

ATTACHMENT A

**TWDB Comments on Initially Prepared 2011 Region M
Regional Water Plan**

LEVEL 1. Comments and questions must be satisfactorily addressed in order to meet statutory, agency rule, and/or contract requirements.
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General Comment

1. Pages in the hard copies of the initially prepared plan do not match the pages in the electronic version of the initially prepared plan (e.g. page 4-26 in the hard copy corresponds to page 4-21 in the electronic version). Please ensure that all the final hard copies and electronic copies of the plan are identical.
 - *Final copies and electronic copies are now identical*
2. Please include a Table of Contents at the front of the plan that covers the entire plan contents including appendices.
 - *Table of contents has been included in final plan*
3. In accordance with the outcome of Region-Specific Study No. 2, please revise throughout plan all references to each irrigation district to consistently and accurately reflect their TWDB-approved designations (per Amendment No. 1 to Final Study No. 2 as approved by TWDB on April 5, 2010) either as a) wholesale water providers or b) as a subset of the water demands indirectly covered by various county irrigation water user groups. Please clarify in the plan that no irrigation districts are designated as stand-alone irrigation 'water user groups' and that, because of non-synchronous boundaries, no irrigation district water demand projection aligns with any designated county irrigation water user group water demand projection.
 - *This has been finalized throughout the plan and a copy of Special Study 2 is in the Appendix.*

Executive Summary

4. Please provide an Executive Summary in the plan. *[Title 31 Texas Administrative Code (TAC) §357.10(a)(2); Contract Exhibit "C" Section 11.1]*
 - *Posted on website and in Spanish*

Chapter 1

5. Please include one-page summaries of the region-specific studies performed during phase I of this third round of planning including a description of whether and/or how each region-specific study was incorporated into the regional water plan. *[Contract Exhibit "C" Section 11.1]*

The one-page summaries have been included along with a general introduction to all three summaries. They can be seen under section 1.5.4 and subsections 1.5.4.1, 1.5.4.2, and 1.5.4.3 in the Final Plan.

6. Page 1-48, Table 1.6: Table 1.6 only includes an apparent listing of Water User Groups that includes some Wholesale Water Providers. Table 1.6 does not label Wholesale Water Providers anywhere as a distinct group. Please provide in the plan the accurate and complete listing of TWDB-approved wholesale water providers (per Amendment No. 1 to Final Study No. 2 as approved by TWDB on April 5, 2010). [31 TAC §357.7(a)(1)(A)]
 - ***A table listing Wholesale Water Providers has been added. It is listed as table 1.6 and on page 1-50 with accordance to Special Study No. 2.***
7. Page 1-48, Table 1.6: Table 1.6 includes does not label Water User Groups as a distinct group. Please provide in the plan the accurate and complete listing of water user groups. [31 TAC §357.7(a)(1)(A)]
 - ***A table listing Water User Groups has been added. It is listed as table 1.6 and is displayed on page 1-50. It is a listing of Irrigation Districts as subsets of the Irrigation WUGs and is in accordance with Special Study No. 2.***
8. Page 1-48, footnote 12: Please provide in the plan the correct reference to the results from the Region-Specific Study no. 2, amendment no. 1 that individual irrigation districts are *not* classified as water user groups but rather may be addressed as subset of any associated county irrigation water user group(s) (per Amendment No. 1 to Final Study No. 2 as approved by TWDB on April 5, 2010). [Contract Exhibits "C" and "D"]
 - ***The correct reference has been provided and it can be seen below. The footnote refers to Table 1.6 which is displayed on page 1-50 in Final Plan.***

Individual irrigation districts are not classified as water user groups but rather are addressed as subset of the associated county irrigation water user group (per Amendment no. 1 to Final Study No. 2 as approved by TWDB on April 5, 2010.)
9. Page 1-49, paragraph 1: Please provide in the plan the appropriate separate and distinct definitions of a water user group and of a wholesale water provider. [31 TAC §357.2]
 - ***The appropriate definitions of water user groups and wholesale water providers have been added to Chapter 1 and are distinctively defined. These definitions can be found on page 1-50 and continues onto page 1-51.***
10. Pages 1-62, 3-44 (paragraph 1); Section 8.3.1, page 8-11, second bullet: Please incorporate relevant information into the plan from the Phase One,

Region-Specific Study No. 1 regarding the water accounting issues at Ft. Quitman. *[Contract Exhibit "C" Section 11.1]*

- ***Relevant information has been included regarding the water accounting at Ft. Quitman and is listed in section 1.13. For reference, the initial section is displayed below followed by the revised section. Additionally, a footnote listed as number 13 has been added to the title it states that : Information on Water Accounting at Fort Quitman came from "Special Study No. 1: Evaluation of Alternate Water Supply Management Strategies Regarding the Use and Classification of Existing Water Rights on the Lower and Middle Rio Grande."***

Chapter 2

11. Please present in the plan TWDB-approved population and water demand projections for categories of use for wholesale water providers considering counties and river basins, including information on contractual obligations and demands. *[31 TAC §357.7(a)(2)(B)]*
 - ***A table listing water demand projections, and contractual obligations for Wholesale Water Providers has been inserted Chapter 2 in Attachment 2-1 in Table 2.21 on page 2-21.***
12. Page 2-5, Table 2.2: Please provide in the plan a breakdown of population by cities with populations greater than 500 people and by retail public utilities. *[31 TAC §357.7(a)(2)(A)]*
 - ***A table listing populations by cities and Water User Groups have been inserted Chapter 2 in Attachment 2-1 on pages 2-6 through 2-9.***
13. Page 2-5, Table 2.3 (and Attachment 2-1): Please provide in the plan water user group population projections that are broken out by both county and river basin. *[31 TAC §357.7(a)(2)(A)(iv)]* (Upon request, this data can be provided in the required format by TWDB.)
 - ***Eight tables that show Water User Group population projections with respect to county and river basin have been included in Chapter 2. These tables show the aforementioned information and are broken out into Cameron, Hidalgo, Jim Hogg, Maverick, Starr, Webb, Willacy, and Zapata County. They are listed as Tables 2.3 through 2.10 and can be found on pages 2-6 through 2-9.***
14. Page 2-8, Table 2.4; page 2-22, Attachment 2-1 first table; and pages 2-24 to 2-27, Attachment 2-1 table: All municipal water demand projections presented appear to be total water demands. Please provide in the plan the appropriate TWDB-approved net water demand

projections for all municipal water use categories broken out by both county and river basin. [31 TAC §357.5(d)(1) and (2)]

- **All total water demands have been changed to net water demands in all the tables mentioned above. Also, all tables were expanded and, now, list counties and river basins. The finalized tables can be found on pages 2-12 and in Attachment 2-1**
15. Page 2-14, Table 2.9: Plan text refers to the TWDB-approved total irrigation water demand of 981,749 in 2060. Table 2.9 shows total 2060 irrigation water demands of 1,274,020 acft/yr for 2060. Please reconcile numbers throughout plan in accordance with TWDB-approved irrigation water demand projections.
- **Irrigation totals have been changed from their previous demands to the TWDB approved irrigation demands. These figures can be seen on pages 2-2 and 2-16 in the final plan.**
16. Page 2-11, Figure 2.8: Plan text refers to the TWDB-approved total irrigation water demand of 981,749 acft/yr in 2060 per Figure 2.8. Figure 2.8 does not show 981,749 acft/yr for 2060 but rather 1,274,020 acft/yr. Please reconcile numbers throughout plan in accordance with TWDB-approved irrigation demand projections.
- **Irrigation demand projections have been changed in accordance with TWDB approved total irrigation water demands. This can be found in the revised Figure 2-8 on page 2-16.**
17. Pages 2-12 and 2-13; Tables 2.6, 2.7, and 2.8; and Attachment 2-1, page 2-24: Please provide in the plan TWDB-approved irrigation water demands that are broken out by both county and river basin. [31 TAC §357.7(a)(2)(A)(iv)] (Upon request, this data can be provided in the required format by TWDB.)
- **The three aforementioned tables are derived from Special Study No. 2 and are now broken out into both county and river basin. These can be found in Table 2.14, Table 2.15, and Table 2.16 on pages 2-17 through 2-19.**
18. Page 2-13: Please provide in the plan water demand projections and population projections broken out for the newly added irrigation district Jim Hogg WCID2 and Union WSC. [Contract Exhibit "A" Task 2.3]
- **The requested information will not be included in Final Plan.**
19. Page 2-20: Please provide in the plan water demand projections for potential ethanol production plants and on a county-by-county basis. [Contract Exhibit "A" Task 2.5]
- **Study was conducted on the respective matter and did not yield any suitable or feasible potential ethanol plants in Region M.**

Needless to say, water demand projections for potential ethanol production plants were not incorporated into the plan. However, additional information was added to the respective matter from comments from Texas A&M professor Ron Lacewell.

20. Attachment 2-1, pages 2-24 and 2-25: Municipal water demands for Cameron County do not appear to be summed correctly (e.g. 90,566 acft/yr for 2010 county total; sum is actually 88,676 acft/yr); and do not appear to match Cameron County demands listed in Table 2.4, page 2-8 (e.g. 89,555 acft/yr for 2010). Please revise to reflect TWDB-approved demand projections for Cameron County municipal totals (e.g. 88,690 acft/yr for 2010) as required. [31 TAC §357.7(a)(2)(A)(iv)]
- ***The requested changes were made and the revised tables are included in Chapter 2. Attachment 2-1 has been corrected and can now be seen on page 2-37.***
21. Attachment 2-1, page 2-26: Attachment 2-1 does not include Jim Hogg County municipal water demand projections. Please include in the plan Attachment 2-1 table municipal water user group water demand projections for Jim Hogg County. [31 TAC §357.7(a)(2)(A)(iv)]
- ***Jim Hogg County municipal water demand projections have been added into the attachment. The respective table can be seen on page 2-39.***

Chapter 3

22. Based on the data in the online planning database, Amistad-Falcon Reservoir appears to be over allocated by 5,111 acft/yr in 2010 and 139,798 acft/yr in 2060. Please revise the plan to acknowledge the volume by which Amistad-Falcon Reservoir is over allocated in each planning decade and to show, quantitatively, how this total over allocation will be resolved in each decade between water user categories in practice (e.g. by voluntary redistribution between municipal and irrigation users). This reallocation may be shown quantified at an aggregate level for irrigation users only. Or, alternatively, revise the plan and online planning database to remove this water source over allocation. [31 TAC §357.7(a)(3)(A)]
- ***Graphs and tables showing overallocation of Amistad-Falcon water have been inserted into Chapter 4 in Table 4.21, which can be found under 4.3.1.1.***
23. The plan does not clearly present or account for the volume of reallocations of existing water supplies that provide the water source for significant recommended municipal water management strategies in the plan. Reallocations of existing water supplies for recommended water management strategies do not appear to be accounted for against the

current water users as either upfront reductions to their existing supplies or as 'negative' water management strategies (i.e. reallocations of existing water supply away from a water user group category during plan implementation). Either approach will increase identified water needs unless sufficient surplus supplies are available to reallocate. Please revise the plan to clearly quantify and present these anticipated water supply reallocations, for each water source, by decade, and by water use category. For each water source (e.g. Amistad-Falcon Reservoir), the reallocations of supplies away from existing water users may be shown as an aggregate volume for irrigation water users but should be broken out for each individual municipal water user group. The information presented should clearly account for all water reallocations (away from and/or to water users) by decade. *[31 TAC §357.7(a)(3)(A)]*

- ***Information was inserted into Chapter 4 pertaining to reallocations of Amistad-Falcon water once WMS were implemented. This information can be found in Figure 4.10 and Table 4.22.***
24. Please include one-page summaries of the region-specific studies performed during phase I of this third round of planning including a description of whether and/or how each region-specific study was incorporated into the regional water plan. *[Contract Exhibits "A" Task 3.1 and "C" Section 11]*
- ***One-page summaries have been included into Chapter 3 along with a general introduction to all studies. They are located under section 3.8 and subsections 3.8.1, 3.8.2, and 3.8.3.***
25. Please provide in the plan revised water supply availability numbers due to the inclusion of a new source of water from the Hidalgo County Drainage District. *[Contract Exhibit "A" Task 3.2]*
- ***This project has been moved under a new heading in chapter 4 "Strategies Considered but Not Fully Evaluated," which can be found in section 4.9.1 on page 4-106. This will not be a new source of water at this time until further evaluation is done.***
26. Please provide in the plan water supply projections associated with the implementation of the Falcon-Matamoros pipeline project. *[Contract Exhibit "A" Task 3.3]*
- ***Text has been included into Chapter 3 section 3.10, stating there is no water supply availability information at this time.***
27. Please discuss in the plan any considerations of the management plans of the four confirmed Groundwater Conservation Districts (Brush Country, Kenedy County, Red Sands, and Starr County) located within Region M. *[31 TAC §357.5(k)(1)(D)]*

- *A discussion mentioning these considerations has been included into the plan. There are brief discussions of each district including their location and any current activity they might be having at this time. It can be found under section 3.6.*
28. Page 3-3, Section 3.2.6: Please include the San Felipe Springs Report that is reference on page 3-36 in the plan in accordance with the placeholder statement.
- *A one-page summary of the San Felipe Springs Report has been incorporated into Chapter 3 and the final full report is located in the appendix.*
29. Pages 3-60, 3-61, and 3-64; Tables 3.9, 3.10, and 3.11: Please provide groundwater availability volumes for each water use category as well as for each water user group by county and basin location. [31 TAC §357.7(a)(3)(D); Contract Exhibit "C" Section 3.0]
- *The requested changes were made to the three tables and a new table that deals with projected groundwater from "Other Aquifer" was added. The three revised tables can be found on pages 3-67, 3-69, and 3-73. In Attachment 3-1 there can be found Groundwater Availability broken down by WUG into county and basin location.*
30. Pages 3-75 through 3-89, Section 3.7: Please provide in the plan surface water availability volumes broken out for each water use category as well as for each water user group by county and basin location. [31 TAC §357.7(a)(3)(F)(i)-(iv); §357.7(a)(3)(G); Contract Exhibit "C" Section 3.0]
- *The requested information was incorporated into a table and was integrated into the report. It can be found in section 3.7.1. Also water availability volumes for each WUG are broken down into county and basin location.*

Chapter 4

31. The plan does not accurately present the volume of identified water needs (e.g. irrigation) that will occur either because of reallocations of existing water supplies to recommended water management strategies or because of the reallocating water supply between water user groups from Amistad-Falcon Reservoir. Depending upon how the plan addresses the over allocation of Amistad-Falcon Reservoir and how reallocations of existing water user group supplies are accounted for, please update and present identified water needs for each decade. For each water source (e.g. Amistad-Falcon Reservoir), the reallocations of supplies away from existing water users may be shown as an aggregate volume of water

need for irrigation water users but should be broken out and presented for each individual municipal water user group. [31 TAC §357.7(a)(4)(A)]

- ***The information above can has been inserted into the Final Plan in section 4.3.1.1.***
32. The plan does not present the volume of irrigation needs that would remain unmet in each decade after all recommended water management strategies are implemented. Based on the data in the plan and online planning database, and without resolving the over allocation of Amistad-Falcon Reservoir, it appears that unmet irrigation water needs could exceed 279,000 acft/yr in 2010 and 85,000 acft/yr in 2060. If the over allocation of Amistad-Falcon reservoir is resolved through the reallocation of water supply from irrigation to municipal use, the unmet irrigation needs would exceed 225,000 acft/yr in 2060. Please revise the plan to quantify and present all unmet water needs, by decade and by water use category and explain why the needs could not be met. Unmet irrigation needs may be presented as an aggregate volume for irrigation water users, by decade. [31 TAC §357.7(a)(5)(C)(i)]
- ***Table 4.23 shows unmet water needs for irrigation when reallocating water from irrigation to municipal use, due to implementation of WMS. This can be found under section 4.3.1.2***
33. Please quantitatively report third party social and economic impacts from voluntary redistributions of water from rural and agricultural areas. [31 TAC §357.7(a)(8)(G)]
- ***This information has been inserted into Chapter 4 and can be found in section 4.3.1.3.***
34. Capital costs were not prepared in accordance with Exhibit "C" guidelines (e.g. annual costs were summed to estimate capital costs). Please revise capital costs to comply with required costing methodology requirements (including those for Section 4.8) [31 TAC §357.7(a)(8)(A)(i); §357.7(a)(9); Contract Exhibits "A" Section 4.1 and "C" Section 4.1.2]
- ***The requested changes have been made; capital costs have been fixed based on Exhibit "c" guidelines and corrected. These changes are manifested throughout Chapter 4 and in the Database. The methodology of the capital costs were approved by TWDB.***
35. Provide a list of potentially feasible water management strategies that were considered and evaluated by the planning group. [Contract Exhibit "C" Section 11.1]
- ***A list of WMS that have been evaluated has been inserted into the report. The respective list can be found under section 4.3.***

36. Please include table summarizing all recommended water management strategies with associated water supplies presented by decade and capital costs. *[Contract Exhibit "C" Sections 4.3, 11.1]*
- ***A summary table has been included with updated water supplies and their associated capital costs into Chapter 4. It is listed as Table 4.19.***
37. Please include a table listing alternative strategies with associated water supplies presented by decade and capital costs, if alternative water management strategies were included by the planning group. *[Contract Exhibit "C" Sections 4.3, 11.1]*
- ***A list of alternative strategies has been incorporated into the plan; this list is presumably the same as the recommended WMS. It can be found under section 4.10.***
38. Please provide in the plan the technical evaluation of the new water management strategy referred to as the Hidalgo Water Supply project, including strategy description, water supply yields and implementation schedule, cost, environmental impact, implementation issues, and recommendations. *[Contract Exhibit "A" Task 4.3.d]*
- ***This project will have no technical evaluation, it was rearranged accordingly in the plan; it is under the "Strategies Considered but Not Fully Evaluated" section because there was no firm outcome of the evaluation.***
39. Please describe in the plan the development of alternative strategies for entities whose recommended water management strategies may become infeasible; including invasion of aquatic weeds and treaty noncompliance for Mexico's water deliveries to the United States. *[31 TAC §357.7(a)(7)(H); Contract Exhibit "A" Task 4.5]*
- ***The requested information can be found in Chapter 4 under section 4.10. A paragraph has been inserted describing an alternative strategy along with how to and why an entity would want to implement an alternative strategy. This information can be located in Chapter 4 in section 4.10 on page 4-112. The strategies listed are presumably the same as the recommended WMS.***
40. Please include information on how the plan explored opportunities and benefits of regional water supply facilities or providing for regional management of water facilities. *[31 TAC §357.5(e)(6)]*
- ***The requested information has been incorporated into the report in section 4.1 beginning on page 4-9. This section refers to the benefits of bringing presentations by entities to the board members and also it is describing the new explored water supply facilities in the region.***

41. Please present in the plan for each identified water user group with a need the water management strategy and associated water supply volumes that were identified to meet each need or identify if the need is recommended to be unmet. [31 TAC §357.7(a)(5) and §357.7(a)(8)]
- ***The requested information has been referenced in Chapter 4 as Attachment 4-1.***
42. Pages 4-14 and 4-15: The irrigation surplus/needs totals do not match between Tables 4.13 (e.g. 2010 total need is 410,637 acft/yr) and 4.14 (e.g. 2010 total need is 518,560 acft/yr). Please reconcile numbers as appropriate in plan in accordance with TWDB-approved irrigation demand projections.
- ***Table 4.13 has been updated and changed to match the total irrigation surplus/needs and is shown on page 4-22. The respective footnote has been added to Table 4.14 and references Special Study No. 2.***
 -
43. Page 4-15, Table 4.14: Please provide in the plan irrigation district surplus/deficits broken out by county and river basin. [31 TAC §357.7(a)(4)(A)(iv)]
- ***The table was revised and now includes county and river basin information, with reference to Special Study No. 2. This table has been inserted into Chapter 4 and can be found in section 4.2.3.***
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44. Page 4-25, Table 4-19, row 2: Please provide in the plan the technical evaluation of the new water management strategy regarding transfer of reservoir storage from one user to another based on need, including strategy description, water supply yield, cost, environmental impact, implementation issues, and recommendations. [Contract Exhibit "A" Task 4.3.c]
- This comment refers to the WMS Banco Morales Reservoir, which can be found under section 4.5.8.4. The existing WMS "Reallocation of Storage in the Amistad-Falcon Reservoir System" is now under section "Water Management Strategies Not Reevaluated from the Previous Plan and Not Recommended" and can be found under section 4.8.8.***
45. Pages 4-48 and 4-49; Table 4.30, 4.31, 4.32: Please describe in the plan how advanced water conservation practices were considered for each of the water user groups with identified water needs and provide the specific conservation practices that were identified for each water user group with an identified water need. If evaluated, please present the associated conservation water management strategy supplies and costs by each water user group with identified needs. In addition, language in this section should be updated to reflect the current time frame (for example,

by revision of the sentence stating that “However, the DOE’s mandate does not take effect until 2007.”) [31 TAC §357.7(a)(7)(A); §357.14(2)(B)]

- ***The requested information has been incorporated into the plan under section 4.5.4.2. This information was based on population projections for each WUG.***
46. Pages 4-75 through 4-94: Please clarify whether water management strategies listed in Section 4.8 are recommended and revise plan accordingly. [31 TAC §357.7(a)(8)]
- ***This section has been revised accordingly; the respective strategies were not reevaluated from the previous plan and, thus, are not recommended.***
47. Page 4-118, Section 4.11: Please provide in the plan the technical evaluation of the new water management strategy(s) for meeting the needs of Ethanol Production Plants, including strategy description, water supply yields, cost, environmental impact, implementation issues, and recommendations. [Contract Exhibit “A” Task 4.6]
- ***Ethanol Production Plants was a recommended WMS; a study was conducted on the respective matter and did not yield any suitable or feasible potential ethanol plants in Region M. Therefore, the respective subject was moved and is now under the section “Strategies Considered but Not Fully Evaluated.” This can be found in section 4.9.3.***

Chapter 5

48. Page 5-4: Plan does not clearly present the volume of water that would be shifted from agricultural areas (e.g. for irrigation) to municipal use and does not quantitatively report the associated impacts to agricultural resources. Please quantify the volume of water that the plan allocates from irrigation use to municipal use during a drought of record and quantify the impacts (e.g. acreage of irrigated agriculture) to agricultural resources. [31 TAC §357.7(a)(8)(A)(iii)]
- ***This information was incorporated into Chapter 5 and can be found under section 5.2. A table summarizing the volume of water allocated from irrigation to municipal has been inserted and found in table 5-3.***

Chapter 6

49. Please include a summary of information regarding water loss audits specific to Region M. [TAC 31§ 357.7 (a)(1)(M)]
- ***A comprehensive summary has been included on water loss audits specific to Region M. It can be found under the section 6.5.1 on page***

6-7. Information was obtained from the Texas Water Loss Audit Report.

Chapter 7

50. Please explain how the region considered emergency transfers of non-municipal use surface water without causing unreasonable damage to the property of the non-municipal water rights holder pursuant to Texas Water Code §11.139. [31 TAC §357.5(i)]

- ***The requested information was incorporated into the report in the form of a paragraph and can be found in section 7.1.1 on page 7-2. Information was received on this matter from the TCEQ website on operating reserve.***

51. Page 7-2, Section 7.2, first paragraph: Plan statement that “In the long run, total water savings associated with both strategies would allow irrigators to offset water supply deficits.” appears incorrect based on the data in the plan and online planning database, which currently shows 85,000 acft/yr of unmet water needs in 2060; after implementing all recommended water management strategies. Please revise statement as appropriate.

- ***The requested changes were made and are now incorporated into the report. The sentence mentioned above was revised accordingly and can be found in section 7.2 and on page 7-2.***

52. Page 7-2, paragraph 3: It appears in the text that the 2020 or 2030 decade “...irrigation water supply deficit of over 410,000ac-ft/yr...to 210,000ac-ft/yr by 2060” does not match the referenced irrigation supply/deficit summary table on the 1st page of the unlabeled appendix (-657,117 acft/yr in 2020; -592,920 acft/yr in 2030; -553,468 acft/yr in 2060). Please reconcile volumes throughout plan as appropriate.

- ***The requested numbers have been reconciled throughout the plan and can be seen on page 7-2.***

53. Page 7-2, paragraph 3: Text states that the “conveyance system improvements could yield savings of 243,000ac-ft” does not match the referenced summary table on the first page of the unlabeled appendix (conveyance system conservation yield = 218,783 acft/yr). Please reconcile volumes throughout plan as appropriate.

- ***These figures have now been changed in the plan. The updated change can be found on page 7-2.***

<p>LEVEL 2. Comments and suggestions that might be considered to clarify or enhance the plan.</p>
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General

1. Please consider providing titles and identification numbers for all tables, figures, appendices, and attachments in the plan.
 - **Titles have been inserted into all appropriate places.**
2. Please consider updating the information throughout the plan to reflect information associated with the current third round of regional planning. (examples: page 1-3, paragraph 1; page 1-39, paragraph 1; page 1-49, paragraphs 1 and 3; page 8-7, paragraph 4; etc.)
 - **Information on third round planning has been inserted into the plan.**

Chapter 3

3. Section 3.6, pages 53-64; Tables 3.9, 3.10 and 3.11: Please consider indicating which TWDB-run Groundwater Availability Model Reports, if any, were used to develop the projected tabular groundwater availability values. Also, please consider noting that the Carrizo-Wilcox Aquifer GAM has been superseded by the Queen City/Sparta GAM, which includes the Carrizo-Wilcox Aquifer.
 - **Information on this matter was not inserted into the plan**

Chapter 7

4. Page 7-2, paragraph 1; and throughout (other examples - page 4-32, paragraph 3; page 4-72, paragraph 2): Please consider clarifying the 2-to-1 ratio is the conversion ratio is for *Class A* irrigation water rights to DMI water use and that the *Class B* irrigation rights require a 2.5:1 conversion ratio.
 - **This information has been revised throughout the plan**

Appendix

5. Please divide the generic "appendix" at the end of the plan as discrete individual appendices based on specific content and relevance to plan chapters and identify and label appendices content appropriately. Please reference appendices appropriately in the plan text and table of contents.
 - **Numbering systems for the appendices were included into the plan.**

Board Member Comments

Chapter 4: Identification, Evaluation, and Selection of Water Management Strategies Based On Needs

1. Develop a new Water Management Strategy "Improving Water Distribution". Include Elsa Elevated Storage Tank and Improving Water Distribution in that category
 - ***This was included in Chapter 4 under section 4.5.9.***
2. Include table in Chapter 4 showing cost summary information for Water Management Strategies.
 - ***A table summarizing cost information is in Table. 4.19.***
3. Develop new Water Management Strategy "Dams, Weirs, and Storage". Include Brownsville Weir, Laredo Low Water Weir, Resaca Restoration, and Banco Morales Reservoir.
 - ***A new section WMS has been inserted into the plan under section 4.5.8.***
4. Develop new component of "Dams, Weirs, and Storage" and include Resaca Restoration and Banco Morales Reservoir.
 - ***A new section WMS has been inserted into the plan under section 4.5.8.***
 -
5. Prepare a document describing the minimum amount of information required to include in a new WMS. Document should be placed as an attachment in Chapter 4.
 - ***This information can be seen in Chapter 4 under Attachment 4-2.***
6. Add list of projects in the Region and list in Chapter 4
 - ***This can be found in Chapter 4 on page 4-135.***
7. 4.5.7.1-Take out "flow otherwise"
 - ***This comment has been incorporated into the plan under section 4.5.7.1.***

Chapter 8: Unique Stream Segments/Reservoir Sites/Legislative Recommendations

1. Section 8.3.1. Give examples of what unique circumstances are (i.e. high population, Mexico Treaty, lowest rainfall)
 - ***More examples of unique circumstances were incorporated into Section 8.3.1.***
2. Section 8.3.1. Add an additional bullet under state issues reading: "The region is projecting a shortage in water supply in the coming future. There

are limitations for funding, but to overcome this we need more state assistance.”

- **An additional bullet has been incorporated into the plan. It is now listed under bullet number 2 under State Issues.**
3. 8.2.2. Change Webb County Low Water Dam to Laredo Low Water Weir
 - **This change has been made and is found under section 8.2.2.**
 4. 8.3 Assign numbers to legislative recommendation instead of bullets
 - **Numbers have been assigned to Legislative Issues in Chapter 8.**
 5. Last bullet should be first bullet and highlighted under State Recommendations
 - **This bullet has been highlighted in the plan and is now listed under number 1.**
 6. Page 8-10 Under Recommendations on Nation, 1st bullet, change “should be” with “will be”
 - **This change has been incorporated on Page 8-10, it is now “will be.”**
 7. Page 8-10 last bullet, remove “currently underway” and replace it with “authorized”
 - **The last bullet which is now number 11, has been changed from “currently underway” to “authorized”.**
 8. 8.3 Change title to “Regulation, Administration, or Legislation Issues”
 - **The title has been changed to “Regulation, Administration, or Legislation Issues”**



**United States Department of the Interior
FISH AND WILDLIFE SERVICE**

Ecological Services - LRGV SubOffice
Phone: (956) 784-7560 Fax: (956) 787-8338
Rt. 2 Box 202-A
Alamo, TX 78516
June 28, 2010

Mr. Kenneth N. Jones
Executive Director, LRGVDC
311 N. 15th Street
McAllen, Texas 78501-4705

Consultation No. 21410-2010-TA-0406

Dear Mr. Jones:

This responds to your Rio Grande Regional Water Planning Group Draft Water Management Plan for Region M. The regional water plans are to be based on an assessment of future water demands and currently available water supply and are to include specific recommendations for meeting identified water needs through 2060. The plans may also include recommendations regarding strategies for meeting long-term (2040-2060) needs, as well as recommendations regarding legislative designation of ecologically unique rivers and streams, reservoir sites, and policy issues. The regional water plans and the state water plan are to be updated every five years. This is the third round of regional water planning.

General comments:

There is no discussion of climate change or sea level rising and how that can have a negative impact on our water resources and increase of salinity in the Rio Grande River and other freshwater sources.

Any open canals that could be closed and be replaced with a pipeline will reduce water availability to local wildlife, loss of habitat, and have a negative impact on ecotourism.

When canals are mowed to allow more water flow, one side of the canal should at least be left with vegetation to provide a wildlife travel corridor, so wildlife can still move along the water canals.

Specific Comments:

Chapter 1

On page 1-19, 1.1.3.2 Lower Lower Laguna Madre, first paragraph, fourth sentence should read: The Arroyo Colorado and Rio Grande provides most of the freshwater inflow to the bay with other drainage canals and floodways having smaller contributions.

1.14 Protected Areas should add: Estero Llano Grande and Resaca de la Palma State Parks should be added at the end of the first paragraph.

1.14 Protected Areas, second paragraph, first sentence should read: Nine local communities, USFWS, and Texas Parks and Wildlife Department (TPWD) have recently developed and completed the final stages of the World Birding Center committing \$20-25 million to the project.

On Page 1-22, 1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corridor, first paragraph, third sentence should read: It currently includes 115 individual tracts totaling over 91,000 acres.

1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corridor, first paragraph, fourth sentence should read: The completed refuge is projected to total 132,500 acres in fee and conservation easements.

On Page 1-25, 1.2.3 Economic Activities, eighth paragraph, second sentence should read: The economic impact by bird watchers in the Rio Grande Valley is estimated to be approximately \$125 million dollars per year (Source: McAllen Chamber of Commerce).

On Page 1-42, 1.6.1 Quantity, third paragraph, first sentence should read: Another threat to agriculture and natural resources of the region is the impact of ongoing and projected urbanization on currently undeveloped areas, and the loss of water availability for wildlife.

On Page 1-45, 1.6.2 Water Quality, add paragraph: Water quality can also be improved by increasing the width of riparian vegetation along rivers (like the Rio Grande and Arroyo Colorado) and streams to minimize urban and agriculture runoff impacts from contaminated water especially agriculture fields next to rivers or drainages with little to no vegetative buffer along the riparian area.

Chapter 4

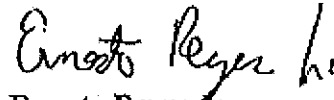
On Page 4-50, 4.5.4 Advanced Water Conservation, 4.5.4.1 Strategy Description, first paragraph, last sentence should include: irrigate lawns during evening hours throughout the municipalities for water conservation.

On Page 4-58, 4.5.5 Sea Water Desalination, 4.5.5.4 Environmental Impacts, first paragraph, add to end of sentence: and the brine concentrate should be piped out several miles out into the gulf, or directionally drilled.

We appreciate the opportunity to provide pre-planning information and look forward to providing any further assistance.

If we can be of further assistance, please contact Ernesto Reyes at the above letterhead and telephone number.

Sincerely,



Ernesto Reyes Sr.
Senior Fish & Wildlife Biologist
For
Allan M. Strand
Field Supervisor

cc:

Field Supervisor, U.S. Fish and Wildlife Service, Corpus Christi, TX

Response to Comments from the United States Department of the Interior

General Comments:

There is no discussion of climate change or sea level rising and how that can have a negative impact on our water resources and increase of salinity in the Rio Grande River and other freshwater sources.

- *The board members did not want to incorporate this comment into the plan.*

Any open canals that could be closed and be replaced with a pipeline will reduce water availability to local wildlife, loss of habitat, and have a negative impact on ecotourism.

- *The board members voted on not incorporating this comment into the plan.*

When canals are mowed to allow more water flow, one side of the canal should at least be left with vegetation to provide a wildlife travel corridor, so wildlife can still move along the water canals.

- *The board members did not want to incorporate this comment into the plan.*

Chapter 1

On page 1-19, 1.1.3.2 Lower Laguna Madre, first paragraph, fourth sentence should read: The Arroyo Colorado and Rio Grande provides most of the freshwater inflow to the bay with other drainage canals and floodways having smaller contributions.

- *Rio Grande was added into this sentence and was incorporated into Chapter 1 on page 1-19, first paragraph, fourth sentence.*

1.1.4 Protected Areas should add: Estero Llano Grande and Resaca de la Palms State Parks should be added at the end of the first paragraph.

- *Estero Llano Grande and Resaca de la Palms State parks was added to section 1.1.4 Protected areas*

1.1.4 Protected Areas, second paragraph, first sentence should read: Nine local communities, **USFWS**, and Texas Parks and Wildlife Department (TPWD) have recently developed and completed the final stages of the World Birding Center committing \$20-25 million to the project.

- *This sentence has been revised and inserted into section 1.1.4 Protected Areas, second paragraph, first sentence.*

On Page 1-22, 1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corrido, first paragraph, third sentence should read: It currently includes 115 individual tracts totaling over 91,000 acres.

- *This sentence has been revised and can be found on page 1-22, in section 1.1.4.1 Lower Rio Grande Valley National Wildlife refuge and Wildlife Corrido, in the first paragraph, third sentence.*

1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corridor, first paragraph, fourth sentence should read: The completed refuge is projected to total 132,500 acres in fee and conservation easements.

- *This revised sentence can be found in section 1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corridor, in the first paragraph, fourth sentence.*

On Page 1-25, 1.2.3 Economic Activities, eighth paragraph, second sentence should read: The economic impact by bird watchers in the Rio Grande Valley is estimated to be approximately \$125 million dollars per year (Source: McAllen Chamber of Commerce).

- *This revised sentence can be found in section 1.1.4.1 Lower Rio Grande Valley National Wildlife Refuge and Wildlife Corridor, in the first paragraph, fourth sentence.*

On Page 1-42, 1.6.1 Quantity, third paragraph, first sentence should read: Another threat to agriculture and natural resources of the region is the impact of ongoing and projected urbanization on currently undeveloped areas, and the loss of water availability for wildlife.

- *This revised sentence can be found on page 1-42, 1.6.1 Quantity, third paragraph, first sentence.*

On Page 1-45, 1.6.2 Water Quality, add paragraph: Water quality can also be improved by increasing the width of riparian vegetation along rivers (like the Rio Grande and Arroyo Colorado) and streams to minimize urban and agriculture runoff impacts from contaminated water especially agriculture fields next to rivers or drainages with little to no vegetative buffer along the riparian area.

- *The addition of this new paragraph can be found on page 1-45 under section 1.6.2 Water Quality.*

Chapter 4

On Page 4-50, 4.5.4 Advanced Water Conservation, 4.5.4.1 Strategy Description, first paragraph, last sentence should include: irrigation lawns during evening hours throughout the municipalities for water conservation.

- *The above comment was added to the sentence under Advanced Water Conservation, under the Strategy Description section, in first paragraph, last sentence.*

On Page 4-58, 4.5.5 Seawater Desalination, 4.5.5.4 Environmental Impacts, first paragraph, add to end of sentence: and the brine concentrate should be piped out several miles out into the gulf, or directionally drilled.

- *The above comment was added to the sentence in section named Seawater Desalination, under Environmental Impacts, in the first paragraph, last sentence.*



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June 21, 2010

Mr. Ken Jones
Lower Rio Grande Valley Development Council
311 N. 15th Street
McAllen, Texas 78501 4705

Re: 2010 Region M Initially Prepared Plan

Dear Mr. Jones:

Thank you for the opportunity to review and comment on the 2010 Initially Prepared Regional Water Plan (IPP) for the Lower Rio Grande Region M. Texas Parks and Wildlife (TPW) acknowledges the time, money and effort required to produce the regional water plan as mandated by Senate Bill 1 of the 75th Legislature. A number of positive steps have been taken since the first planning cycle to advance the issue of environmental protection. For example, the regional water planning groups are required by TAC §357.7(a)(8)(A), to perform a "quantitative reporting of environmental factors including effects on environmental water needs, wildlife habitat, cultural resources, and effect of upstream development on bays, estuaries, and arms of the Gulf of Mexico" when evaluating water management strategies (WMS). Quantification of environmental impacts is a critical step in planning for our state's future water needs while also protecting environmental resources.

TPW staff has reviewed the IPP with a focus on the following questions:

- Does the plan include a quantitative reporting of environmental factors including the effects on environmental water needs and habitat?
- Does the plan include a description of natural resources and threats to natural resources due to water quantity or quality problems?
- Does the plan discuss how these threats will be addressed?
- Does the plan describe how it is consistent with long-term protection of natural resources?
- Does the plan include water conservation as a water management strategy? Reuse?
- Does the plan recommend any stream segments be nominated as ecologically unique?
- If the plan includes strategies identified in the 2006 regional water plan, does it address concerns raised by TPWD at that time?

In general, the 2010 Region M IPP is a well-written document that acknowledges the importance of environmental flow needs of the Rio Grande. However, TPWD believes that more quantitative analysis rather than narrative description is needed for the environmental impacts associated with each water

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Lee M. Bass
Chairman-Emeritus
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Carter P. Smith
Executive Director

Mr. Ken Jones
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June 21, 2010

description is needed for the environmental impacts associated with each water management strategy.

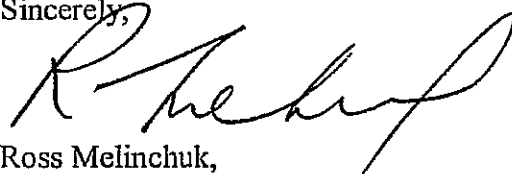
The Region M IPP includes conservation and reuse for meeting future municipal, industrial and agricultural water needs. While reuse of potable and non-potable water is thoroughly discussed, potential adverse effects of higher rates of reuse on effluent dependent streams, in particular the Arroyo Colorado should be acknowledged. TPWD encourages exploring the potential for additional conservation through implementation of additional Water Conservation Implementation Task Force Best Management Practices.

The plan does not recommend nomination of any stream segments as ecologically unique. As indicated in Table 8.1, TPWD has identified several stream segments in the region that meet at least one of the criteria for classification as ecologically unique should the regional planning group decide to pursue nomination of an ecologically significant stream in the future. These segments include portions of the tidal segment of the Arroyo Colorado, Las Moras Creek, and the Lower Rio Grande.

TPWD appreciates the efforts to quantitatively assess the inflow needs to the Lower Laguna Madre Estuary. Chapter 8 of the 2006 Regional Water Plan stated "Environmental flows in the Rio Grande could be included as a separate WUG in the next round of regional planning to ensure minimums would be met in a manner consistent with all other WUGs." This sentence is repeated in Chapter 8 of the IPP. TPWD believes that this idea has significant merit and encourages Region M to explicitly consider this option in the next planning cycle. Since surface flows are quite limited in Region M, environmental stream flows are of considerable importance.

Thank you for your consideration of these comments. TPWD looks forward to continuing to work with the planning group to develop water supply strategies that not only meet the future water supply needs of the region but also preserve the ecological health of the region's aquatic resources. Please contact Cindy Loeffler at (512) 389-8715 if you have any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Melinchuk". The signature is fluid and cursive, with a large initial "R" and a long, sweeping underline.

Ross Melinchuk,
Deputy Executive Director, Natural Resources

RM:CL:ch

**Texas Parks and Wildlife
Response to General Comments**

No specific comments were made from TPWD and therefore not incorporated into the plan.