondence with Region H. We will defer to Region H to respond, as your comments were specifically addressed to that group.

Commenter — Glen Roe (written comments)

Mr. Roe expresses concern about building the Bedia Reservoir, as it will affect the surrounding land and communities who love that land.

Thank you for your comments and we appreciate you copying Brazos G on your correspondence with Region H regarding the proposed Bedia Reservoir. We will defer to Region H to respond to comments that specifically address strategies in the Region H Plan.

Multiple Commenters — see list below (written comments)

The following individuals and organizations provided written comments expressing opposition to the Millican Reservoir project as a recommended water management strategy. This reservoir was also recommended as a water management strategy and as a site uniquely suited for reservoir construction by the Region H Water Planning Group in the 2011 Initially Prepared Region H Water Plan. Several of those commenting originally directed their comments toward

the Region H Plan, but also provided copies of their comments to Brazos G. Several others provided written comments to the TWDB, which are included in Appendix O, along with correspondence from the TWDB in reply. As this set of comments all expressed clear opposition to inclusion of the proposed Millican Reservoir in either the Brazos G or Region H Plans, the comments are responded to as a single group.

Steven L. Hanson, three letters to the TWDB

Tom and Paula Moore, letter to the TWDB

T. Barret Lyn, PhD, two letters to the TWDB

Robert and Elaine Sheffield, letter to Region H

Randy Sims, Brazos County Judge, letter to Region H and resolutions from the Brazos County

Commissioners Court opposing Millican Reservoir in the Brazos G and Region H Plans

Paul Brannon, letter to Region H

John Cruse Knotts, letter to the TWDB

Grimes County Commissioner's Court, resolution opposing Millican Reservoir in the Region H Plan

Elaine Sheffield, Iola Cemetery Association, letter to Region H

Grimes County Sub-Regional Planning Commission, letter to the TWDB announcing resolution opposing Millican Reservoir in the Region H Plan

Chris Loup, letter to the TWDB

Blair Fannin, letter addressed to both Region H and the TWDB

Alec Pointer, several emails in correspondence with Brazos G

Mark Dudley, Guardians of the Navasota River, letter to Brazos G accompanied with a petition containing in excess of 1,600 signatures

Cheryl Wells, letter to Brazos G

Catherine Payne, letter to the TWDB

C. Leon Williamson, letter to Brazos G

Millican Reservoir will not be a recommended water management strategy in the 2011 Brazos G Regional Water Plan.

Commenter — Brazos River Authority (written comments)

The BRA provided two attachments containing their comments. Some of their comments are noted as having been addressed in an earlier draft of the plan prior to publication of the IPP. Many of the comments are editorial corrections noting minor typographical errors. These have been corrected in the final plan. The remainder of the comments are responded to below.

Table 4C.1-5, Bell County Steam-Electric. Temple recently purchased 2,500 acft from BRA for steam electric and is part of the 30,453 acft contract total shown on previous pg.

The database provided by BRA of its contracts lists the Temple 2,500 acft/yr as municipal supply. Correcting the Steam-Electric supplies for Bell County will not change the plan, as Temple is committed to providing up to 10 MGD of reuse supply to meet the Bell County Steam-Electric need. A change to the plan at this time is unwarranted.

Paragraph 4C.7.3.1. In the Description of Supply 2nd bullet it states that the supply is limited by treatment plant capacity but there is no strategy to expand the treatment plant capacity.

The estimated reliable supply from the BRA contract (5,000 acft/yr) equals the treatment plant capacity.

Paragraphs 4C.7.3.3 (Gatesville) and 4C.7.5.2 (County-Other). Should explain cost for new Coryell Co reservoir as simply being BRA's current system rate. "FYI" Current rate is \$60/acft.

The cost is not based on BRA's current system rate, but is based on the 2008 rate. As per earlier discussions with BRA staff regarding how to appropriately address costs for water management strategies identified as BRA projects, the unit cost of the actual project, not BRA's system rate, was utilized.

Section 4C.10.2. City of Marlin plan. Also, it is the BRA's understanding that the existing Brazos mainstem intake and raw water line are in need of repair. Should they also be included, so that they are eligible for TWDB funding?

The City of Marlin's engineer has not indicated that the City would like those facilities included in the plan for the City of Marlin.

Section 4C.15.2.3. Need clarification on cost, it's misleading to assume that a pool rise won't cost our customers anything. If you leave cost at zero add footnote with explanation.

A footnote has been added stating that future increases in BRA System Rate would account for costs for BRA to augment existing supplies.

4C.18.5.1. need to reference BRA contract (1,820 acft).

The contract is referenced in Section 4C.38.17 in the plan for Stamford as a WWP.

4C.24.13. McGregor. Please confirm that McGregor has access to run-of-river supplies as stated.

The text has been corrected to remove the reference to run-of-river rights.

4C.24.1. Woodway. They may receive some water from Lake Belton through Bluebonnet WSC.

The Bluebonnet WSC supply is not referenced.

4C.25.8. Milan County Steam-Electric. Clarify - does the supply number for the shortage calculation include both the ALCOA Little River water right and BRA contract for 5,000 acft?

The shortage calculation includes only the ALCOA Little River water right. The BRA contract for 5,000 acft/yr is assigned to Milam County Manufacturing supply.

4C.30.4. Somervell County Steam-Electric. Confirm that the shortage calculation of 35K acft can be reconciled with Luminant's 2006 Brazos G Plan Amendment numbers since shortage is much less than what Luminant is requesting to purchase from BRA.

The steam-electric demands used in the regional water plans are consumptive demands and often require contractual commitments that are greater than the demands shown in the plan.

4C.33.13.1. Abilene. Add BRA supply (50 acft contract).

This contract for supply from Possum Kingdom Reservoir is part of a priority calls agreement to compensate BRA for loss of yield. The supply made available to Abilene from this contract is much greater than 50 acft/yr and is accounted for by including priority calls (subordination) agreements in the water supply modeling.

4C.36.13. Jonah Water SUD. Treatment infrastructure is not currently in place to use the Stillhouse Hollow supply (Clarify that there shouldn't be a WMS for infrastructure). Jonah is currently getting water from the EWCRWTS and it doesn't appear to be reflected in the number in the Table. Contract is for "needs-met" quantity.

The text and available supplies has been modified to account for this.

Table 4A-6. Why do Existing Contracts (Region K) under Little River System increase through time?

The increasing demands in Region K are due to how the BRA contractual supplies were proportioned between Region K and Brazos G. The Region K supplies shown are for entities with demands in both Region K and Brazos G. The Region K supplies increase over time as the Brazos G supplies decrease over time. The sum of the two equal 250,970 acft/yr in each decade. This adjustment was done in coordination with Region K so that the Region K demands (which are relatively small) could be shown as being fully met, and any shortages from BRA contracts would be located solely in Brazos G. This was done so that water management strategies would not have to be implemented in the Region K plan.

Table 4A.6. New Demands (Region H) under Main Stem/Lower Basin appear inconsistent with Region H Plan. Region H allocates WMS supply from both Allens Creek and BRA Sys Ops beginning in 2020.

The Region H demands from the BRA Main Stem/Lower Basin System were coordinated with the Region H consultant and are consistent.

Can BRA obtain the Little River System projected reservoir yields from 2010 - 2060 by individual reservoir?

Individual yields for the BRA reservoirs are presented in Table 3.3-2 for years 2000 and 2060. Yields for intervening decades were linearly interpolated between these values.

Table 4A-7. Clarify whether "...purchased 3,889 acft..." and "Total sales...were 4,844 acft." in Description represent contract totals or actual amounts used. Also document/explain whether the Projected Demand numbers are contract amounts or actual projected use. This comment applies to all following WWP Projected Demand sections.

The contract amounts in the tables for all wholesale water providers are full contract amounts. Needs met contracts will not be shown as static and will change over time. The uses discussed in the descriptions are the actual use (water delivered). It is an indication of how much water is being used from the contracted supplies.

Table 4A.8. Description at top references 62,509 acft/yr BRA contracts while Supply section below shows 53,428 acft/yr. Is this difference a result of the Little River System contract reductions made by HDR for modeling?

Yes.

Table 4A-9. Recommend deleting "...however the firm supply of those contracts is 7,037 acft/yr." from Description. Also, clarify whether the "943 acft" and "2,848 acft" numbers in Description are contract amounts or actual water use. The Projected Demands increase through time and look like actual water use projections as opposed to contract amounts. Is this consistent with the way demands are shown for other WWPs such as BRA, Aquilla WSD, Bell Co. WCID#1, and Central Texas WSC?

The text should remain to clarify that the full contractual amounts are not firm supplies. See previous comment and response. The contracts shown in the table are "needs met" contracts and will change over time to match the demands of the WUGs that are supplied by the contracts.

Table 4A.16. Check Total Raw Water Supply numbers in bottom of Supplies Table. Shouldn't OH Ivie component of this number be approximately 15,000 AF instead of 6,720?

The full raw water supply from O.H. Ivie cannot be used without advanced treatment resulting in 15 percent reject brine. Therefore the full contract amount from O.H. Ivie cannot be considered the raw supply.

Table 4C.38-1. Do BRA shortages include shortages shown for BRA customers in the table that are also WWPs (i.e. Round Rock, Aquilla WSD, etc.)? If so, probably need to footnote table so numbers are not accidentally "double counted" by readers.

The BRA shortages are contractual shortages (including water management strategies), and need to match those shortages shown in the Section 4A tables. A footnote has been added to the table.

Section 4C.38.2.2. Note that Lake Granger Augmentation project isn't solely dependent on Sys Ops interruptible supply. Existing System Order provisions allow diversions from Lake Granger in excess of its priority amount. Suggest rewording.

Additional text has been added to clarify.

Section 4C.38. Comparing water contract amounts (as opposed to actual projected water use under those contracts) to yield creates unrealistic shortages in early decades, which in turn results in strategies being shown much sooner than they are really needed. BRA does not have a real shortage of 31,802 acft/yr in 2010 as shown in Table 4C.38-3. The text and tables are misleading and need to be modified somehow to reflect this.

Contractual demands are necessarily shown at their full amounts, even if the customer demands are much less than what they have contracted for. Text has been added in bold type on page 4C.38-1 to clarify that shortages shown are likely accelerated.

Section 4C.38.3. What is the math for calculating these shortages (107,223 in 2030 and 302,926 in 2060)?

The math for calculating the shortages is shown in the Wholesale Water Provider summary tables in Section 4A.

Section 4C.38.3. Stonewall, Kent, and Garza County Chloride Control Project. BRA is not actively involved in pursuing this chloride control strategy. BRA recognizes downstream benefits from upper basin chloride control and is not opposed to the project; however, BRA's long-range financial planning does not currently contemplate large financial participation in 2020 as currently shown for this strategy.

The BRA is identified as the project sponsor because the BRA is a major regional entity in the Brazos River Basin. BRA is identified in the plan for several water management strategies when a clear sponsor for a major project has not been identified. Also, it is the technical consultant's understanding that BRA has participated in the project in the past.

Section 4C.38.3. What is the math for calculating these shortages? Region H Plan shows no BRA shortage in 2010, 83,062 acft/yr of recommended strategies in 2020, increasing to approximately 246,000 acft/yr in 2060. Millican Reservoir is not recommended until 2040 in Region H Plan.

The math for calculating the shortages is shown in the Wholesale Water Provider summary tables in Section 4A.

Table 4C.38-4. Also need to correct footnote 2. It doesn't apply to Millican Reservoir or Chloride Control as shown in the table, and the footnote itself looks like it is from the 2006 plan in that it references a Region H Sys Ops allocation of 120,000 acft/yr.

The footnote in the IPP is correct and only references the Sys Ops strategy, not Chloride Control or Millican Reservoir.

Page 4C.38-10. Eliminate or reword first and second to last sentence. BRA will honor its full contract. Add the following text to the end of the sentence: "...and potentially make additional water available for contracting."

Corrected.

Table 4C.38-5. What causes the 117 acft/yr shortage in 2010, 2020, and 2030 decades? Based on updated sedimentation rates, reservoir yield should exceed total of all Lake Aquilla contracts in 2010 and potentially in 2020 and 2030 as well. Also need to address cost that is shown as \$0. This is misleading without additional context.

Aquilla WSD has contracted to supply its customers 6,070 acft/yr. The supply allocated to Aquilla WSD from Lake Aquilla is 5,953 acft/yr. The difference is the shortage. A footnote has been added regarding the zero additional cost.

Table 4C.38-18. How can there be a 7,000 acft/yr surplus of treated water and an 8,154 acft/yr shortage of raw water in 2010?

Please review Table 4A.-16, which presents the math. The City has sufficient supplies and treatment capacity to meet its treated water demands, but insufficient raw water supplies to meet some of the additional raw water needs for which the City of Abilene supplies are identified as recommended water management strategies.

Page 4B.6-1. "Water demands in Johnson County are increasing at a very significant rate, while the existing supply from the Surface Water and Treatment System (SWATS) water treatment plant at Lake Granbury is at or near capacity," (Verify this statement is correct)

This statement is correct. The IPP actually reads "...is near operational capacity."

Section 4B.8.1. Brazos G WAM subordinates PK to Salt Fork and Lake Davis - would like to know what impacts this consideration has to the yield and if it impacts PK yield. And check to see if BRA should be compensated for any loss of yield.

The impacts to PK yield were not defined during this evaluation, and is stated as such in the last paragraph of Section 4B.8.1.4. This project is not a recommended water management strategy in the plan.

Table 4B.7-2. System Rate should be updated (The System Rate is has not been updated throughout the plan)

Costs are based on September 2008 prices. The BRA System Rate in 2008 was \$54.50/acft, which is the value used throughout the plan.

New Reservoirs and Off-Channel Reservoirs. It appears that the subordination of water rights to the BRA has been accommodated inconsistently throughout the variety of strategies. For some, we have agreed to subordination in our Sys Ops settlements or interlocal agreements, but not in others.

Correct. Subordination was only considered when it corresponded with an existing agreement, or when it was necessary to make water available to a project.

Section 4B.14.2. Fails to acknowledge current efforts by Stephens Regional SUD to construct their own advanced treatment facility. They have already piloted the technology and acquired a site (and may even be under construction). Having an existing plant within the area would certainly seem to effect implementation of the strategy.

Text has been added to the implementation issues addressing this development.

Section 4B.5.2.2. Verify yield numbers for Lake Granger. The yields seem high compared to the 2060 reservoir capacity.

The year 2060 yield for Lake Granger is correct.

Table 4B.5.2.4-2. Need to clarify under the Total Capital Cost that land acquisition is included. Write-up states that land is included, but not clear where in the estimate.

The cost for land acquisition and surveying for 37 acres is shown in the cost summary table.

Page 4B.5-4. Add this sentence to the end of the second paragraph...

The sentence has been added to 4B.5-6.

Page 4B.5-4. Add to the last sentence of the 4th paragraph...

The last sentence of the first paragraph on page 4B.5-8 has been modified to clarify.

Section 4B.12.2.2. Expand on how PK was modeled...

Additional explanation has been added.

Section 4B.12.4.2. Explain why the Brazos Mini-WAM was not used for the yield estimates.

The Brazos Mini-WAM includes only the Clear Fork of the Brazos River down to its confluence with the main stem of the Brazos River, then the main stem downstream through Possum Kingdom Reservoir.

Section 4B.18.2.2. Footnote that the 2060 estimated storage does not account for the updated TWDB volumetric survey (2008).

Footnote added.

Section 4B.4.1. Why is 698,440 acft/yr of BRA commitments shown here different from 669,821...

We cannot locate the reference to 669,821 acft/yr. The number as referenced in Section 4B.4.1 is what was included in the modeling.

Table 4B.4-1. Suggest further clarification of footnote 2...

Further clarification has been added.

Section 4B.4.6. Range of unit costs shown in paragraph 2 is different...

No unit costs are shown in paragraph 2. This comment must be concerning an earlier draft of the report section.

Section 4B.17.2.10. Should this strategy for Cleburne be associated with Lake Whitney instead of Lake Granbury?

The strategy for taking water from Lake Granbury has been removed as a recommended water management strategy for Cleburne. The strategy description will remain as a Lake Granbury supply, but will not be recommended.

Table 4B.18.2.1. Suggest footnote to table explaining SUPER yield versus BWAM3 yield.

Footnote has been added.

Section 4B.18.2.2. Suggest examining 2060 yield value for Lake Aquilla.

The yield values are correct and consistent with the value used in the water supply analyses (Section 3).

Page 1-22, Table 1-7. Not clear how LCRA contracts totaling 49,400 acre/yr are determined.

The contracts included in that total are taken from page 4B.11-6 and include the HB 1763 supply.

Page 1-52. Any updates to groundwater conservation district membership?

That information will be checked and updated as necessary for the final plan.

Table 3.5-1. No mention of HB 1437 water.

That will be added.

Section 4C.1.1. The text is not clear that 439 WSC also has a supply allocation from Bell County WCID No. 1.

That fact is now noted.

Chisholm Trail SUD has no plans to utilize the 3,472 acft balance of HB 1437 water.

Needs (shortages) for the SUD do not appear until 2050, and the SUD has not indicated any plans to meet the future shortages that are projected. The strategy is included as a recommendation of the planning group.

Section 4B.6.2.2. What water at Lake Granbury is uncommitted and available for sale?

The sentence has been deleted.

Page 4B.11-9. The 25% surcharge is subject to adjustment by the LCRA.

A note has been added to the plan.

Commenter — Ross Melinchuk, Texas Parks and Wildlife Department (written comments)

...7 of the 13 Mollusks listed as Species of Concern in Table 4B.12.8-3 are now listed as threatened by the State of Texas.

Table 4B.12.8-3 will be updated to reflect the revised listing status of the threatened species.

Comment questions steam-electric demands to be supplied by the City of Abilene, including a current contractual commitment and steam-electric demands in Nolan County.

The existing contract between the City of Abilene and West Texas Utilities (now Eagle Construction) is a commitment by the City of Abilene to provide water and must be recognized in the regional water plan as such until such time as the contract ceases to exist.

The quantity of water planned to be used by Tenaska is, to the planning group's knowledge, less than the 20,000 acre-feet per year identified in the 2011 IPP. However, the Nolan County demand for water should not be identified specifically as a "Tenaska" demand, but should instead be considered as a regional water demand for steam-electric power generation. The demand identified for Nolan County by the BEG and the TWDB was originally 94,298 acre-feet per year. The planning group requested that the TWDB adopt a smaller, more realistic demand projection.

...concentrations of dissolved salts and minerals in Possum Kingdom...to increase.

Analysis of the impact of Cedar Ridge Reservoir on salinity levels in Possum Kingdom Reservoir is beyond the scope of work authorized by the TWDB for developing the 2011 Brazos G Regional Water Plan. However, during development of the 2016 Brazos G Regional Water Plan, additional treatment of salinity issues could be added to the scope of work if requested by the planning group and approved by the TWDB.

...Possum Kingdom will experience greater fluctuations.

Possum Kingdom Reservoir will experience greater fluctuations in the future as greater demands are placed on the reservoir. An agreement exists between the City of Abilene and the BRA to compensate the BRA for impacts of Cedar Ridge on Possum Kingdom. This agreement provides for a reduced demand on Possum Kingdom in response to reduced inflows due to Cedar Ridge.

Environmental Water Needs Impacts of Miller's Creek Augmentation (new dam and reservoir option) are described as "moderate impact" even though Miller's Creek is predicted to be dry approximately 85% of the time with the project compared to less than 20% of the time without the project.

The increase in percent time dry from 85% to 20% does appear to be significant. However, the stream is dry approximately 15% of the time. Streamflow statistics indicate that the 7Q2, and 25th percentile naturalized flow are both zero, and the median streamflow is greater than zero in 7 out of 12 months. An increase in the percent of time dry of a stream that already experiences considerable periods of zero flow would appear to be a "moderate" impact. Also, remember that the streamflow statistics reflect not only construction of the reservoir, but also a priority calls (subordination) agreement whereby Millers' Creek Reservoir does not have to pass inflows to Possum Kingdom Reservoir. That priority calls agreement is not reflected in the "without project scenario", e.g., the "without project" scenario includes flows passed to downstream.

TPWD has concerns regarding environmental flow impacts that could result from increased interbasin transfers from the Colorado River Basin to the Brazos River Basin and recommends an analysis of these potential impacts be undertaken.

The water supply associated with the interbasin transfer from the Colorado River Basin the Brazos River Basin is from an existing, perpetual water right, and would not be a new appropriation of water. Therefore, no impacts on streamflows would occur beyond those assumed by full utilization of existing water rights.

Alterations in hydrologic and water quality conditions...may disrupt the dynamics of the unique ecosystem and render habitat unsuitable for species adapted to prairie streams...

Detailed analysis of any downstream impacts of water management strategies is beyond the scope and funding limitations of the regional water planning process, and should be considered

during Environmental Impact Analyses that occur during the permitting processes associated with water rights appropriations and Corps of Engineers 404 permits.

TPWD encourages Brazos G to make water conservation a priority early in the next planning cycle.

Advanced water conservation was considered first by the Brazos G Regional Water Planning Group for any water user group with a projected shortage. Advanced water conservation was recommended as a water management strategy for 35 of the 76 municipal water user groups with shortages. Brazos G has made and will continue to make water conservation an important part of the regional water plan.

The Brazos G IPP does not recommend nomination of any stream segments as ecologically unique. No explanation is provided for the lack of recommendations. TPWD...encourages the planning group to consider this creek [Salado Creek], and other rivers and streams, in the next planning cycle.

The Brazos G Regional Water Planning Group deliberated at length regarding the subject of recommending stream segments having unique ecological value during both the 2006 and the 2011 planning cycles. Ultimately, the planning group members were unsure of the future legal ramifications of such a designation and elected to not recommend any stream segments as having unique ecological value. The planning group will reconsider this issue during the next planning cycle.

10.7 TWDB Comments on Initially Prepared Plan and BGRWPG Responses

The following section summarizes the comments received from the TWDB and the responses of the BGRWPG. Level 1 comments are required to be addressed in order to meet statutory, agency rule, and/or contract requirements. Level 2 comments and suggestions are suggested for consideration to clarify or enhance the plan.

10.7.1 Level 1 TWDB Comments

Chapter 1

- 1. Please confirm that plan will not impact any relevant, designated unique stream segments.*

[3] TAC §357.8(c)]

There are no designated unique stream segments in the Brazos G Area. Therefore, no water management strategies identified in the 2011 Brazos G Plan will impact any designated unique stream segments in the Brazos G Area. Additionally, no water management strategies recommended in the 2011 Brazos G Plan are located in Regions E and H, the only regions with current, unique stream segment designations.

- 2. Page 1-48; Chapter 4B; Volume II, Sections 4B.1 through 4B.20: Quantitative reporting of impacts to agricultural resources are provided regarding cropland/rangeland/grassland acreage impacts of reservoirs but not for other water management strategies. Please provide*

numerical basis for quantitative impact discussion on page 1-48 and include similar quantitative reporting of impacts for all potentially feasible water management strategies evaluated. [Title 3 Texas Administrative Code (TAC) 357.7(a)(8)(A)(iii)]

Section 1 of the report is a description of the region as it exists currently. Page 1-48 begins a section on threats to agricultural and natural resources, not the impacts of water management strategies on those resources. Section 1 is not the appropriate place in which to place information regarding potential impacts of the regional water plan. The Brazos G Regional Water Planning Group declines to include information regarding quantitative impacts of water management strategies in this report section.

The impacts of reservoir projects that will inundate large acreages are well documented in Volume II of the regional water plan. The remaining water management strategies involve relatively insignificant acreages and will have no significant impact on the State's agricultural resources. That piece of information will be included in Section 4B.1.2.

3. *Pages 1-54 and 1-55, Table 1-11.1.9.2: Please update the approval dates for Groundwater District Management Plans. Please update Table 1-11 with the following dates:*
- *Clearwater Underground Water Conservation District, approved 3/6/2006*
 - *Middle Trinity Groundwater Conservation District, approved 5/5/2009*
 - *Saratoga Underground Water Conservation District, approved 11/30/2009*
 - *Wes-Tex Groundwater Conservation District, approved 4/7/2010*

The approval dates will be updated as requested.

Chapter 3

4. *Pages 3-28 and 3-30, Table 3.2.2: Plan includes water supply estimates using the 75/75 basis as availability for irrigation. Developing a strategy for agricultural needs must reflect availability under drought of record conditions. Please modify analysis based on firm yield or firm diversion and revise table results to reflect drought of record conditions (e.g. firm yield). Please update plan regarding any resulting changes to water needs, if applicable. [31 TAC §357.7(a),(5); Contract Exhibit "D" Section 3.0]*

The Brazos G Regional Water Planning Group respectfully declines to make this change to the plan. The 75/75 convention for determining availability of supply for surface water irrigation rights was utilized in both the 2001 and 2006 Brazos G Regional Water Plans with the knowledge and approval of the TWDB, under the same or similar TAC requirements. Use of the 75/75 convention was articulated clearly at regional water planning group meetings during the development of the 2011 IPP (see Agenda item 6.7, February 18, 2009 meeting). TWDB representatives present at those meetings gave no indication that Brazos G was to discontinue use of the 75/75 convention for irrigation rights. The 2011 Plan is to be an update to the 2006 Plan, and should follow similar conventions. Modification of this convention at this late date would modify a large portion of the regional water plan, and would necessitate adding a number of additional water management strategies to supply increased irrigation needs. When the scope of work was developed for the 2011 Plan, this potential situation was never considered and potentially feasible water management strategies

were never identified to meet irrigation needs that would be substantially greater than those in the 2001 and 2006 Plans. This would be a significant modification of the basic assumptions of the plan and would require a new public hearing and public comment period, because potentially new water management strategies to meet new irrigation needs would have to be identified, evaluated and incorporated into the regional water plan.

5. *Page 3-45, Table 3.4-2: The availability value for the Edwards Balcones Fault Zone Aquifer-Northern Segment in Williamson County (3,462 acft/yr) does not match the managed available groundwater value from groundwater availability model Run 08-10 (3,452 acft/yr). Please revise as appropriate throughout the plan.*

The value will be updated throughout the plan.

6. *Pages 3-45 thru 3-48, Table 3.4-2: Please update the "Source" column in all instances where table states "Pending final TWDB determination" for the Trinity Aquifer to reflect the appropriate groundwater availability model (GAM) run. TWDB's March 31, 2009 letter provides the managed available groundwater estimates in GAM Run 08-04 based on desired future conditions adopted by the groundwater districts in GMA 8.*

The reference has been changed to indicate it is a preliminary determination. The groundwater availability estimates from the Trinity Aquifer are based on the preliminary results available from GMA8 GAM Run 08-06, as referenced. The GMA8 did not provide Desired Future Conditions (DFC's) for the Trinity Aquifer to the TWDB until after the January 1, 2008 deadline. The DFCs for the Trinity Aquifer were provided to the TWDB in a letter dated October 6, 2008. The Brazos G RWPG elected to utilize final MAG determinations when the DFC deadline was not met if the resulting MAG for an aquifer was determined prior to October 1, 2008. Because the resulting MAG determination was not made prior to October 1, 2008, Brazos G elected to utilize a preliminary estimate for the Trinity Aquifer as the best available estimate. This resulting MAG differs slightly from the final MAG and Table 3.4-2 should correctly note that it is not the "final" MAG determination.

7. *Pages 3-47 and 48, Tables 3.4-2 and 3.4-3: The 'Western Area' total for Other (Local) aquifer (located in Shackelford County only) of 2,250 acft/yr shown in Table 3.4-3 is not included in the Shackelford County availability of 806 acre-feet in Table 3.4-2. Please revise as appropriate throughout the plan.*

Table 3.4-3 has been corrected.

8. *Page 3-48, Table 3.4-3: Table 3.4-3 Other (Local) Aquifer total of 2,915 acft does not equal the Table 3.4-2 Other (Local) Aquifer total of 3,059 acft. Please reconcile Other (Local) Aquifer totals between Table 3.4-2 and 3.4-3, and, as appropriate, throughout plan.*

Table 3.4-3 has been corrected.

Chapter 4B

9. *Page 4B-8, second paragraph: "...drought management recommendations have not been made by the Brazos G RWPG as a water management strategy for specific WUG needs". Please explain whether drought management strategies were considered for each water user group (WUG) to which Texas Water Code §11.1272 applies in a manner consistent with Texas Water Code §11.1272. [31 TAC §357.7(a)(7)(B)]*

As explained in the paragraph, drought management as a water management strategy was considered but not utilized to meet WUG needs for the reasons stated.

Chapter 4C

10. *The plan does not present categories of water use delineated by counties and river basins. Please present water user group water demands by county and river basin. [31 TAC §357.7(a)(5)A)(iv)]*

A table will be added as an appendix showing this information.

11. *Please indicate whether conservation water management strategies were considered for every water user group with an identified water need and if none were recommended, please explain why in each instance (e.g. Milam County Mining). [31 TAC §357.7(a)(7)(A)]*

Appropriate text will be added to each instance where conservation was not recommended as a water management strategy to meet a water user group's projected needs.

12. *Page 4C.12-2 and 3, Section 4C.12.4.3: The references to "cost source" for items "c" and "d" currently show, "4B.17.2.7", which should be "4B.17.3.7." Please revise.*

The text will be corrected.

13. *Page 4C.30-4 through 4C.30-6: Regarding Somervell County Steam-Electric water needs plan states that "Conservation was not applied to this plan because... (it) is not applicable." Please clarify why conservation was not considered as an applicable strategy where the shortage results from construction of new facilities.*

The text has been revised to: "Conservation was not applied to this plan because the shortage results from the construction of new steam-electric facilities, which are assumed to be built with technologies minimizing water use as much as practicable."

14. *Page 4C.39-4: The water management strategy shown as "Groundwater Development" appears to be included in the online planning database as "Additional Carrizo Aquifer Development (includes overdrafting)". Please revise to consistently name water management strategies in both the plan document and online planning database. [Contract Exhibit 'D' Section 3.0]*

The addition of "(includes overdrafting)" to the description of this water management strategy in the online planning database has been objected to strenuously by at least one

wholesale water provider, when that description was observed as they were completing the Water Infrastructure Financing survey. The description “(includes overdrafting)” connotes a negative situation where the recommended strategy would “overdraft” the aquifer, when in fact it does not result in an over allocation of the resource in that county. The Brazos G Regional Water Planning Group respectfully requests that the text “(includes overdrafting)” be removed from the online planning database because of the negative connotation it places on recommended water management strategies that do not result in over allocation of the Carrizo-Wilcox Aquifer.

Chapter 6

15. *Please include a summary of information regarding water loss audits specific to water users located in Region G. [31 TAC §357.7(a)(1)(M)]*

Section 1.12 has been added to Section 1 to summarize the water loss audit information for Brazos G entities.

Appendix C

16. *It appears that total county ‘balance’ surpluses/shortages were calculated incorrectly throughout Appendix C Tables by subtracting ‘Total Demand’ from ‘Total Supply’. Please revise to reflect total subcategory and county-wide water needs as the sum of the individual needs of each water user group in the county; needs that are calculated based on each water user group’s own demands and supplies. [31 TAC §357.7(a)(4)(B)]*

The Brazos G Regional Water Planning Group respectfully declines to make the suggested change. The tables are prepared this way intentionally to illustrate the overall county water balance. Even though some water users have “needs”, supplies in the county may still exceed demands. For the municipal demands and supply comparisons shown in the county tables (odd-numbered tables), this effectively illustrates the difference between total demand and total supply for all municipal users in the county, in contrast to the itemized individual needs documented in the municipal water user group tables for each county. Summations of individual water “needs” are effectively itemized in other places in the report.

A footnote will be added to the tables explaining this.

17. *Please include a footnote explaining how ‘contractual demand’ (e.g. Table C-I) is accounted for in calculating net supplies available for each water user group so that current supply numbers can be replicated.*

A footnote will be added.

Volume II

18. *Chapter 4B: contains two consecutive report sections “4B.17.3”, without section 4B.17.2. Please revise the first of these sections to “4B.17.2” if appropriate.*

The text has been corrected.

19. (Attachment B) Comments on the online planning database (i.e. DB12) are herein being provided in spreadsheet format. These Level 1 comments are based on a direct comparison of the online planning database against the Initially Prepared Regional Water Plan document as submitted. The table only includes numbers that do not reconcile between the plan (left side of spreadsheet) and online database (right side of spreadsheet). An electronic version of this spreadsheet will be provided upon request.

The spreadsheets have been reviewed and database and plan numbers have been corrected to remove inconsistencies, or the inconsistencies have been explained.

20. (Attachment C) Based on the information provided to date by the regional water planning groups, TWDB has also attached a summary, in spreadsheet format, of potential interregional conflicts, apparent water source over allocations, and apparent unmet water needs that were identified during the review of the online planning database and initially Prepared Regional Water Plan. [Additional TWDB comments regarding the general conformance of the online planning database (DB12) format and content to the Guidelines for Regional Water Planning Data Deliverables (Contract Exhibit D) are being provided by TWDB staff under separate cover as 'Exception Reports']

Potentially over allocated sources – the Brazos G and Region L technical consultants have coordinated and the supply available to the GBRA Simsboro Project from Lee County in the Region L Plan has been reduced to remove the potential over allocation.

Water user groups with unmet needs – Municipal water user groups Abilene, Cedar Park and Round Rock do not have unmet needs. The database issue has been resolved. Each of the irrigation water user groups do, indeed, have unmet needs. No economically feasible water management strategies exist to meet those irrigation needs. The mining demand in Williamson County is associated primarily with dewatering of quarry operations, for which pumping exceeds the available groundwater supply estimated for the county. Steam electric water demands in Nolan and Somervell County do not have unmet needs. The database issue has been resolved.

10.7.2 Level 2 TWDB Comments

General Comments

1. Please consider eliminating one version of section 4B-1 which is duplicated in both Volume I and Volume II.

Section 4B.1 will be removed from Volume I.

2. Table of Contents, Page vi. 4B.1.8: Indicates “stage agencies”. Please consider correcting to state agencies.

That section is no longer referenced in the Volume I Table of Contents.

Chapter 4

3. *Fig 4B.12-1, page 4B.12-2: the legend indicates black dots as representing “off-channel reservoir sites”. It appears that these are sites for proposes on-channel reservoirs. Please consider correcting the figures legend.*

The legend has been corrected.

4. *Page 4C.36-21 and 22: There appears to be a mislabeled subsection as there are two sections labeled as “c”. Please consider revising as appropriate throughout the plan.*

Corrected.

Chapter 5

5. *The chapter includes brief discussion of impacts of voluntary redistributions of water and moving water from rural and agricultural areas; however, it does not provide the economic basis for the conclusion regarding increased pumping costs to agricultural and rural areas. Please consider providing additional information on which this conclusion is based.*

The text is self-explanatory. Lowering of water levels increases pumping costs because water has to be lifted higher, using more energy. There is no need to further elaborate.

Appendix B

6. *Page B-27, 3rd paragraph: Please consider replacing “GAM-7” with “GMA-8”.*

The application Groundwater Management Area for the Edwards Trinity Plateau Aquifer is GMA-7. “GAM-7” has been corrected to “GMA-7”.

7. *Page B-32, 1st paragraph: Please consider replacing “GAM-8” with “GMA-8”.*

Corrected.

8. *Page B-39, 3rd paragraph: Groundwater Management Area 8 established desired future conditions for the Hickory Aquifer in Lampasas and Williamson Counties on May 19, 2008. Please consider revising paragraph to reflect this status.*

Clarifying language has been added to the paragraph.

9. *Page B-32: The plan states “The preliminary groundwater availability estimates by GAM-8 for the Ellenburger-San Saba Aquifer in Lampasas County is 2,341 acft/yr.” The managed available groundwater numbers were officially released by TWDB on December 9, 2009 as 2,593 acft/yr. Please consider revising to reflect this volume.*

As the official number will not be used in the 2011 Plan, it is best to only cite the preliminary value in the 2011 Plan.

10. Page B-41, 5th paragraph: Please consider replacing “GAM-8” with “GMA-8”.

Corrected.

10.8 Final Plan Adoption

On July 21, 2010, the BGRWPG reviewed and adopted responses to the oral and written comments received. The final plan was adopted by unanimous vote of the members present pending completion of the changes noted in response to comments received.

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