Region L

South Central Texas Regional Water Planning Group

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VACANT
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Water Districts
Milton Stolte
Agriculture
Thomas Taggart
Municipalities
Dianne Wassenich
Public
Bill West
River Authorities

DATE: January 31, 2014

TO: Members of the South Central Texas Regional Water Planning Group

FROM: Steven J. Raabe, P.E.

The schedule and location of the meeting of the South Central Texas Regional Water Planning Group is as follows:

TIME AND LOCATION

Thursday, February 6, 2014
9:30 a.m.
San Antonio Water System
Customer Service Building
Room CR 145
2800 US Highway 281 North
San Antonio, Bexar County, Texas 78212

Enclosed is a copy of the posted public meeting notice.

Gary Middleton

GMM/en

Enclosure

NOTICE OF OPEN MEETING OF THE SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP

TAKE NOTICE that a meeting of the South Central Texas Regional Water Planning Group as established by the Texas Water Development Board will be held on Thursday, February 6th, 2014 at 9:30 a.m. at San Antonio Water System (SAWS), Customer Service Building, Room CR 145, 2800 US Highway 281 North, San Antonio, Bexar County, Texas. The following subjects will be considered for discussion and/or action at said meeting.

1. Public Comment

2. Approval of Minutes

3. Election of Officers for Calendar Year 2014

4. Status of Edwards Aquifer Habitat Conservation Plan (HCP) – Nathan Pence, Executive Director, EA HCP

5. Status of Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) and Expert Science Team (BBEST) and Nueces River and Corpus Christi and Baffin Bays Stakeholder Committee (BBASC) and Expert Science Team (BBEST)

6. Chair's Report
    - Report on Uniform Standards to be used by Regional Water Planning Groups to Prioritize Projects
    - Discussion and Appropriate Action Regarding Creation of Work Group to Begin Draft Prioritization Projects from 2011 RWP
    - Report by SAWS on Bed and Banks Permit Application

7. Discussion and Appropriate Action Regarding Authorizing Administrator to Begin Soliciting Nominations for SCTRWPG Water District Vacancy (Term Expires August 2016)

8. Texas Water Development Board (TWDB) Communications, David Meesey

9. Report, Discussion and Appropriate Action from Carrizo Aquifer Water Management Strategies Work Group - Greg Sengelmann, Chair

10. Discussion and Appropriate Action Regarding Consultants Work and Schedule

11. Discussion and Appropriate Action Regarding Evaluation of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Submittal to TWDB and Inclusion into Planning Contract, TWDB Contract No. 1148301323

12. Discussion and Appropriate Action Regarding Authorizing Political Subdivision to Submit Request for Notice-to-Proceed for Evaluation of Seven Water Management Strategies and Authorize Administrator to Execute Contract Amendment with TWDB

13. Discussion and Appropriate Action Regarding Identification of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Consideration at the Next South Central Texas Regional Water Planning Group Meeting

14. Discussion and Appropriate Action Regarding Evaluation of Water Management Strategies (Task 4D)

15. Possible Agenda Items for the Next South Central Texas Regional Water Planning Group Meeting

16. Public Comment

The South Central Texas Regional Water Planning Area consists of Atascosa, Bexar, Caldwell, Calhoun, Comal, Dewitt, Dimmit, Frio, Goliad, Gonzales, Guadalupe, Karnes, Kendall, La Salle, Medina, Refugio, Uvalde, Victoria, Wilson, Zavala and part of Hays Counties.

www.RegionLTexas.org

AGENDA ITEM 1

Public Comment

AGENDA ITEM 2

Approval of Minutes

Minutes of the
South Central Texas Regional Water Planning Group
November 7, 2013

The meeting was called to order at 10:00 a.m. in the San Antonio Water System's (SAWS) Customer Service Building, Room CR 145, 2800 US Highway 281 North, San Antonio, Bexar County, Texas.

Twenty-seven of the 29 voting members, or their alternates, were present.

Voting Members Present:

Tim Andruss
Donna Balin
Patrick Garcia for Rey Chavez
Alan Cockerell
Will Conley
Art Dohmann
Blair Fitzsimons
Vic Hilderbran
Kevin Janak
John Kight
Gená Leathers
Doug McGooky
Dan Meyer
Gary Middleton
Con Mims
Iliana Pena
Robert Puente
Steve Ramsey
David Roberts
Roland Ruiz
Diane Savage
Suzanne Scott
Greg Sengelmann
Milton Stolte
Thomas Taggart
Dianne Wassenich
James Murphy for Bill West

Voting Members Absent:

Gene Camargo
Don Dietzmann

Non-Voting Members Present:

Norman Boyd, Texas Department of Parks and Wildlife
Ron Fieseler, Region K Liaison
Matt Nelson, Texas Water Development Board (TWDB)
Steve Ramos, Texas Commission on Environmental Quality, South Texas
Ken Weidenfeller, Texas Department of Agriculture

AGENDA ITEM NO. 1: Public Comment

Chairman Con Mims informed the Planning Group he had received Mike Mahoney's resignation on the Planning Group effective immediately. The solicitation process to fill that vacancy will begin in February 2014. Mr. Mahoney represented Water Districts.

AGENDA ITEM NO. 2: Approval of Minutes

Mr. Mims asked if there were any additions or corrections to the August 1, 2013 meeting minutes. There were no corrections or revisions requested. Gary Middleton made a motion to

approve the minutes as presented. Milton Stolte seconded the motion. The motion carried by consensus.

AGENDA ITEM NO. 3: Status of Edwards Aquifer Habitat Conservation Plan (HCP)

Nathan Pence, EAHCP Executive Director, provided a brief overview of progress on the HCP. Mr. Pence stated the completion of the first year of implementation was upon the group. There were many success and challenges and they are continuing to make progress into the future. The work plans for 2014 and conservation to be implemented have been established and approved by the Implementing Committee. The activities to be implemented in 2014 are listed on the EAHCP website. The HCP process first annual report, which is due to US Fish and Wildlife Service in March 2014, will contain all the information and details of methodology, accomplishments, and directions taken in the first year. Mr. Pence also informed the Planning Group the next Implementing Committee meeting will be held on December 19th, 2013 at EAA. The meeting will be a joint meeting of the Implementing Committee, the Science Committee, and the Stakeholder Committee and will be an all-day meeting.

Mr. Pence provided details of the effects of the high water event on October 31st, 2013 in San Marcos and New Braunfels. In New Braunfels, the flows on the Comal River reached about 4,000cfs (cubic feet per second). There has been a great deal of restoration completed in that area and there was concern the restoration would be adversely affected. Mr. Pence stated the high water flow came through the dry Comal Creek and bypassed the important habitat for the species and much of the restored habitat in New Braunfels was not affected.

In San Marcos, the gages stopped working at some point so it is unknown the exact amount of water. There are still several roads closed in the area, as well as a large amount of water still coming in to the system out of the creek as it continues to drain off. At this time, it is unknown how much damage has been done to the restoration in the area.

A presentation will be given at the next Implementing Committee meeting showing the effects of the high water event. A copy of the presentation will also be on the EAHCP website. Mr. Pence also offered to give the presentation at the next Planning Group meeting in February.

AGENDA ITEM NO. 4: Chair's Report

- **Update of House Bill 4 Stakeholder Committee**

Mr. Mims provided an update on the status of the House Bill 4 (HB4) Stakeholder Committee, of which he is a member representing Region L. HB4, passed by the 83rd Texas Legislature in 2013, provided $2 Billion to capitalize loans to be used to plan and construct projects in the State Water Plan. Under HB4, each Planning Group throughout the state is required to use their existing regional water plan (2011 RWP) and prioritize the Recommended Water Management Strategies (WMS) using a scoring template that is currently being created by the HB4 Stakeholder Committee. Mr. Mims stated a copy of the draft template is in the agenda packet for review by Planning Group members. Mr. Mims reviewed the draft template with the group and requested Planning Group members provide any comments to him.

Mr. Mims also asked HDR Engineering to choose a sample set of five WMS from the 2011 RWP and score them using the draft template. Mr. Mims stated the objective of the template is to provide a uniform method of scoring water projects throughout the state.

The Stakeholder Committee will submit its recommendations for uniform scoring and the scoring template to TWDB for its approval. TWDB will then forward the approved template to the Regional Water Planning Groups with instructions to begin the process of prioritizing all the Recommended WMS in their 2011 plans and have the first draft of prioritization submitted to the TWDB by Summer 2014 with final prioritization submitted later in 2014.

Once all the planning groups have submitted their final prioritizations to TWDB, TWDB will prioritize projects in the State Water Plan for purposes of funding through the SWIFT funds. TWDB has different project prioritization criteria.

Dianne Wassenich requested the Administrator email the scoring results of the sample set of five projects to the entire Planning Group upon completion for their review.

AGENDA ITEM NO. 5: Status of Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) and Expert Science Team (BBEST) and Nueces River and Corpus Christi and Baffin Bays Stakeholder Committee (BBASC) and Expert Science Team (BBEST)

Mrs. Scott, Chair of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC), informed the Planning Group the next GSA BBASC meeting will be held at the San Antonio River Authority on November 21, 2013 at 1:00pm.

Currently, the GSA BBASC Evaluation Criteria Work Group is developing draft criteria for Request for Proposal Statements and Proposal Evaluation Matrix to assist TWDB, the contracting entity for the appropriated funding for Environmental Flows Work Plan for Adaptive Management studies. As previously stated, the GSA BBASC has been allocated $750,000 for continued study of environmental flows and instream flows for the river basins by the 83rd Texas Legislature. The GSA BBASC will be coordinating efforts with TWDB, the GSA BBEST and other agencies to seek studies, in accordance with its work plan that builds upon existing data, existing or ongoing research, and/or requires limited additional field work to assist in the validation or refinement of the adopted TCEQ environmental flow standards in sustaining the environmental health of the rivers, bays and estuaries.

Mr. Mims, Chair of the Nueces River and Corpus Christi and Baffin Bays Stakeholder Committee (BBASC), informed the Planning Group TCEQ has proposed rules for the Nueces BBASC. The proposed rules may be adopted in February of 2014. The proposed rules are very close to what the stakeholder committee recommended for the Nueces. One concern is the proposed rules leave an opportunity for new water rights to be issued from the Nueces River Basin, though many feel the Nueces River Basin is already over allocated. He noted that the Nueces Bay and Delta was determined by the Science Committee to not be in an ecologically sound condition.

Sam Vaugh, HDR Engineering, noted that the environmental flow standards will put regional water planning and state water permitting on the same footing. In the past, regional water plans used Consensus Criteria environmental guidance and now with the Environmental Flow Standards adopted, when we look at a strategy for regional planning, it's the same kind of look TCEQ will be doing when looking at permitting. It's a nice bridge between permitting and planning.

AGENDA ITEM NO. 6: Review/Approve Administrator's Budget

Erin Newberry, San Antonio River Authority, provided an update on the expenditures to the Administrators Budget as of September 30, 2013. Currently, the Administrator is trending under budget for the year. On behalf of SARA, as Administrator of the SCTRWPG, Mrs. Newberry requested approval from the Planning Group to the 2014 Administrators budget of $58,000.00. Mr. Mims asked the Planning Group for a motion to approve the CY2014 Administrators budget of $58,000.00. Mrs. Wassenich made a motion to approve the Administrators budget for Calendar Year 2014 as presented. Mr. Stolte seconded the motion. The motion carried by consensus.

AGENDA ITEM NO. 7: Texas Water Development Board (TWDB) Communication

- **TWDB Administrative Update**
- **New Planning Group Member Presentation**

Matt Nelson provided an update on changes that will begin to take effect with the passing of Proposition 6. There will be a rule making process in regards to SWIFT funds which will involve an advisory committee to advise the board and developing the rules. This process is quite extensive. Mr. Nelson also stated TWDB will announce a significant reorganization on November 8th, 2013.

Following an administrative update, Mr. Nelson provided a presentation on regional water planning for new planning group members.

AGENDA ITEM NO. 8: Report, Discussion and Appropriate Action from Work Group

- **Carrizo Aquifer WMS Work Group, Greg Sengelmann, Chair**

Mr. Sengelmann provided a status report on work group actions to date on the Carrizo Aquifer WMS work group and background information on managed available groundwater (MAGS) and Desired Future Conditions (DFCs) for better understanding of the issues the work group faces in the Carrizo Aquifer area. Mr. Sengelmann stated a major issue is TWDB rules and guidance regarding managed available groundwater.

Mr. Sengelmann stated that after all calculations were completed (allocated groundwater by aquifer in each county), there were five counties in the Carrizo Aquifer that reflected allocated amounts greater than the MAG – Atascosa, Frio, Karnes, Wilson and Gonzales Counties. The key questions that the work group will consider are (1) how to address allocated groundwater in excess of the MAG when determining existing supplies; (2) how to plan for potentially feasible water management strategies where allocated groundwater exceeds the MAG; (3) how to plan for potentially feasible water management strategies where allocated groundwater is less than the MAG or allocated groundwater plus water management strategies exceed the MAG; and (4) how to present the technical evaluations of potentially feasible water management strategies with firm supplies proportionately reduced or shown as zero for MAG compliance.

Brian Perkins, HDR Engineering, provided a brief presentation reflecting how to potentially handle the two situations the planning group faces regarding WMS' from the Carrizo Aquifer; (1) existing groundwater supplies proportionately reduced for MAG compliance and; (2) WMS' with firm supplies proportionately reduced or shown as zero for MAG compliance. Mr. Perkins

reminded the Planning Group that MAG compliance equates to TWDB's policy of not over-allocating water supplies over the MAG for the aquifer.

Following discussions on groundwater management areas, DFCs and MAGs, Mr. Nelson stated that he will ask a staff member from TWDB's Groundwater Division to attend the February Region L meeting to answer questions and discuss GMA processes, setting DFCs and groundwater modeling.

Charles Ahrens, SAWS, stated the illustrations presented by HDR Engineering should show there is water permitted above the MAG which causes several problems for existing and potential WMS' in the Carrizo Aquifer.

Mr. Mims stated the work group will have a final recommendation for the planning group at the February meeting.

AGENDA ITEM 9: Presentation of "Texas State Soil and Water Conservation Board (TSSWCB) Water Supply Enhancement Program - Enhancing Surface and Ground Water Supplies Through Brush Control in Region L" - Aaron Wendt, TSSWCB Natural Resources Specialist

Aaron Wendt, TSSWCB, provided a presentation on the TSSWCB Water Supply Enhancement Program, formerly the Brush Control Program and how the program is currently being implemented. Mr. Wendt also discussed how the program has changed over the years, brush control work in the Upper Guadalupe River and the effects on Canyon Lake and, lastly, brush control in Gonzales County and possible impacts on the Carrizo Aquifer.

AGENDA ITEM 10: Discussion and Appropriate Action Regarding Consultants Work and Schedule

- **Technical Memorandum Update**

Mr. Perkins, HDR Engineering, presented an update on the TWDB schedule for work plan development highlighting upcoming TWDB deadlines for the Planning Group. At this time, water demands projections and population projections are fairly completed. Existing supplies will need to be completed once the Carrizo Aquifer WMS work group presents their recommendations to the Planning Group. Technical evaluations of WMS' will be presented to the Planning Group throughout 2014; however, in order to answer how many WMS' are needed and which WMS' need to be evaluated, we will need to know what water needs must be met.

The Initially Prepared Plan (IPP) is due May 1, 2015 which means all WMS evaluations must be completed and presented to the Planning Group for consideration to be included in the RWP as Recommended, Alternative or Needs Further Study by the November 2014 Planning Group meeting. The draft IPP would then be ready for Planning Group review at the February 2015 meeting to be completed and turned in to TWDB by the May 1, 2015 deadline.

Mr. Perkins informed the Planning Group on the change to the original scope of work for the Technical Memorandum and the revised deadline date of August 1, 2014.

Mr. Perkins also updated the Planning Group on the task and expense budget to date and reviewed the list of potential issues for development of the 2016 RWP HDR is tracking.

AGENDA ITEM NO. 11: Report on TWDB Final Recommendations on Population and Water Demand Projections, Results of Phase 2 Survey to Water User Groups (WUG) and Wholesale Water Providers (WWP) and Draft Needs Analysis Review (Tasks 4A & 4B)

Mr. Perkins told the Planning Group that TWDB finalized water demand projections (municipal and non-municipal) on October 17th, 2013 and provided a recap of Region L's requests for revisions and TWDB's responses to the requests. TWDB accepted all Eagle Ford Shale revision requests for DeWitt, Dimmit, Goliad, Gonzales, Karnes, LaSalle and Refugio Counties. TWDB approved population and water demand projections for City of Converse, City of Schertz, Fair Oaks Ranch, City of San Marcos and Plum Creek Water Company. TWDB approved population only revision requests for County-Other for Bexar, Caldwell, Comal, Hays and Kendall Counties. TWDB partially approved a revision request of population and water demands for the City of Cibolo. Mr. Perkins provided a presentation of the results and a regional summary breakdown for the Planning Group's review. Mrs. Scott reminded Mr. Perkins to ensure that by increasing the gallons per capita per day (GPCD) in the Eagle Ford Shale counties, there isn't an issue with conservation strategies or the counties aren't penalized in any way.

Mr. Perkins also presented Phase 2 Survey Results – Phase 2 Survey focused on confirming population and water demand projections, confirming firm supplies for each decade point, calculating needs, if any, and the list of WMS' from the 2011 RWP to meet the entity's needs. Phase 2 also asked questions regarding drought management and emergency supplies/connections. The survey was sent out to 137 WUGs, the survey was reviewed by 39 WUGs (representing 76.4% of the population of Region L). Seven WUGs requested changes or provided additional information based on the survey's information.

Mr. Perkins informed the Planning Group the Draft Needs Analysis is not complete due, in part, to the groundwater issues the Carrizo Aquifer WMS Work Group is working through presently.

AGENDA ITEM NO. 12: Discussion and Appropriate Action Regarding Evaluation of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Submittal to TWDB and Inclusion into Planning Contract, TWDB Contract No. 1148301323 (Task 4D)

At the August 1st, 2013 Planning Group Meeting, HDR Engineering received authorization to begin drafting scopes of work and budgets for sixteen WMS: 1) Edwards Transfers, 2) Purchase from WWP, 3) Water Resources Integration Pipeline (SAWS), 4) Advanced Meter Infrastructure (SAWS), 5) Regional Water Supply Project – RFCSP (SAWS), 6) Regional Brackish Wilcox Project – Alternative (SAWS), 7) Integrated Water-Power Project (GBRA), 8) Luling ASR (GBRA), 9) New Braunfels ASR Project (NBU), 10) New Braunfels Trinity Well Field (NBU), 11) New Braunfels Reuse Project (NBU), 12) Expansion Carrizo-Wilcox Aquifer, Guadalupe County (SSLGC), 13) Lavaca River Off-Channel Reservoir, 14) Brackish Wilcox Groundwater for SS WSC, 15) Carrizo/Buda/Austin Chalk/Leona & Regional ASR (City of Uvalde), and 16) Texas Water Alliance (Trinity Well Field in Comal).

Mr. Perkins presented the results to the Planning Group, reviewing each WMS and budget for evaluation. Though sixteen WMS' were requested by HDR to begin drafting scopes of work and budgets, Mr. Perkins is presenting twelve of the sixteen today to the Planning Group. Work is still ongoing on the remaining four, but will be presented to the Planning Group at the February

meeting. Mr. Perkins also provided an estimate of the budget to be allocated after the sixteen WMS presented is $133,850.

Mr. Mims asked the Planning Group if there were any objections to the scope and budget of the twelve water management strategies presented by HDR Engineering. Mr. Ahrens moved to approve the draft scopes and budgets as presented. Alan Cockerell seconded the motion. The motion carried by consensus.

AGENDA ITEM NO. 13: Discussion and Appropriate Action Regarding Authorizing Political Subdivision to Submit Request for Notice-to-Proceed for Evaluation of Twelve Water Management Strategies and Authorize Administrator to Execute Contract Amendment with TWDB

Mr. Mims asked the Planning Group if there was any objection to the San Antonio River Authority, as Administrator, submitting a request for Notice-to-Proceed #3 for the evaluation of the twelve WMS presented by HDR Engineering and authorizing Administrator to execute a contract amendment with TWDB. The Planning Group had no objections and approval was made by consensus.

AGENDA ITEM NO. 14: Discussion and Appropriate Action Regarding Identification of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Consideration at the Next South Central Texas Regional Water Planning Group Meeting

Mr. Perkins requested Planning Group authorization to begin drafting scopes of work and budgets for four additional WMS: 1) Carrizo Transfers, 2) Brush Management, 3) Recycled Water Management Strategy - Amendment, 4) Hays County – Four Star Water In addition to the four additional WMS' listed, Mr. Perkins will complete the draft scopes of work and budgets for three WMS' previously authorized by the Planning Group: 5) Regional Water Supply Project – RFCSP (SAWS), 6) Regional Brackish Wilcox Project – Alternative (SAWS), and 7) Carrizo/Buda/Austin Chalk/Leona & Regional ASR (City of Uvalde).

Tom Taggart asked if Carrizo Transfers, in comparison to Edwards Transfers, had a regulatory and/or legal framework in place governing such transfers (outside of the governing district) and, if not, how the Planning Group would evaluate and recommend a Carrizo Transfer WMS without the legalities in place. Mr. Perkins stated the evaluation could be completed on Carrizo Transfers as a WMS by HDR, presented to the Planning Group in February, and at that time, if the Planning Group does not agree or is not ready to authorize the WMS, it could be placed on hold until such time the Planning Group wishes to review the evaluation and forward to TWDB for authorization.

With Planning Group authorization, HDR Engineering will draft scopes of work and budgets for future technical evaluations. Mr. Mims asked if there were any objections to HDR Engineering beginning to draft scopes of work and budgets for the seven water management strategies presented. The Planning Group had no objections. The approval was given by consensus.

AGENDA ITEM NO. 15: Set Dates and Times of Regional Water Planning Group Meetings for 2014

Ms. Newberry presented a schedule of meeting dates, times and locations to the Planning Group for Planning Group meetings and Staff Work Group meetings in 2014. The Planning Group will continue to meet quarterly on the first Thursday in February, May, August and November at SAWS' Customer Service Building, Room CR-145. Staff Work Group meetings are held at the San Antonio River Authority. Ms. Newberry reminded the Planning Group all meeting details are listed on the calendar on the Region L website at www.RegionLTexas.org.

AGENDA ITEM NO. 16: Possible Agenda Items for the Next South Central Texas Regional Water Planning Group Meeting

Mr. Mims proposed the following agenda items for the February 6th, 2014 Planning Group Meeting:

- EAHCP Update
- Status of SB3, Environmental Flows Process
- Report, Discussion and Appropriate Action from Work Group
- Groundwater Discussion with Appropriate TWDB Staff
- Administrator Authorization to Begin Solicitation Process for Water District Vacancy

AGENDA ITEM NO. 16: Public Comment

There was no public comment and meeting adjourned.

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GARY MIDDLETON, SECRETARY

Approved by the South Central Texas Regional Water Planning Group at a meeting held on February 6, 2014.

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CON MIMS, CHAIR

AGENDA ITEM 3

Election of Officers for Calendar Year 2014

AGENDA ITEM 4

Status of Edwards Aquifer Habitat Conservation Plan (HCP)

AGENDA ITEM 5

Status of Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays Basin and Bay Stakeholder Committee (BBASC) and Expert Science Team (BBEST) and Nueces River and Corpus Christi and Baffin Bays Stakeholder Committee (BBASC) and Expert Science Team (BBEST)

AGENDA ITEM 6

Chair's Report

- Report on Uniform Standards to be used by Regional Water Planning Groups to Prioritize Projects
- Discussion and Appropriate Action Regarding Creation of Work Group to Begin Draft Prioritization Projects from 2011 RWP
- Report by SAWS on Bed and Banks Permit

Agenda Item 6 – Chair's Report

Re: Report on Uniform Standards to be used by Regional Water Planning Groups to prioritize projects

Ladies and Gentlemen:

Last year, the Texas Legislature (83rd Reg.) decided to promote development of new water supplies throughout the state by funding the State Water Plan.

House Bill 4 created a new State Water Implementation Fund, called SWIFT, to be administered by the Texas Water Development Board (Board) as a low interest loan fund. And, it described how water supply projects would be prioritized for funding as, basically, a three step process.

First, uniform standards for prioritizing water projects on the regional level are to be developed by a HB 4 Stakeholder Committee established by the Board. Its members are to consist of the chairs of the state's sixteen Regional Water Planning Groups (RWPG), or their designees. Second, using the uniform standards developed by the Stakeholder Committee, each RWPG is to prioritize the recommended water management strategies found in both their 2011 and 2016 regional water plans and send those priority lists to the Board. And, third, the Board will adopt rules that will establish a point system for its use in prioritizing projects being considered for SWIFT funding. The point system is to be based on fifteen (15) specific items listed in the legislation to be considered by the Board.

The HB 4 Stakeholder Committee, on which I served, has completed its work and the Board has approved the uniform standards recommended by this Committee, as submitted. The RWPG's now have until June 1 to submit to TWDB a draft prioritization of the recommended water management strategies in their 2011 Plans and until September 1 to submit their final prioritized list. Then, they will work on prioritizing projects in the 2016 plans that are, currently, under development.

The HB 4 Stakeholders Committee started meeting last September, shortly after HB 4 became effective and well before the November 5 voter approval of Proposition 6, because we had a statutory December 1 deadline to develop the uniform standards and no precedent to help us. This short timeline influenced our deliberations and the final product, considerably.

An important early decision of the Committee was to stay close to the statutory guidance as to what regional water planning groups must consider in prioritizing projects. This was because there was no end to other possible considerations, and no time to explore them.

HB 4 provides that, at a minimum, regional water planning groups must consider the following criteria in prioritizing their water projects:

(1) the decade in which the project will be needed;
(2) the feasibility of the project, including the availability of water rights for purposes of the project and the hydrological and scientific practicability of the project;
(3) the viability of the project, including whether the project is a comprehensive solution with a measurable outcome;
(4) the sustainability of the project, taking into consideration the life of the project; and
(5) the cost-effectiveness of the project, taking into consideration the expected unit cost of the water to be supplied.

Perhaps, the most controlling decision we made was that, for scoring standards to be uniform as required by HB 4, there could be no flexibility in scoring. For example, there was a reoccurring desire to find ways to allow regions to express their sense of the importance of projects, such as by allowing them to adjust the weighting to reflect their specific regional concerns. But, we kept coming back to the fact that the statute requires uniform standards. Similarly, while we agreed that water projects can affect private property rights, the environment, and the economy, we did not to include these as scoring criteria because of the subjectivity of the issues.

We felt that the best way to achieve uniform standards was to make the scoring template as simple as possible and to minimize subjective questions.

There is a HB 4 requirement to set aside 10% of SWIFT to support rural water projects and 20% for water conservation or reuse. The scoring template provides for flagging projects that may qualify for these set asides, however the Board will determine how to handle these set asides in its rule making.

As a side note, the work that, most likely, will bear heaviest on how SWIFT funds are allocated by the Board remains to be done. Between December 1, 2014 and March 1, 2015, the Board will work on rules governing how it will prioritize water projects and allocate the SWIFT funds. Also, the SWIFT Advisory Committee, consisting of the Comptroller, three members of the Senate and three members of House, or their designees, will submit its recommendations relating to allocation of the funds and the Board's prioritization of projects.

With this still ahead, how the regional prioritization of water projects will be considered, and its importance, remains to be seen. It has not gone unnoticed, however, that of the 15 items set out in HB 4 to be considered by the Board in developing its point system, the priority that a RWPG gives to a project is last on the list.

A copy of the scoring template approved by the Board is attached.

Con Mims, Chair
Region L

HB 4 Stakeholder Committee
Final Uniform Standards for Prioritization
Adopted by Consensus at 3pm, November 14, 2013

PROJECT NAME:	
PROJECT SPONSOR:	

Overall Criteria Weightings:

Decade of Need	40%
Project Feasibility	10%
Project Viability	25%
Project Sustainability	15%
Project Cost Effectiveness	10%
	100%

potential SWIFT funding category	flag all that may apply
mainstream	
rural/agricultural conservation	
conservation/reuse	

** indicates that additional data may have to be collected by RWPG in order to score projects

1. Decade of Need for Project

	Max Score	Actual Score
A What is the decade the RWP shows the project comes online?	10	0
** B In what decade is initial funding needed?	10	0
Criteria Total	20	0

A

Points	Year
0	2060
2	2050
4	2040
6	2030
8	2020
10	2010

B

Points	Year
0	2060
2	2050
4	2040
6	2030
8	2020
10	2010

HB 4 Stakeholder Committee
Final Uniform Standards for Prioritization
Adopted by Consensus at 3pm, November 14, 2013

2. Project Feasibility

		Max Score	Actual Score
	A What supporting data is available to show that the quantity of water needed is available?	5	0
**	B If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require?	5	0
**	C What level of engineering and/or planning has been accomplished for this project? (Points based on progress on scientific data collection, stage of studies and design)	10	0
	D Has the project sponsor requested (in writing for the 2016 Plan) that the project be included in the Regional Water Plan?	5	0
	Criteria Total	25	0

A

Points	Measure
0	Models suggest insufficient quantities of water or no modeling has been performed
3	Models suggest sufficient quantity of water
5	Field tests and measurements confirm sufficient quantities of water

B

Points	Measure
0	legal rights, water rights and/or contract application not submitted
2	application submitted
3	application is administratively complete
5	legal rights, water rights and/or contracts obtained or not needed

C

Points	Measure	Points	Measure
1	Project idea is outlined in Regional Plan.	6	Preliminary engineering report initiated.
2	Feasibility studies initiated.	7	Preliminary engineering report completed.
3	Feasibility studies completed.	8	Preliminary design initiated.
4	Conceptual design initiated.	9	Preliminary design completed.
5	Conceptual design completed.	10	Final design complete.

D

Points	Measure
0	no
5	yes

HB 4 Stakeholder Committee
Final Uniform Standards for Prioritization
Adopted by Consensus at 3pm, November 14, 2013

3. Project Viability	Max Score	Actual Score
For A and B, the calculation is to be based on the total needs of all WUGs receiving water from the project.		
A In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project? 0.00 %	10	0.00
B In the final decade of the planning period, what is the % of the WUG's (or WUGs') needs satisfied by this project? 0.00 %	10	0.00
C Is this project the only economically feasible source of new supply for the WUG, other than conservation?	5	0
D Does the project serve multiple WUGs?	5	0
Criteria Total	30	0

Points	Measure
0	no
5	yes

Points	Measure
0	no
5	yes

4. Project Sustainability		
** A Over what period of time is this project expected to provide water (regardless of the planning period)?	10	0
B Does the volume of water supplied by the project change over the regional water planning period?	5	0
Criteria Total	15	0

Points	Measure
5	less than or equal to 20 years
10	greater than 20 years

Points	Measure
0	decreases
3	no change
5	increases

HB 4 Stakeholder Committee
Final Uniform Standards for Prioritization
Adopted by Consensus at 3pm, November 14, 2013

5. Project Cost Effectiveness	Max Score	Actual Score
A What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP? (Project's Unit Cost divided by the median project's unit cost)	5	0
Criteria Total	5	0

Points	Relative to Median unit cost
0	200% or greater than median
1	150% to 199% of median
2	101% to 149% of median
3	100% of median
4	51% to 99% of median
5	0% to 50% of median

SCORING RESULTS ON SCALE OF 1,000 POINTS MAXIMUM:	
sub-score for: Decade of Need	-
sub-score for: Project Feasibility	-
sub-score for: Project Viability	-
sub-score for: Project Sustainability	-
sub-score for: Project Cost Effectiveness	-
FINAL SCORE FOR PROJECT	-

10-9-13

Answers to Questions Received from the House Bill 4 Prioritization Stakeholder Committee Members as of October 7, 2013

1. **Q: Is the Stakeholder Committee prioritizing in rank-order from one to the total number of projects, or groups?**
   A: We think that to satisfy the legislative intent regional water planning groups will have to prioritize with a rank order from one downward through the total number of projects in their plans.

2. **Q: Is the Stakeholder Committee expected to prioritize all 3,089 water management strategies or just the 274 that indicated financial need?**
   A: We think that to satisfy the legislative intent regional water planning groups will have to prioritize all projects, including those with no capital costs.

3. **Q: Can water management strategies/projects be bundled into a package for ranking?**
   A: They cannot be bundled if they are considered separate projects and are presented as such in the regional plans and will or can be implemented separately. For example, two groundwater well projects that would serve two different entities and are entirely separate physically shouldn't be prioritized together. The reason for this is that each project could be built independently and there would not be a single borrower to implement those two projects. Moreover, with separate entities, the projects may receive different scoring under the criteria specified by House Bill (HB) 4 due to entity-specific circumstances (e.g., decade of need, availability of water rights, cost-effectiveness, taking into consideration the expected unit cost).

4. **Q: How flexible and subjective might the standards be? For example, "scientific practicality" can be viewed in different ways by different entities.**
   A: TWDB's interpretation is that the standards for "scientific practicality" that the Stakeholder Committee develops will need to precisely prescribe the level or degree of "scientific practicality" applicable to the various, specific criteria and fact circumstances (e.g., desalination, conservation, well field production). The standard must also be sufficient to allow consistent and "standardized" application across a variety of strategies.

5. **Q: How will the regional water planning group prioritization fit into the state prioritization product?**
   A: The prioritization developed by regional water planning groups is one of the criteria under HB 4 that will be considered by TWDB when prioritizing projects at the state level. There are a number of other criteria.

6. **Q: What is a "project"?**
   A: At this point, we consider a "project" to be a self-contained facility or activity, proposed independently of and not directly contingent on another facility or project, that is a recommended water management strategy. The strategy would be implemented by a single entity (or team of entities as co-borrowers) over a defined timeline and would be characterized by a discrete capital cost to be borne by the borrower/co-borrowers. For the purpose of HB 4, most "projects" will probably be defined as recommended water management strategies in a regional plan at the sponsor-water management strategy level of detail since that is the level at which the vast majority of water management strategies will be implemented as a "project." Examples of a project might include: one facility built by multiple sponsors, a single pipeline sponsored by a single entity, or a conservation strategy that would involve a regional entity reducing irrigation water distribution losses.

7. **Q: Does the TWDB plan to allow the regional water planning groups to assign their own, unique weightings to each of the overall HB4 criteria or will the Stakeholder Committee need to assign a single weighting to each criteria to be applied by all 16 regional water planning groups in order to achieve another level of standardization?**
   A: The Stakeholder Committee will need to consider whether allowing variations in the criteria weightings will achieve "uniform standards." On the face of it, it is hard for us to see how that could be the case.

8. **Q: How much weight does the TWDB anticipate assigning to the regional water planning group's ranking?**
   A: We do not know at this time. The particular manner in which a regional water planning group's ranking affects a project's prioritization by the TWDB will be worked out through a rulemaking process. That process will consider the criterion in concert with the other criteria specified for the agency's prioritization. The rulemaking will also need to consider public comment, including comment from members of the Stakeholder Committee, and recommendations from the SWIFT Advisory Committee.

9. **Q: What about projects that are typically determined to be "consistent" with rather than being specifically recommended projects because they fall into the broad "County-Other" water user category that has historically represented numerous rural entities? Will this hinder the ability of these small or rural entities to obtain SWIFT financing (as directed by the legislature in HB 4 for rural entities) since these County-Other projects won't be specifically prioritized? For example, wells, pumps, storage tanks might fall into this category. Would these be eligible for funding from the SWIFT, and how will these be prioritized?**
   A: HB 4 makes it clear that the legislature's intent "is that the SWIFT will never be used for a purpose other than the support of projects in the state water plan." TWDB is currently reviewing ways of addressing these types of projects. Addressing the water needs of rural Texas has been and will continue to be a priority for the TWDB.

10. **Q: Can SWIFT funds go to projects that are only "consistent" with the 2011 Regional Water Plans (e.g., to projects that are not specifically included in the plan along with associated capital costs)?**
    A: In general, no. HB 4 makes it clear that the legislature's intent "is that the SWIFT will never be used for a purpose other than the support of projects in the state water plan." However, TWDB is currently reviewing ways of addressing smaller rural projects that may fall into this category as a project under "County-Other." (see previous question)

11. **Q: What about urban projects "masquerading" as a rural project – those with a primary purpose of providing urban water supply? What if these projects attempt to utilize rural funding? Reservoirs might fall into this category. Need to give full access to the rural funding.**
    A: If a project would serve both rural and urban users, the share of the project that would serve rural entities may be eligible for rural funds depending on how rural is defined and applied under the SWIFT allocations. Although HB 4 provides some clear direction on what is included in the "rural" category and how the associated funding will be accounted for, the particulars will depend on the SWIFT Advisory Committee recommendations and stakeholder input during the rulemaking.

12. **Q: What if a project has no capital cost listed in the plan but then a sponsor comes in for SWIFT funds, will it be eligible? What if the funds were in the plan but they did not indicate a need for financial assistance?**
    A: As was the case with Water Implementation Fund (WIF) appropriations, HB 4 makes clear the intent of the legislature to apply SWIFT funds only toward projects that are recommended in the regional and state water plans. That means that a project and the dollars associated with it should be specifically included in the regional water plan to be eligible. Whether a project must expressly indicate a need for financial assistance in the plan has not been decided.

13. **Q: Are water management strategies going to be prioritized by regional water planning groups? For example, if a City has five water management strategies, does the City prioritize them for themselves? Or do those five water management strategies all go into one big list by region, which are then prioritized by the regional water planning group?**
    A: The latter. All projects in a region will be prioritized together into a single list for that region.

Proposition 6 Implementation Timeline
September 1, 2013 through March 1, 2015

Texas Water Development Board
November 2013

2013

September

September 1, 2013
Governor appoints TWDB Board members.

October

November

November 5, 2013
Voters passed Senate Joint Resolution 1 (SJR1), constitutional amendment creating SWIFT and SWIRFT. $2 billion transferred from economic stabilization fund to SWIFT.

As soon as practicable after Nov. 5:
-- Lt. Governor and House Speaker appoint SWIFT Advisory Committee.
-- TWDB creates Regional Water Planning Group (RWPG) stakeholder committee to establish standards for project prioritization.

December

December 1, 2013
Regional Water Planning Group (RWPG) stakeholder committee submits project prioritization standards to TWDB.

2014

January

February

March

April

May

June

June 1, 2014
RWPGs submit draft prioritization of projects from 2011 Regional Water Plans.

July

August

September

September 1, 2014
RWPGs submit final prioritization of projects from the 2011 Regional Water Plans.

SWIFT Advisory Committee submits recommendations to TWDB regarding rules relating to the allocation of funds for specific purposes and for prioritizing projects.

October

November

December

December 1, 2014
TWDB shall provide SWIFT implementation report to the Governor, Lt. Governor, House Speaker and Legislature.

2015

January

December 1, 2014 - March 1, 2015
TWDB shall adopt rules relating to the allocation of funds for specific purposes and for prioritizing projects.

February

March

March 1, 2015
Deadline for TWDB adoption of rules.

AGENDA ITEM 7

Discussion and Appropriate Action Regarding Authorizing Administrator to Begin Soliciting Nominations for SCTRWPG Water District Vacancy (Term Expires August 2016)

Texas Administrative Code
Title 31 – Natural Resources and Conservation
Part 10 – Texas Water Development Board
Chapter 357 – Regional Water Planning
Sub Chapter A – General Information

Rule §357.11 (Designations)
(d)(10) Water districts, defined as any districts or authorities, **created under authority** of either Texas Constitution, Article III, **§**52(b)(1) and (2), or Article XVI, **§**59 including districts having the authority to regulate the spacing of or production from water wells, but not including river authorities

SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP
MEMBERS' TERMS OF OFFICE
February 1, 2014

Member Name	Position	Interest Represented	Term Expires
Executive Committee			
Con Mims	Chair	River Authorities	2016
VACANT	Vice Chair		
Gary Middleton	Secretary	Municipalities	2016
	At-Large		
	At-Large		
Dianne Wassenich		Public	2018
Iliana Pena		Environmental	2016
Donna Balin		Environmental	2016
Will Conley		Counties	2018
John Kight		Counties	2016
Robert Puente		Municipalities	2016
Tom Taggart		Municipalities	2016
Gená Leathers		Industries	2018
Rey Chavez		Industries	2016
Alan Cockerell		Agricultural	2016
Milton Stolte		Agricultural	2016
Blair Fitzsimons		Agricultural	2018
Doug McGooky		Small Business	2018
David Roberts		Small Business	2018
Kevin Janak		Elec. Generating Utilities	2016
Bill West		River Authorities	2016
Suzanne Scott		River Authorities	2018
Roland Ruiz		Water Districts	2018
Tim Andruss		Water Districts	2018
Greg Sengelmann		Water Districts	2018
VACANT		Water Districts	2016
Steve Ramsey		Water Utilities	2018
Gene Camargo		Water Utilities	2018
Vic Hilderbran		GMA 7	Indefinite
Don Dietzmann		GMA 9	Indefinite
Daniel Meyer		GMA 10	Indefinite
Diane Savage		GMA 13	Indefinite
Art Dohmann		GMA 15	Indefinite

SOUTH CENTRAL TEXAS REGIONAL WATER PLANNING GROUP

Nomination for Interest Group (check one):

□ Agriculture, □ Counties, □ Electric Generating Utilities,

□ Environmental, □Industries, □ Municipalities, □ River Authority, □ Water Districts

NOMINATOR

NAME:_____

ADDRESS:_____

PHONE:_____**FAX:**_____**EMAIL:**_____

OCCUPATION_____

NOMINEE

NAME:_____

ADDRESS:_____

PHONE:_____**FAX:**_____**EMAIL:**_____

INTEREST AREA:_____

COUNTY:_____

OCCUPATION:_____

PLEASE GIVE A BRIEF DESCRIPTION OF THE NOMINEE'S EXPERIENCE THAT WOULD QUALIFY HIM/HER FOR THE POSITION:

_____

_____

_____

PLEASE LIST ANY PERTINENT AFFILIATIONS:

_____

_____

_____

DATE SUBMITTED:_____

PLEASE ATTACH ADDITIONAL INFORMATION IF DESIRED

Nominations must be received by **5:00 p.m., Friday, March 28, 2014** addressed to Con Mims, Chair, South Central Texas RWPG, c/o San Antonio River Authority, Attn: Erin Newberry, P.O. 839980, San Antonio, Texas 78283-9980: Faxed to (210) 302-3692 or email to enewberry@sara-tx.org

DRAFT

SCHEDULE FOR REPLACEMENT OF SCTRWPG MEMBERS

February 6, 2014

DATE:	DESCRIPTION:
Sunday, February 16, 2014	Publish Notice in the San Antonio Express News & Victoria Advocate paper
Monday, February 17, 2014	Mail notice of vacancy to each respective Interest within the Planning Area (Water District)
Friday, March 28, 2014	Deadline for submitting nominations (40 days notice)
Thursday, April 17, 2014 (TENTATIVE)	Exec Committee to interview and recommend nominees (1 - 4 pm)
Thursday, May 8, 2014	SCTRWPG to consider Executive Committee's recommendation and appointment of voting member(s)

Region L
South Central Texas Regional Water Planning Group

c/o San Antonio River Authority
P.O. Box 839980
San Antonio, Texas 78283-9980

(210) 227-1373 Office
(210) 302-3692 Fax
www.RegionLTexas.org

EXECUTIVE COMMITTEE
Con Mims
Chair / River Authorities
VACANT
Vice-Chair / Water Districts
Gary Middleton
Secretary / Municipalities

MEMBERS
Tim Andruss
Water Districts
Dr. Donna Balin
Environmental
Gene Camargo
Water Utilities
Rey Chavez
Industries
Alan Cockerell
Agriculture
Will Conley
Counties
Don Dietzmann
GMA 9
Art Dohmann
GMA 15
Blair Fitzsimons
Agriculture
Vic Hilderbran
GMA 7
Kevin Janak
Electric Generating/Utilities
John Kight
Counties
Gená Leathers
Industries
Doug McGookey
Small Business
Dan Meyer
GMA 10
Iliana Peña
Environmental
Robert Puente
Municipalities
Steve Ramsey
Water Utilities
David Roberts
Small Business
Roland Ruiz
Water Districts
Diane Savage
GMA 13
Suzanne Scott
River Authorities
Greg Sengelmann
Water Districts
Milton Stolte
Agriculture
Thomas Taggart
Municipalities
Dianne Wassenich
Public
Bill West
River Authorities

DRAFT

February 16, 2014

NOTICE TO PUBLIC

The South Central Texas Regional Water Planning Group (Region L), as established by the Texas Water Development Board in accordance with 31 TAC 357, is soliciting nominations to fill a vacancy as a voting member on the South Central Texas Regional Water Planning Group in the following interest area: Water Districts. The vacancy will be filled to complete a term expiring in 2016. Persons interested in Water District's interest area must be nominated by the governing board or chief executive officer of an entity within the respective interest area.

A nomination form must be completed and submitted for each nominee to be considered. For specific definitions and eligibility requirements in each of the areas of interest and to obtain a nomination form, please contact Erin Newberry, (210) 302-3293 or enewberry@sara-tx.org.

The South Central Texas Regional Water Planning Area consists of Atascosa, Bexar, Caldwell, Calhoun, Comal, DeWitt, Dimmit, Frio, Goliad, Gonzales, Guadalupe, Karnes, Kendall, La Salle, Medina, Refugio, Uvalde, Victoria, Wilson, Zavala and part of Hays Counties.

Nominations must be received by 5:00 pm, Friday, March 28, 2014 addressed to Con Mims, Chair, South Central Texas Regional Water Planning Group, c/o San Antonio River Authority, Attn: Erin Newberry, P.O. Box 839980, San Antonio, Texas 78283-9980, faxed to (210) 302-3692 or emailed to enewberry@sara-tx.org.

AGENDA ITEM 8

Texas Water Development Board (TWDB) Communications

AGENDA ITEM 9

Report, Discussion and Appropriate Action from Carrizo Aquifer Water Management Strategies Work Group – Greg Sengelmann, Chair

Carrizo Aquifer Workgroup Recommendation

SCTRWPG Meeting

February 6, 2014

Background & Workgroup Activities

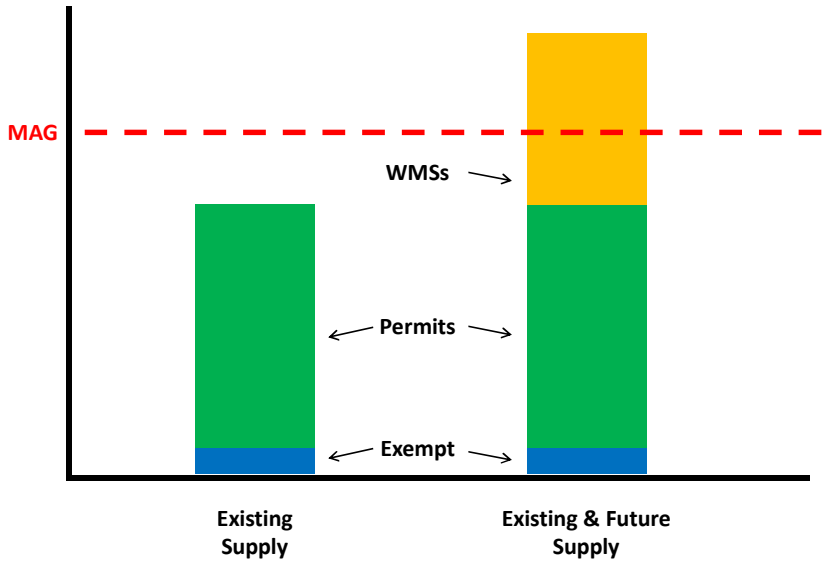
Background: TWDB rules and guidance necessitate resolution of issues with RWP presentation of:

a. Existing supplies (which affect Needs calculation)
b. Water Management Strategies

Workgroup Activities:

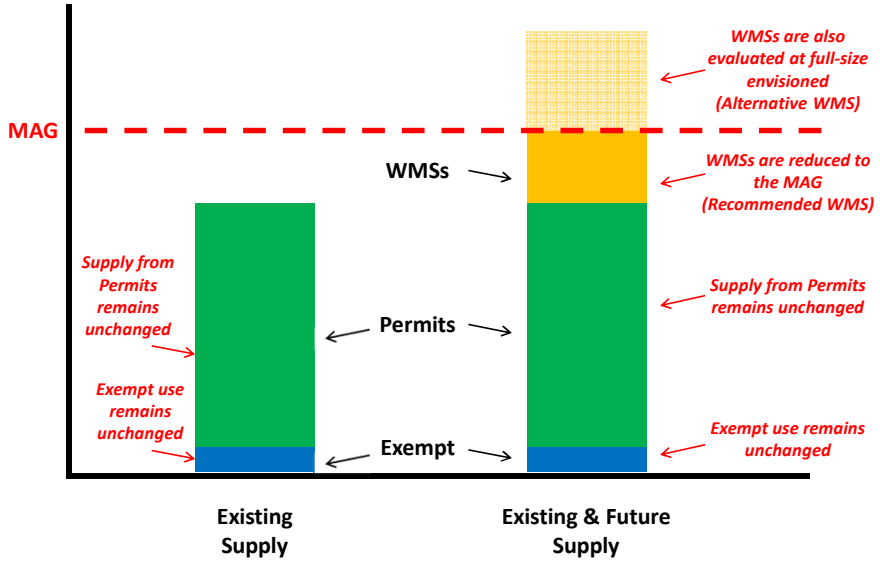
1. Establish procedures for compliance with TWDB rules and guidance in the Region L Plan
2. Develop explanatory language to protect the interests of all concerned
3. Workgroup recommendation to SCTRWPG

Example: Guadalupe County

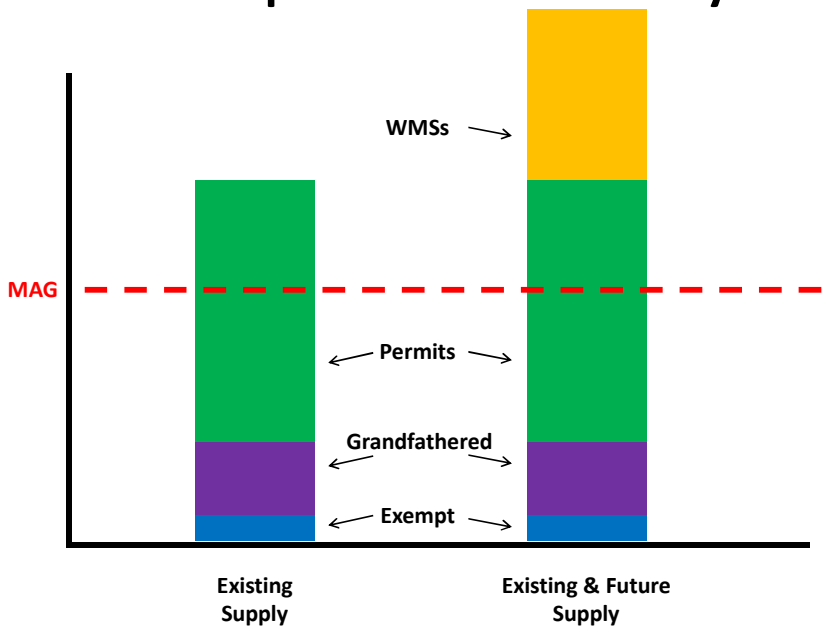


Example: Guadalupe County

Per TWDB Rules and Guidance

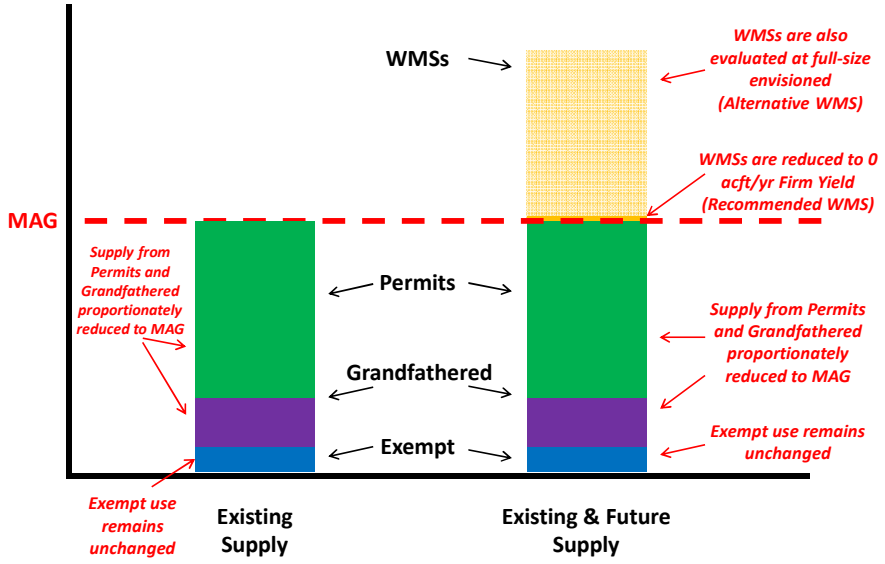


Example: Gonzales County



Example: Gonzales County

Per TWDB Rules and Guidance



Recommendation #1

When allocated groundwater exceeds the MAG in any decade, the Workgroup recommends that exempt use be maintained at the full estimated amount, while the permitted and grandfathered use amounts are reduced proportionately for planning purposes so that the total firm supply equals the

MAG.

Recommendation #2

Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater exceeds the MAG, show a firm supply of zero in the plan for the WMSs for planning purposes, but explain that groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD

rules.

Recommendation #3

Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater is less than the MAG, but allocated groundwater plus WMSs exceeds the MAG, show firm supplies of no more than the difference between allocated groundwater and the MAG in the plan for planning purposes, but explain that supplemental groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD rules.

Recommendation #4

For potentially feasible WMSs with firm supplies proportionately reduced or shown as zero for MAG compliance, evaluate facilities and costs for WMSs at both the reduced firm supply value associated with MAG compliance without transfers and at the supply amount that the sponsor seeks to develop.

Recommendation #5

For existing groundwater supplies that are fully permitted, or grandfathered, by a GCD and are proportionately reduced in quantity for planning purposes in this Plan for MAG compliance, include the following explanatory note in the regional water plan document and database at appropriate locations:

"For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the modeled available groundwater (MAG) for the aquifer. This has resulted, for planning purposes only, in adjustments to supply amounts in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs' discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount."

Recommendation #6

For potentially feasible WMSs that have GCD permits for a portion of the needed supply and the remainder is not yet permitted, include the following explanatory note in the regional water plan document and database at appropriate locations:

"For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the modeled available groundwater (MAG) for the aquifer. This has resulted, for planning purposes only, in adjustments to permit amounts, and a lack of firm water available for future permits in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments, or deny future permit applications. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount."

South Central Texas Regional Water Planning Group
Carrizo Aquifer Workgroup
Summary of Activities and Recommendations

1. Introduction

The Texas Water Development Board (TWDB) requires that planning groups use the approved Modeled Available Groundwater (MAG) values for regional and state water planning purposes. Hence, regional water planning groups cannot explicitly plan on existing supplies or future Water Management Strategies (WMSs) in excess of the approved MAGs for each region, county, and/or aquifer.

The South Central Texas Regional Water Planning Group (SCTRWPG) established a Carrizo Aquifer Workgroup with the following charge:

> *To study water management strategies shown on the WMS list provided by Technical Consultants at February 2013 meeting that use or propose to use the Carrizo Aquifer as a water source to identify and describe the interrelationships of each, noting, in particular, how the use of each strategy affects the use of the others and present a report at the May 2013 meeting.*
>
> *In addition the Workgroup was asked to "answer the MAG questions", i.e., to what extent may the Planning Group look at the MAG(s) for potential WMS' – how much has already been permitted, what remains for Carrizo Aquifer WMS' and how do we quantify against exempt uses?*

In following its charge, the workgroup evaluated the degrees to which current MAG values have been allocated to exempt, grandfathered, and permitted uses in order to assess groundwater available for recommended and/or alternative WMSs to be included in the 2016 regional water plan. Ultimately, the Workgroup is to provide recommendations to the SCTRWPG as to how the development of potentially feasible WMS including groundwater supplies can be reflected in the 2016 regional water plan while respecting the regulatory authority of groundwater conservation districts (GCDs), complying with TWDB guidance for regional water planning, and treating competing interests seeking to use limited groundwater supplies in an equitable manner.

The Carrizo Workgroup met four times (April 15, 2013, May 22, 2013, November 6, 2013, and November 25, 2013) to develop its recommendations and this document summarizes the results of these meetings and the recommendations of the Carrizo Aquifer Workgroup.

2. Data Acquisition

In order to accomplish its charge, the workgroup compiled available information about MAGs, exempt and grandfathered water uses, and production permits by aquifer, county, and groundwater conservation district. MAG values were acquired from the TWDB, as approved by the Groundwater Management Areas (GMAs).

HDR Engineering, Inc. (HDR) provided technical support in contacting groundwater conservation districts to acquire permitted, exempt, and grandfathered amounts (where applicable). The sum of permitted, exempt, and grandfathered uses is referenced herein as "allocated" groundwater. Several groundwater conservation

districts were able to promptly provide the information, while others required some time to gather the data. In some cases, groundwater conservation districts could not provide the requested data. Table 1 summarizes the permitted, grandfathered, and produced amounts for the Carrizo and Wilcox Aquifers, respectively. Note that the TWDB considers the Carrizo and Wilcox formations as one aquifer for planning purposes.

Existing permitting information was supplied by the Gonzales County UWCD, the Plum Creek CD, Guadalupe County GCD, Evergreen UWCD, and Medina County GCD. Gonzales County UWCD also provided information regarding grandfathered uses (as it appears they are the only groundwater conservation district to have this category in the region). Uvalde County UWCD stated that they would provide permitting information; however, none has been received to-date. The Wintergarden GCD stated that it did not have permit information in the Carrizo or Wilcox Aquifers. Bexar County does not have a groundwater conservation district, so the latest pumpage projection values are reported.

Table 1. Permitted, Grandfathered and Produced Amounts for the Carrizo-Wilcox Aquifer by County

Gonzales County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
SSLGC	19,362	Carrizo	Permitted	GCUWCD
SAWS	11,688	Carrizo	Permitted	GCUWCD
CRWA	7,400	Carrizo	Permitted	GCUWCD
TWA	13,846	Carrizo	Permitted	GCUWCD
Gonzales Co WSC	712	Carrizo	Permitted	GCUWCD
Smiley	730	Carrizo	Permitted	GCUWCD
Nixon	3,629	Carrizo	Permitted	GCUWCD
Irrigation	4,242	Carrizo	Permitted	GCUWCD
Gonzales	5,805	Carrizo	Grandfathered	GCUWCD
Gonzales Co WSC	2,800	Carrizo	Grandfathered	GCUWCD
Smiley	242	Carrizo	Grandfathered	GCUWCD
Warm Springs	403	Carrizo	Grandfathered	GCUWCD
Irrigation	73	Wilcox	Grandfathered	GCUWCD

Caldwell County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
HCPUA	10,300	Carrizo	Permitted	GCUWCD
TWA	1,154	Carrizo	Permitted	GCUWCD
Aqua WSC	5,000	Carrizo	Grandfathered	GCUWCD
NA	0	Carrizo	Permitted	PCCD
Irrigation	4,078	Wilcox	Grandfathered	GCUWCD
Lockhart	5,475	Wilcox	Permitted	PCCD
Polonia	3,895	Wilcox	Permitted	PCCD
Luling	1,612	Wilcox	Permitted	PCCD
Aqua WSC	625	Wilcox	Permitted	PCCD
Cal-Maine (Ind)	600	Wilcox	Permitted	PCCD
Irrigation	1,758	Wilcox	Permitted	PCCD

Atascosa County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	162,271	Carrizo	Permitted	Evergreen
Unspecified	1,425	Wilcox	Permitted	Evergreen

Frio County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	252,548	Carrizo	Permitted	Evergreen
Unspecified	3,963	Wilcox	Permitted	Evergreen

Karnes County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	140,105	Carrizo	Permitted	Evergreen
Unspecified	0	Wilcox	Permitted	Evergreen

Wilson County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	80,003	Carrizo	Permitted	Evergreen
Unspecified	1,673	Wilcox	Permitted	Evergreen

Guadalupe County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	6,389	Carrizo	Permitted	GCGCD
Unspecified	3,497	Wilcox	Permitted	GCGCD

Dimmit County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	N/A	Carrizo-Wilcox	Allocated	Wintergarden

La Salle County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	N/A	Carrizo-Wilcox	Allocated	Wintergarden

Zavala County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	N/A	Carrizo-Wilcox	Allocated	Wintergarden

Bexar County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	12,819	Carrizo	Produced*	N/A
N/A	0	Wilcox	N/A	N/A

Medina County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	994	Carrizo-Wilcox	Permitted	MCGCD

Uvalde County

Owner	Amount (acft/yr)	Aquifer	Type	GCD
Unspecified	N/A	Carrizo-Wilcox	Allocated	UCGCD

3. Comparison of MAGS and Allocated Groundwater

After evaluating the compiled information, the consensus of the workgroup is that it should be assumed that all allocated groundwater will eventually be used, thus full allocated amounts should be used for planning rather than projected pumpage amounts. If permitted water is not being used by a permit holder, then it can be assumed that someone else may purchase the permit or lease the rights to produce groundwater under the permit.

Exempt water use projections were obtained from the TWDB and are consistent with modeling performed by the TWDB during the GMA process, including calculation of the MAGs. No exempt use amount was available for Bexar County. The only groundwater district providing an alternative exempt use amount to the Workgroup was the Plum Creek CD. The Workgroup discussed whether alternative exempt use amounts provided by GCDs should be used, but ultimately decided to use those provided and approved by the TWDB. If a groundwater conservation district obtains TWDB approval of an alternative exempt use amount, it may be counted against the MAG in this or a future planning cycle.

The exempt water use projections, permitted, grandfathered, and production data (i.e. allocated groundwater) were then compared against the MAGs to identify where allocated groundwater exceeds the MAG (Table 2).

Table 2. MAGs, Exempt Use, and Allocations for the Carrizo-Wilcox Aquifer by County

Gonzales County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**62,316**	**70,317**	**75,791**	**75,970**	**75,970**	***75,970***
Exempt	1215	1025	890	850	863	*863*
SSLGC	19,362	19,362	19,362	19,362	19,362	*19,362*
SAWS	11,688	11,688	11,688	11,688	11,688	*11,688*
CRWA	7,400	7,400	7,400	7,400	7,400	*7,400*
TWA	3,846	13,846	13,846	13,846	13,846	*13,846*
Gonzales Co WSC	712	712	712	712	712	*712*
Smiley	730	730	730	730	730	*730*
Nixon	3,629	3,629	3,629	3,629	3,629	*3,629*
Irrigation	4,242	4,242	4,242	4,242	4,242	*4,242*
Gonzales	5,805	5,805	5,805	5,805	5,805	*5,805*
Gonzales Co WSC	2,800	2,800	2,800	2,800	2,800	*2,800*

Smiley	242	242	242	242	242	*242*
Warm Springs	403	403	403	403	403	*403*
Irrigation	73	73	73	73	73	*73*
Totals	**62,147**	**71,957**	**71,822**	**71,782**	**71,795**	***71,795***

Caldwell County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**44,607**	**44,199**	**44,199**	**43,622**	**43,622**	***43,622***
Exempt	164	148	135	123	112	*112*
HCPUA	2000	10300	10300	10300	10300	*10300*
TWA	1,154	1,154	1,154	1,154	1,154	*1,154*
Aqua WSC	5000	5000	5000	5000	5000	*5000*
NA	0	0	0	0	0	*0*
Irrigation	4,078	4,078	4,078	4,078	4,078	*4,078*
Lockhart	5,475	5,475	5,475	5,475	5,475	*5,475*
Polonia	3,895	3,895	3,895	3,895	3,895	*3,895*
Luling	1,612	1,612	1,612	1,612	1,612	*1,612*
Aqua WSC	625	625	625	625	625	*625*
Cal-Maine (Ind)	600	600	600	600	600	*600*
Irrigation	1,758	1,758	1,758	1,758	1,758	*1,758*
Totals	**26,361**	**34,645**	**34,632**	**34,620**	**34,609**	***34,609***

Atascosa County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**68,776**	**70,369**	**71,947**	**73,786**	**75,808**	***75,808***
Exempt	578	438	333	251	191	*191*
Unspecified	162,271	162,271	162,271	162,271	162,271	*162,271*
Unspecified	1,425	1,425	1,425	1,425	1,425	*1,425*
Totals	**164,274**	**164,134**	**164,029**	**163,947**	**163,887**	***163,887***

Frio County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**79,089**	**76,734**	**74,439**	**72,222**	**70,030**	***70,030***
Exempt	645	719	781	826	849	*849*
Unspecified	252,548	252,548	252,548	252,548	252,548	*252,548*
Unspecified	3,963	3,963	3,963	3,963	3,963	*3,963*
Totals	**257,155**	**257,229**	**257,291**	**257,336**	**257,359**	***257,359***

Karnes County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**1,117**	**1,182**	**1,231**	**1,259**	**1,280**	***1,280***
Exempt	4	4	5	5	5	*5*
Unspecified	140,105	140,105	140,105	140,105	140,105	*140,105*
Unspecified	0	0	0	0	0	*0*
Totals	**140,109**	**140,109**	**140,110**	**140,110**	**140,110**	***140,110***

Wilson County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**36,986**	**38,717**	**40,486**	**42,531**	**44,794**	***44,794***
Exempt	850	1,144	1,429	1,724	2,029	*2,029*
Unspecified	80,003	80,003	80,003	80,003	80,003	*80,003*
Unspecified	1,673	1,673	1,673	1,673	1,673	*1,673*
Totals	**82,526**	**82,820**	**83,105**	**83,400**	**83,705**	***83,705***

Guadalupe County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**10,833**	**11,283**	**13,021**	**13,541**	**14,041**	***14,041***
Exempt	264	198	127	73	17	*17*
Unspecified	6,389	6,389	6,389	6,389	6,389	*6,389*
Unspecified	3,497	3,497	3,497	3,497	3,497	*3,497*
Totals	**10,150**	**10,084**	**10,013**	**9,959**	**9,903**	***9,903***

Dimmit County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**3,359**	**3,359**	**3,359**	**3,359**	**3,359**	***3,359***
Exempt	509	527	529	519	493	*493*
Unspecified	2,850	2,832	2,830	2,840	2,866	*2,866*
Totals	**3,359**	**3,359**	**3,359**	**3,359**	**3,359**	***3,359***

La Salle County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**6,454**	**6,454**	**6,454**	**6,454**	**6,454**	***6,454***
Exempt	278	303	322	334	341	*341*
Unspecified	6,176	6,151	6,132	6,120	6,113	*6,113*
Totals	**6,454**	**6,454**	**6,454**	**6,454**	**6,454**	***6,454***

Zavala County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**35,859**	**35,521**	**35,388**	**35,288**	**34,969**	***34,969***
Exempt	696	780	864	931	961	*961*
Unspecified	35,163	34,741	34,524	34,357	34,008	*34,008*
Totals	**35,859**	**35,521**	**35,388**	**35,288**	**34,969**	***34,969***

Bexar County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**26,278**	**26,278**	**26,278**	**26,278**	**26,107**	***26,107***
Exempt	N/A	N/A	N/A	N/A	N/A	*N/A*
Unspecified	12,819	12,819	12,819	12,819	12,819	*12,819*
N/A	0	0	0	0	0	*0*
Totals	**12,819**	**12,819**	**12,819**	**12,819**	**12,819**	***12,819***

Medina County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**2,545**	**2,533**	**2,533**	**2,533**	**2,533**	***2,533***
Exempt	549	648	734	817	892	*892*
Unspecified	994	994	994	994	994	*994*
Totals	**1,543**	**1,642**	**1,728**	**1,811**	**1,886**	***1,886***

Uvalde County	YR 2020	YR 2030	YR 2040	YR 2050	YR 2060	*YR 2070*
MAG	**1,230**	**828**	**828**	**828**	**828**	***828***
Exempt	43	49	54	58	60	*60*
Unspecified	1,187	779	774	770	768	*768*
Totals	**1,230**	**828**	**828**	**828**	**828**	***828***

Considering the sums of permitted, grandfathered (where applicable), and exempt uses (i.e. allocated groundwater) in each county shows that there are four counties in which the combined Carrizo-Wilcox allocated amounts through the entire 2020 to 2070 planning cycle decades are greater than the MAG: Atascosa, Frio, Karnes, and Wilson Counties. In Gonzales County, the combined Carrizo-Wilcox allocated amounts are greater than the MAG in the 2030 decade only.

4. Key Questions Considered

For aquifers in counties in which allocated groundwater is less than the MAG, Region L may rely on the full permit amounts for existing uses and potentially feasible WMSs. Additionally, the MAG amount less the allocated groundwater amount can be available for WMSs to the extent they require new permits. However, for the counties in which allocated groundwater exceeds the MAG, the Workgroup addressed the four key questions below. Recommendations (i.e. responses to these questions) are summarized in Section 4.

1. How to address allocated groundwater use in excess of the MAG when determining existing supplies?
2. How to plan for potentially feasible WMSs where allocated groundwater exceeds the MAG?
3. How to plan for potentially feasible WMSs where allocated groundwater is less than the MAG, but allocated groundwater plus WMSs exceeds the MAG?
4. How to present the technical evaluations of potentially feasible WMSs with firm supplies proportionately reduced or shown as zero for MAG compliance?

5. Carrizo Aquifer Workgroup Recommendations

Following are the recommendations of the Carrizo Aquifer Workgroup for South Central Texas Regional Water Planning Group consideration:

1. When allocated groundwater exceeds the MAG in any decade, the Workgroup recommends that exempt use be maintained at the full estimated amount, while the permitted and grandfathered use amounts are reduced proportionately for planning purposes so that the total firm supply equals the MAG.

2. Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater exceeds the MAG, show a firm supply of zero in the plan for the WMSs for planning purposes, but explain that groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD rules.

3. Where potentially feasible WMSs are contemplated that require new permits and allocated groundwater is less than the MAG, but allocated groundwater plus WMSs exceeds the MAG, show firm supplies of no more than the difference between allocated groundwater and the MAG in the plan for planning purposes, but explain that supplemental groundwater for the WMSs may be obtained under existing permits through the Carrizo/Wilcox Transfers WMS or under new permits issued in accordance with GCD rules.

4. For potentially feasible WMSs with firm supplies proportionately reduced or shown as zero for MAG compliance, evaluate facilities and costs for WMSs at both the reduced firm supply value associated with MAG compliance without transfers <u>and</u> at the supply amount that the sponsor seeks to develop.

5. For existing groundwater supplies that are fully permitted, or grandfathered, by a GCD and are proportionately reduced in quantity for planning purposes in this Plan for MAG compliance, include the following explanatory note in the regional water plan document and database at appropriate locations:

> *For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the modeled available groundwater (MAG) for the aquifer. This has resulted, for planning purposes only, in adjustments to supply amounts in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs' discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount.*

6. For potentially feasible WMSs that have GCD permits for a portion of the needed supply and the remainder is not yet permitted, include the following explanatory note in the regional water plan document and database at appropriate locations:

> *For each aquifer in the region, the GCDs have adopted desired future conditions (DFCs). In some GCDs, full use of all groundwater supplies (permitted, grandfathered and exempt) may result in non-achievement of the DFCs for an aquifer. To ensure consistency with the DFCs, TWDB currently requires that groundwater availability for each aquifer be limited for planning purposes to the modeled available groundwater (MAG) for the aquifer. This has resulted, for planning purposes only, in adjustments to permit amounts, and a lack of firm water available for future permits in this plan for some areas for certain time periods. This should not be construed as recommending or requiring that GCDs make these adjustments, or deny future permit applications. SCTRWPG recognizes and supports the ability of permit holders to exercise their rights to groundwater use in accordance with their permits and it recognizes and supports the GCDs discretion to issue permits and grandfather historical users for amounts in excess of the MAG. SCTRWPG may not*

modify groundwater permits that GCDs have already issued or limit future permits that GCDs may issue. If the MAG is increased during or after this planning cycle, SCTRWPG may amend this Plan to adjust groundwater supply numbers that are affected by the new MAG amount.

Based on these recommendations, remaining water amounts available for potentially feasible WMSs in the combined Carrizo-Wilcox Aquifers for the 2016 Region L water plan are shown in Table 3.

Table 3. Supply for Regional Water Planning (based on MAG proration)

Gonzales County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**62,316**	**70,317**	**75,791**	**75,970**	**75,970**	***75,970***
Exempt	1215	1025	890	850	863	*863*
SSLGC	19,362	18,914	19,362	19,362	19,362	*19,362*
SAWS	11,688	11,418	11,688	11,688	11,688	*11,688*
CRWA	7,400	7,229	7,400	7,400	7,400	*7,400*
TWA	3,846	13,526	13,846	13,846	13,846	*13,846*
Gonzales Co WSC	712	696	712	712	712	*712*
Smiley	730	713	730	730	730	*730*
Nixon	3,629	3,545	3,629	3,629	3,629	*3,629*
Irrigation	4,242	4,144	4,242	4,242	4,242	*4,242*
Gonzales	5,805	5,671	5,805	5,805	5,805	*5,805*
Gonzales Co WSC	2,800	2,735	2,800	2,800	2,800	*2,800*
Smiley	242	236	242	242	242	*242*
Warm Springs	403	394	403	403	403	*403*
Irrigation	73	71	73	73	73	*73*
Totals	**62,147**	**70,317**	**71,822**	**71,782**	**71,795**	***71,795***
Remaining	***169***	***0***	***3,969***	***4,188***	***4,175***	***4,175***

Caldwell County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**44,607**	**44,199**	**44,199**	**43,622**	**43,622**	***43,622***
Exempt	164	148	135	123	112	*112*
HCPUA	2000	10300	10300	10300	10300	*10300*
TWA	1,154	1,154	1,154	1,154	1,154	*1,154*
Aqua WSC	5000	5000	5000	5000	5000	*5000*
NA	0	0	0	0	0	*0*
Irrigation	4,078	4,078	4,078	4,078	4,078	*4,078*
Lockhart	5,475	5,475	5,475	5,475	5,475	*5,475*
Polonia	3,895	3,895	3,895	3,895	3,895	*3,895*
Luling	1,612	1,612	1,612	1,612	1,612	*1,612*
Aqua WSC	625	625	625	625	625	*625*
Cal-Maine (Ind)	600	600	600	600	600	*600*
Irrigation	1,758	1,758	1,758	1,758	1,758	*1,758*
Totals	**26,361**	**34,645**	**34,632**	**34,620**	**34,609**	***34,609***
Remaining	***18,246***	***9,554***	***9,567***	***9,002***	***9,013***	***9,013***

Atascosa County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**68,776**	**70,369**	**71,947**	**73,786**	**75,808**	***75,808***
Exempt	578	438	333	251	191	*191*
Unspecified	67,604	69,322	70,991	72,895	74,959	*74,959*
Unspecified	594	609	623	640	658	*658*
Totals	**68,776**	**70,369**	**71,947**	**73,786**	**75,808**	***75,808***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***
Frio County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**79,089**	**76,734**	**74,439**	**72,222**	**70,030**	***70,030***
Exempt	645	719	781	826	849	*849*
Unspecified	77,232	74,841	72,520	70,293	68,112	*68,112*
Unspecified	1,212	1,174	1,138	1,103	1,069	*1,069*
Totals	**79,089**	**76,734**	**74,439**	**72,222**	**70,030**	***70,030***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

Karnes County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**1,117**	**1,182**	**1,231**	**1,259**	**1,280**	***1,280***
Exempt	4	4	5	5	5	*5*
Unspecified	1,113	1,178	1,226	1,254	1,275	*1,275*
Unspecified	0	0	0	0	0	*0*
Totals	**1,117**	**1,182**	**1,231**	**1,259**	**1,280**	***1,280***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

Wilson County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**36,986**	**38,717**	**40,486**	**42,531**	**44,794**	***44,794***
Exempt	850	1,144	1,429	1,724	2,029	*2,029*
Unspecified	35,396	36,803	38,257	39,971	41,889	*41,889*
Unspecified	740	770	800	836	876	*876*
Totals	**36,986**	**38,717**	**40,486**	**42,531**	**44,794**	***44,794***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

Guadalupe County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**10,833**	**11,283**	**13,021**	**13,541**	**14,041**	***14,041***
Exempt	264	198	127	73	17	*17*
Unspecified	6,389	6,389	6,389	6,389	6,389	*6,389*
Unspecified	3,497	3,497	3,497	3,497	3,497	*3,497*
Totals	**10,150**	**10,084**	**10,013**	**9,959**	**9,903**	***9,903***
Remaining	***683***	***1,199***	***3,008***	***3,582***	***4,138***	***4,138***

Dimmit County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**3,359**	**3,359**	**3,359**	**3,359**	**3,359**	***3,359***
Exempt	509	527	529	519	493	*493*
Unspecified	2,850	2,832	2,830	2,840	2,866	*2,866*
Totals	**3,359**	**3,359**	**3,359**	**3,359**	**3,359**	***3,359***

Remaining	***0***	***0***	***0***	***0***	***0***	***0***

La Salle County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**6,454**	**6,454**	**6,454**	**6,454**	**6,454**	***6,454***
Exempt	278	303	322	334	341	*341*
Unspecified	6,176	6,151	6,132	6,120	6,113	*6,113*
Totals	**6,454**	**6,454**	**6,454**	**6,454**	**6,454**	***6,454***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

Zavala County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**35,859**	**35,521**	**35,388**	**35,288**	**34,969**	***34,969***
Exempt	696	780	864	931	961	*961*
Unspecified	35,163	34,741	34,524	34,357	34,008	*34,008*
Totals	**35,859**	**35,521**	**35,388**	**35,288**	**34,969**	***34,969***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

Bexar County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**26,278**	**26,278**	**26,278**	**26,278**	**26,107**	***26,107***
Exempt	N/A	N/A	N/A	N/A	N/A	*N/A*
Unspecified	12,819	12,819	12,819	12,819	12,819	*12,819*
N/A	0	0	0	0	0	*0*
Totals	**12,819**	**12,819**	**12,819**	**12,819**	**12,819**	***12,819***
Remaining	***13,459***	***13,459***	***13,459***	***13,459***	***13,288***	***13,288***

Medina County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**2,545**	**2,533**	**2,533**	**2,533**	**2,533**	***2,533***
Exempt	549	648	734	817	892	*892*
Unspecified	994	994	994	994	994	*994*
Totals	**1,543**	**1,642**	**1,728**	**1,811**	**1,886**	***1,886***
Remaining	***1,002***	***891***	***805***	***722***	***647***	***647***

Uvalde County	**YR 2020**	**YR 2030**	**YR 2040**	**YR 2050**	**YR 2060**	***YR 2070***
MAG	**1,230**	**828**	**828**	**828**	**828**	***828***
Exempt	43	49	54	58	60	*60*
Unspecified	1,187	779	774	770	768	*768*
Totals	**1,230**	**828**	**828**	**828**	**828**	***828***
Remaining	***0***	***0***	***0***	***0***	***0***	***0***

While Region L considers the MAGs on a county by county basis, GCDs manage groundwater resources by aquifer. Aquifers are not separated by county boundaries and the effects of pumpage from an aquifer extend across county lines. In addition, GCDs in GMA13 manage the Carrizo and Wilcox Aquifers separately and do not consider the aquifers connected. However, for the purposes of this plan, the MAGs for the Carrizo Aquifer and Wilcox Aquifer are combined into a single available groundwater amount. This should not be construed

as recommending or requiring that GMA 13 modify the DFCs, or that the GCDs modify their rules and management plans, to treat the Carrizo Aquifer and Wilcox Aquifer as a singular formation. Although some counties show permitted and exempt use as less than the MAG, this does not necessarily mean that water will be available for permitting.

Water *for* Texas

The Role of Modeled Available Groundwater in Regional Water Planning

What is Modeled Available Groundwater?

Groundwater is regulated locally by groundwater conservation districts except in locations that do not have a district. Districts may issue permits that regulate pumping of groundwater and spacing of wells within their jurisdictions. Multiple districts within a single groundwater management area determine the desired future conditions of relevant aquifers within that area. (Desired future conditions are the desired, quantified conditions of groundwater resources, such as water levels, water quality, spring flows, or volumes, at a specified time or times in the future or in perpetuity.) TWDB staff then translate those desired future conditions into modeled available groundwater values using the groundwater availability models (or other approaches if a groundwater availability model is not applicable). A modeled available groundwater value is the amount of groundwater production, on an average annual basis, that will achieve a desired future condition. The desired future condition in a specific location may not be achieved if pumping quanitities exceed the modeled available groundwater volume over a long term.

How Are Modeled Available Groundwater Volumes Used in the Regional Water Plans?

Regional water plans consider the volume of groundwater that is anticipated to be actually pumped during a drought in any planning decade. Texas Water Code requires that regional water plans be "consistent with the desired future conditions…" (Texas Water Code Section 16.053(e)(2-a)). Water planning rules require that regional water planning groups "shall use Modeled Available Groundwater volumes for groundwater availability" unless there is no modeled available groundwater volume (Title 31 Texas Administrative Code Section 357.32(d)).

Regional water planning requirements do mean that:

- the regional water planning process focuses on anticipated pumping volumes in each planning decade rather than on permit volumes;
- the total anticipated pumping volume in any planning decade may not exceed the modeled available groundwater volume in any county-aquifer location (total pumping volume includes the quantities both from existing water supplies and from any recommended water management strategies);
- planning groups may not recommend water management strategy supply volumes that result in exceeding (e.g., "overdrafting") the modeled available groundwater volumes; and
- in the absence of specific information about how groundwater will be managed to meet desired future conditions in a particular location, planning groups may have to develop their own planning basis for allocating the modeled available groundwater volume to complete their regional water plans. The allocation of groundwater may impact the identified water needs and/or the strategy options available to meet needs.

Regional water planning requirements do not mean that:

- planning groups may modify groundwater permits that districts have already issued or limit future permits that districts may issue;

Texas Water Development Board

- districts must consider whether a project is in an adopted regional water plan when determining whether to issue a groundwater permit; or
- planning groups may modify the desired future conditions (or modeled available groundwater volume) within their planning area through the regional water planning process.

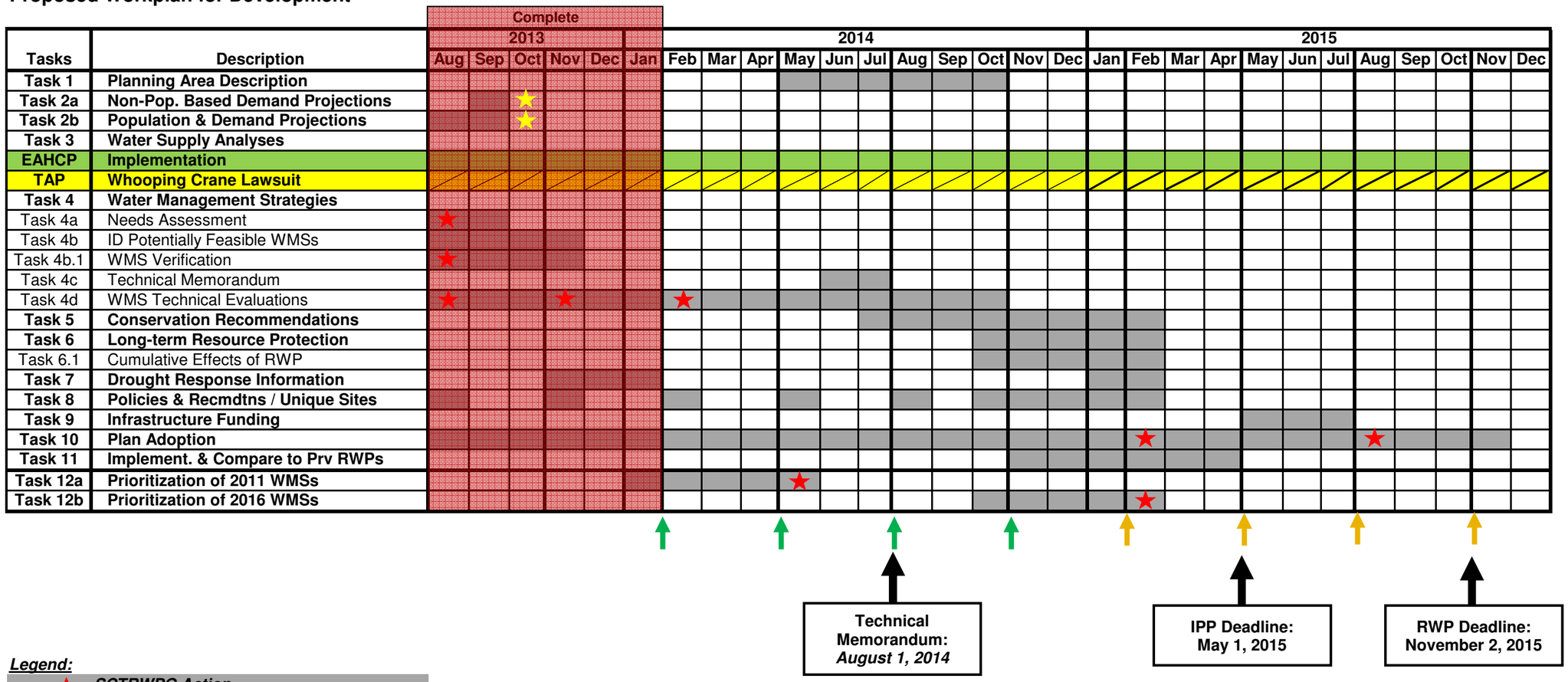
Only districts in groundwater management areas can modify desired future conditions.

AGENDA ITEM 10

Discussion and Appropriate Action Regarding Consultants Work and Schedule

2016 South Central Texas Regional Water Plan

Proposed Workplan for Development



Legend:

- ***SCTRWPG Action***
- ***TWDB Action***
- ***Scheduled SCTRWPG Meeting***
- ***Probable SCTRWPG Meeting***

HDR

DRAFT
2014-01-29

Potential Issues For The 2016 SCTRWP

February 6, 2014

1) Carrizo Aquifer Workgroup (Status: Recommendation for RWPG)
   a) Multiple Potentially Feasible Projects Exceed MAG
   b) TWDB will not allow for over-allocation in the 2016 RWP

2) Importing Groundwater from Other Regions (Status: No Action Thus Far)

3) Meeting Needs of Formosa (Status: Con Mims has discussed with LNRA)
   a) Coordination with Regions P and N

4) Implementation of TCEQ Estuary Environmental Flow Standards (Status: No documentation from TCEQ; Proceed based on comments with TCEQ)

5) Population and/or Water Demand Projections Revisions (Status: Finished)

6) Eagle-Ford Shale Demands – Direct, Indirect, and Induced (Status: Finished)

7) Whooping Crane Litigation (Status: District Court Decision Stayed Pending Appeal; Oral Arguments heard in August / Awaiting Ruling from Appellate Court)

8) Meeting Steam-Electric Needs in Victoria County (Status: No Action Thus Far)

9) Inter-Regional Coordination (e.g. SAWS Competitive Sealed Proposals) (Status: Interviews on 10/18; Staff Recommendation to Board in March 2014)

10) Legislation (Status: Legislative Session Ended; Responding to legislation adopted in 2013; New Session begins January 2015)

AGENDA ITEM 11

Discussion and Appropriate Action Regarding Evaluation of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Submittal to TWDB and Inclusion into Planning Contract, TWDB Contract No. 1148301323

TASK 4D
WATER MANAGEMENT STRATEGIES
Scope and Budget #4

Perform Technical Evaluations including Cost Estimates

Perform technical evaluations, including cost estimates and documentation, of the following water management strategies (WMS) to be consistent with current projections of water supply needs and facilities planning pursuant to TWDB rules and guidance. Work effort involves coordination with sponsoring water user group(s), wholesale water provider(s), and/or other resource agencies regarding projected needs, planned facilities, costs of water supply, endangered or threatened species, etc. Work effort includes cost estimates and supporting documentation to reflect the September 2013 cost basis for the 2016 regional water plans pursuant to TWDB guidance.

Carrizo Transfers $3,500

Acquire readily available information regarding permits by use type in the Carrizo Aquifer for source counties. Develop technical evaluation, including estimated cost of project and documentation. Budget does not include assessment of regional economic effects of Carrizo Transfers.

Brush Management $10,600

Incorporate results of Texas State Soil and Water Conservation Board study on Brush Management over the Carrizo Outcrop affecting recharge to the Carrizo Aquifer MAG in Gonzales County. Develop technical evaluation, including estimated cost of project and documentation. Technical evaluation may include updates of the modeling and costs associated with Brush Management above Canyon Reservoir.

Direct Recycled Water Management Strategy – Amendment $2,500

Incorporate specific subsections in the Direct Recycled Water Management Strategy to describe direct (i.e. “flange-to-flange”) recycled water plans for New Braunfels Utilities, City of San Marcos, and City of Kyle.

Hays County-Forestar Water $11,500

Coordinate with the Hays County Commissioners and representatives from Forestar in order to be consistent with their latest plans regarding this WMS with technical focus on available information regarding pipeline route, transmission capacity, and source water availability. Estimate cost of project and document in the technical evaluation. Budget for technical evaluation does not include groundwater simulations.

Regional Water Supply Project – RFCSP (SAWS) $9,300

Coordinate with the San Antonio Water System (SAWS) in order to be consistent with their Water Supply Plan regarding this WMS with technical focus on available information regarding pipeline route, transmission capacity, and source water availability. Estimate cost of project and document in the technical evaluation. Budget for technical evaluation does not include groundwater simulations.

Regional Brackish Wilcox Project – Alternative WMS (SAWS) $7,800

Coordinate with the San Antonio Water System (SAWS) in order to be consistent with their Water Supply Plan regarding this WMS with technical focus on available information regarding treatment, pipeline route, transmission capacity, and source water quality and availability. Estimate cost of project and document in the technical evaluation. Budget for technical evaluation does not include groundwater simulations.

Carrizo/Buda/Austin Chalk/Leona & Regional ASR (City of Uvalde) $9,500

Coordinate with the City of Uvalde and their consultant(s) in order to be consistent with the available studies regarding this WMS with technical focus on available information regarding treatment, pipeline route, transmission capacity, and source water quality and availability. Develop basic ASR mass balance accounting model. Estimate cost of project and document in the technical evaluation. Budget for technical evaluation does not include groundwater simulations.

Total = $54,700
Previously Authorized (May, Aug, & Nov 2013) = $375,150
Grand Total = $429,850

Total Task 4D Budget = $509,904
Budget Left To Be Allocated = $80,054

Previously Authorized	**Amount**
Edwards Aquifer Habitat Conservation Plan (EA HCP)	$5,800
Water Conservation	$8,950
Drought Management	$8,950
Recycled Water Program Expansion	$4,200
Local Groundwater	$19,900
Surface Water Rights	$4,100
Facilities Expansions	$4,700
Balancing Storage (ASR and/or Surface)	$4,100
Wells Ranch – Phase 2 (CRWA and Others)	$12,200
Brackish Wilcox for CRWA (Formerly Brackish Wilcox for the RWA)	$12,200
Hays/Caldwell PUA – Phases 1 & 2 (San Marcos, Buda, Kyle, CRWA)	$21,600
CRWA Siesta Project (CRWA)	$14,500
Brackish Wilcox for SAWS	$17,400
Expanded Local Carrizo – Bexar County (SAWS)	$14,000
Brackish-Wilcox, Gonzales County (SSLGC)	$13,250
Texas Water Alliance Carrizo Well Field, Gonzales County (TWA)	$18,100
Carrizo-Wilcox Aquifer, Wilson County (Cibolo Valley Local Government Corporation)	$18,600
GBRA Mid-Basin Project and Alternatives (GBRA)	$10,900
GBRA Lower Basin Off-Channel Reservoir (GBRA)	$18,900
GBRA Lower Basin New Appropriation (GBRA)	$19,100
Water Resources Integration Pipeline (SAWS)	$5,400
Advanced Meter Infrastructure (SAWS)	$3,000
Integrated Water-Power Project (GBRA)	$11,400
Luling ASR (GBRA)	$13,500
New Braunfels ASR Project (NBU)	$12,200
New Braunfels Trinity Well Field (NBU)	$10,000
TWA Trinity Well Field/Western Comal Project/Upper Cibolo Valley Project	$10,000
Edwards Transfers	$14,400
Purchase from WWP	$15,000
Expansion Carrizo-Wilcox Aquifer, Guadalupe Co (SSLGC)	$10,900
Lavaca River Off-Channel Reservoir	$7,900
Brackish Wilcox Groundwater for SS WSC	$10,000

AGENDA ITEM 12

Discussion and Appropriate Action Regarding Authorizing Political Subdivision to Submit Request for Notice-to-Proceed for Evaluation of Seven Water Management Strategies and Authorize Administrator to Execute Contract Amendment with TWDB

AGENDA ITEM 13

Discussion and Appropriate Action Regarding Identification of Potentially Feasible Water Management Strategies (Task 4B), Draft Scopes of Work and Budgets for Consideration at the Next South Central Texas Regional Water Planning Group Meeting

January 22, 2014

Via e-mail only to:
Mr. Con Mims
Chair, Region L Water Planning Group
c/o San Antonio River Authority
100 E. Guenther Street
San Antonio, TX 78283

Re: Consideration of a New Joint HCPUA-TWA Water Management Strategy

Dear Mr. Mims:

The Hays Caldwell Public Utility Agency (HCPUA) and Texas Water Alliance (TWA) respectfully request the addition of a new Water Management Strategy (WMS) to the 2016 South Central Texas Regional Water Plan. The WMS would combine the HCPUA and TWA groundwater well fields in Caldwell and Gonzales County into a single water supply. Attached is a conceptual map of the primary infrastructure associated with the project.

Please note that this new joint project would be in addition to the individual strategies already being considered for the HCPUA and TWA projects. We understand that the funding for analyzing strategies may be fully allocated. Please inform us of any additional funds required to analyze this new WMS.

Should you have any questions, please do not hesitate to contact Graham at (512) 294-3214 or at gmmoore@trcsolutions.com or Mark at (408) 621-9031 at Mark_Janay@sjwater.com.

Sincerely,

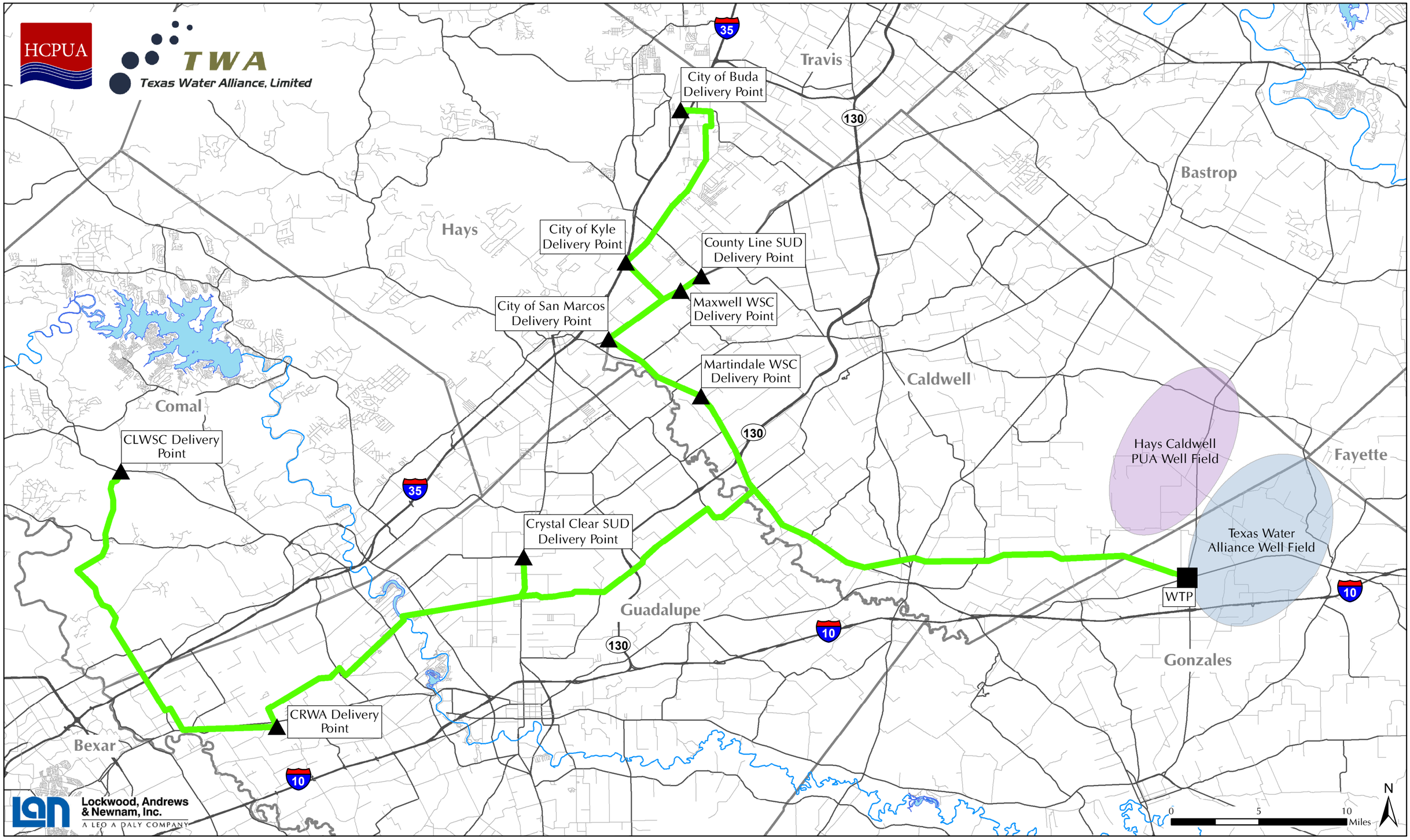
Graham Moore
Agency Manager, HCPUA

Mark Janay
President, Texas Water Alliance

cc: Erin Newberry – San Antonio River Authority
Sam Vaugh, PE – HDR
Brian Perkins, PE - HDR

HCPUA-TWA Joint Project Map

1/21/2014



AGENDA ITEM 14

Discussion and Appropriate Action Regarding Evaluation of Water Management Strategies (Task 4D)

2016 South Central Texas Regional Water Plan

Edwards Aquifer Habitat Conservation Plan Water Management Strategy

South Central Texas Regional Water Planning Group

February 6, 2014

Recommendation of the EAHCP Implementing Committee

In the 2016 South Central Texas Regional Water Plan, the EAHCP should be considered:

- ✓ **A Water Management Strategy**
- ✓ **The Basis for Springflows Used in Evaluating Existing Supplies and Water Management Strategies**

→ **Water Management Strategy in Implementation**

DRAFT (1/21/2014)

2

Recommendation of the Region L EAHCP Workgroup Approved by Region L on 3/14/2013

The Edwards Aquifer Habitat Conservation Plan (EAHCP) Workgroup recommends that the South Central Texas Regional Water Planning Group include the EAHCP as a recommended Water Management Strategy in the 2016 South Central Texas Regional Water Plan and use the spring flows associated with EAHCP implementation[1] as an hydrologic modeling assumption for computation of existing surface water supplies and technical evaluation of water management strategies. The EAHCP Workgroup further recommends that existing water supplies from the Edwards Aquifer in the 2016 South Central Texas Regional Water Plan be those associated with EAHCP implementation and in specific amounts to be determined in consultation with the Edwards Aquifer Authority.

[1] RECON Environmental, Inc., Hicks & Company, Zara Environmental LLC, & BIO-WEST, "Edwards Aquifer Recovery Implementation Program Habitat Conservation Plan, Appendix K," Edwards Aquifer Recovery Implementation Program, November 2012.

DRAFT (1/21/2014)

3

EAHCP Water Supply Components

Layer 4	Emergency CPM Stage V Reductions
Layer 3	Use of SAWS ASR with Pumping Off-Set
Layer 2	Conservation Measures
Layer 1	Voluntary Irrigation Suspension Program Option (VISPO)

DRAFT (1/21/2014)

4

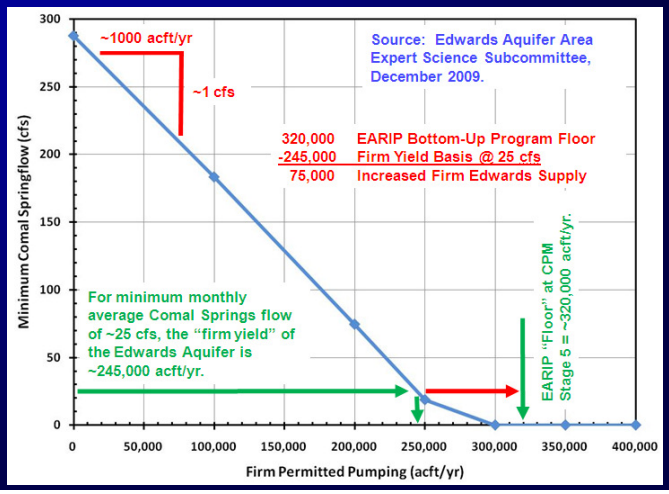
EAHCP Components Affecting Water Supply

1) Voluntary Irrigation Suspension Program Option - 40,000 acft/yr
2) Conservation Measures – 10,000 acft/yr reduction in Edwards pumping for municipal uses
3) SAWS ASR – 50,000 acft/yr in new Edwards leases and pumping offsets with stored water
4) Critical Period Stage V – 44% reduction in permitted Edwards pumping
   a) Potentially allowable Edwards pumping reduced to 320,000 acft/yr
   b) 27,400 acft/yr reduction below Stage IV

DRAFT (1/21/2014)

5

EAHCP Water Supply



Water Rights Holder Benefits by Category (Based on Minimum Year)

	Municipal (acft/yr)	Industrial / Steam-Electric (acft/yr)	Irrigation (acft/yr)	Other (acft/yr)	Hydroelectric (acft/yr)
Surface Water Supplies	+2,677	+15,608	+3,142	+105	Varies *
Groundwater Supplies **	+45,828	+6,047	+23,125	N/A	N/A

DRAFT (1/21/2014)

6

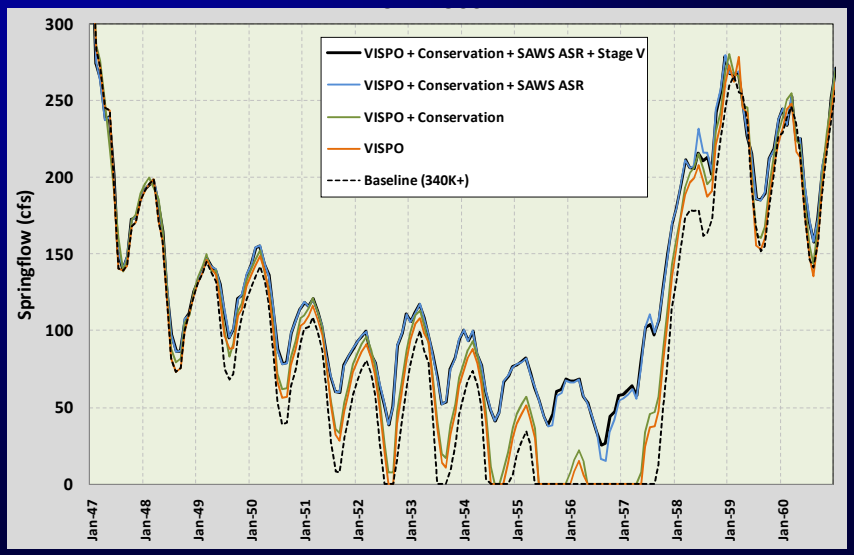
EAHCP WMS Implementation Costs

- Based on Table 7.1 in the Edwards Aquifer Habitat Conservation Plan, annual implementation costs are expected to average $17,460,530/year.
- Based on an increase of about 51,875 acft/yr in firm Edwards municipal and industrial supplies, the unit cost of the EAHCP WMS may be estimated at $337/acft/yr.

DRAFT (1/21/2014)

7

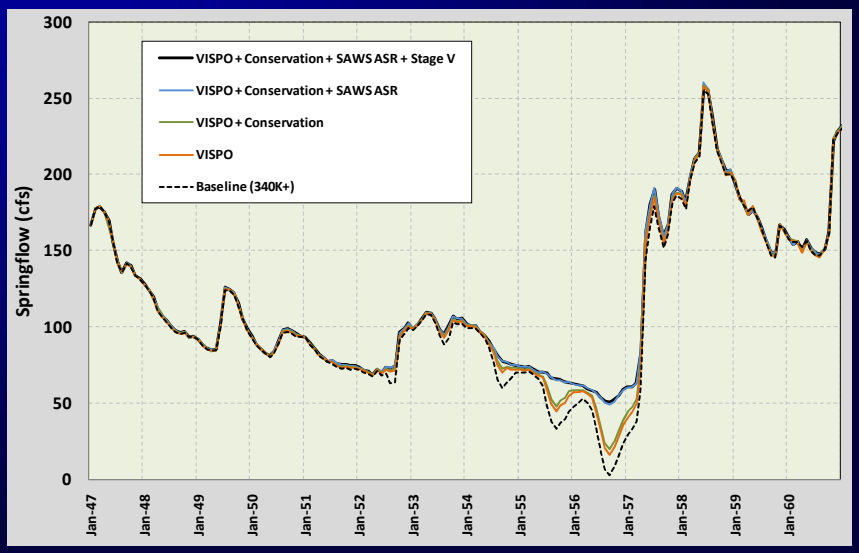
Comal Springs in Drought of Record



DRAFT (1/21/2014)

8

San Marcos Springs in Drought of Record



DRAFT (1/21/2014)

9

2016 South Central Texas Regional Water Plan

Edwards Transfers
Water Management Strategy

South Central Texas
Regional Water Planning Group

February 6, 2014

Edwards Transfers & Remaining Potential

Row	Description	Units = kacft/yr	Mun.	Ind.	Irr.	Total
1	EAA Initial Regular Permits		239.2	72.6	262.4	574.2
2	Unrestricted Transfer Potential		239.2	72.6	131.2	443.0
3	EAA Current Regular Permits w/o EAHCP Transfers		359.3	37.3	175.0	571.6
4	Apparent Non-EAHCP Transfers		120.1	-35.3	-87.4	-2.6
5	EAHCP ASR Leases To-Date				4.7	
6	Planned Future EAHCP ASR Leases				45.3	
7	Remaining Unrestricted Transfer Potential				-6.2	

1) As of March 2013, permits totaling approximately 120 kacft/yr have been transferred from irrigation and industrial to municipal uses.
2) EAHCP VISPO leases are generally associated with base (restricted) irrigation permits while EAHCP ASR leases are associated with unrestricted irrigation permits.
3) Given existing non-EAHCP irrigation transfers and EAHCP ASR leases (current & planned), there is effectively no remaining unrestricted irrigation transfer potential.

DRAFT (1/30/2014)

WUGs w/ Planned Edwards Transfers

1) The following Water User Groups (WUGs) are seeking Edwards Transfers as a recommended water management strategy (WMS) to meet their projected needs for additional water supply:
   a) Uvalde Co. (2.6 kacft/yr @ 2070) – Sabinal & Uvalde
   b) Medina Co. (2.1 kacft/yr @ 2070) – Castroville, East Medina SUD, Hondo, La Coste, Natalia, Yancey WSC, & County Other
   c) Bexar Co. (12.9 kacft/yr @ 2070) – Alamo Heights, Atascosa Rural WSC, Converse, Kirby, Leon Valley, SAWS, Shavano Park, & Windcrest
   d) Atascosa Co. (0.6 kacft/yr @ 2070) – Lytle
2) Total firm supply sought through Edwards Transfers is 18.2 kacft/yr. The estimated regular permit equivalent (prior to 40-44% critical period reductions) is 30.9 kacft/yr.
3) A significant portion of the planned Edwards Transfers for these WUGs will likely come from Edwards municipal users that are developing, or have surplus, non-Edwards supplies and are willing to lease some of their Edwards supplies.

DRAFT (1/30/2014)

3

Costs for Planned Edwards Transfers

1) In the 2011 Region L plan, costs for Edwards Transfers ($454/acft/yr) were based on then current market experience for regular permit leases ($128/acft/yr) increased by adjustments for critical period reductions ($100/acft/yr) and integration costs for facility upgrades ($226/acft/yr).
2) In the 2016 Region L plan, it is proposed that costs for Edwards Transfers be estimated as the average unit cost of firm, non-Edwards WMSs recommended for SAWS, New Braunfels, and San Marcos ($acft/yr to be determined), plus integration costs for facility upgrades ($226/acft/yr).

DRAFT (1/30/2014)

4

Municipal Water Conservation

Objective: reduce the per capita water use without adversely affecting quality of life

- Use of low flow plumbing fixtures (Plumbing Retrofits)
- More efficient water-using appliances (Passive Clothes Washers)
- Modifying and/or installing less water intensive landscaping (Landscape Design)
- Repair of plumbing and water-using appliances to reduce leaks (Water Audits)
- Modification of personal behavior (Education / Water Conservation Pricing)

Draft 1/29/2014

2016 RWP Goals

- For municipal WUGs with water use of 140 gpcd or more, reduce per capita water use by 1%/yr until the level of 140 gpcd is reached, then by 0.25%/yr.
- For municipal WUGs with use of <140 gpcd, reduce per capita water use by 0.25%/yr.

Draft 1/29/2014

Statistics

Per Capita Water Use in 2011 (gpcd)	Number of WUGs	Percent of WUGs	Population		Water Use	
			2011	Percent of Total	2011 (acft)	Percent of Total
Less than 140	66	47.1%	660,166	26.1%	85,475	20.36%
140 and Greater	74	52.9%	1,866,460	73.9%	334,239	79.6%
Totals	140	100.0%	2,526,626	100.0%	419,714	100.0%

Total Use Reduction Needed to Meet Goals (acft-yr)

2020	2030	2040	2050	2060	2070
6,701	13,952	18,840	27,935	43,923	58,853

Draft 1/29/2014

Costs

Reductions Include:

- Plumbing Fixtures
- Clothes Washers Retrofit
- Lawn Irrigation Conservation

	2020	2030	2040	2050	2060	2070
Implementation Cost	$4,832,482	$9,861,858	$13,224,600	$19,112,293	$29,112,536	$38,529,032
Reduction (acft/yr)	6,701	13,952	18,840	27,935	43,923	58,853
Unit Cost ($/acft)	$721	$707	$702	$684	$662	$655

Draft 1/29/2014

Advanced Meter Infrastructure (SAWS)

Itron 100W Communication Module with Leak Sensor

Draft 1/29/2014

Advanced Meter Infrastructure (SAWS)

- Install an AMI fixed network system
- Update meters and include Leak Sensors
- Provides more frequent and precise use information
- Vibration recordings identify leaks in the system

More precise meter information ensures that all water use is appearing on billing statements

Draft 1/29/2014

Advanced Meter Infrastructure (SAWS) – Potential Revenue Gain

- Improved reporting will lead to additional revenue
- Study shows 304 gallon/month increase
- Estimate of $20.06 annually/customer
- Intended for 500,000 customers, 100,000 a yr for 5 years

Year	Active Meters	Yearly Revenue Gain
2016	100,000	$ 2,006,000
2017	200,000	$ 4,012,000
2018	300,000	$ 6,018,000
2019	400,000	$ 8,024,000
2020	500,000	**$ 10,030,000**

Draft 1/29/2014

Advanced Meter Infrastructure (SAWS) – Costs

Item	Unit Cost	Units	Total cost
AMI Meter/Support	$ 201	500,000	$ 100,500,000
Leak Network	$ 4,723,636	1	$ 4,723,636
Leak Software	$ 1,458,750	1	$ 1,458,750
Leak Equipment	N/A	N/A	$ 16,000,000
		Total Cost:	**$ 122,682,386**

→ **$10,266,000/yr**

O&M = $1,227,000/yr

$11,493,000/yr

- $10,030,000/yr

Net Cost = $1,463,000/yr

Saved Water (Leaks) = 5,598 acft/yr

"Net" Unit Cost = $216/acft/yr

Draft 1/29/2014

Direct Recycled Water Programs

- Supply and Availability:
  - For Non-Potable Uses Only
    - Irrigation of Parks and Golf Courses
    - Industrial Cooling and Processes
  - Limited by WWTP Production (Typically 50-65% of Total Demand)
  - Limited by Customers Within Economical Distance from WWTPs

- Potential WUGs Identified in 2016 SCTRWP:
  - City of San Marcos
  - City of New Braunfels
  - City of Kyle
  - Others (TBD)

DRAFT (1-29-2014)

1

Direct Recycled Water Programs

- Type 1 – Public or food crops generally **can** come in contact with reuse water.
- Type 2 – Public or food crops **cannot** come in contact with reuse water.

Scenario #	*Treatment*	*Distribution*
1	Existing WWTP **is achieving treatment that meets the Type 1 effluent requirements**. Treatment upgrade includes only the addition of chlorine for distribution.	Treated wastewater is supplied to demand location(s) from central WWTP by addition of piping and pump station.
2	Existing WWTP **is nearly achieving treatment that meets the Type 1 effluent requirements**. Treatment upgrade includes tertiary treatment and chlorine.	Treated wastewater is supplied to demand location(s) from central WWTP by addition of piping and pump station.

DRAFT (1-29-2014)

2

Direct Recycled Water Programs

- Potential Environmental Issues

Implementation Measures	Development of additional wastewater treatment plant facilities, distribution pipelines, and pump stations.
Environmental Water Needs / Instream Flows	Potential low impacts on instream flows due to decreased effluent/return flows; possible increased water quality.
Bays and Estuaries	Potential low negative impact due to reduced freshwater inflow and nutrient loading.
Localized Fish and Wildlife Habitat	Variable impacts depending on changes in volume of effluent return flows; in the case of substantially reduced stream flows, potential high negative impact to fish and wildlife habitat.
Cultural Resources	None anticipated.
Threatened and Endangered Species	None anticipated with recommended WMSs.

DRAFT (1-29-2014)

3

Direct Recycled Water Programs

- Facilities:
  - Potential Upgrades to existing WWTPs
  - Dedicated Recycle Distribution System
    - Pump Stations
    - Transmission Pipelines (Purple Pipe)
    - Storage Tanks
  - Distribution Systems May Need to be Sized for Peak Demands for Short Durations (Irrigation)
- Cost:

Short-Term (Debt Service Period)*

	Capacity (MGD)			
Scenario	***0.5***	***1***	***5***	***10***
1	$1,047	$770	$564	$502
2	$2,144	$1,440	$775	$631

** Cost in $/acft/yr*

Long-Term (Beyond Debt Service Period)*

	Maximum Capacity (MGD)			
Scenario	***0.5***	***1***	***5***	***10***
1	$191	$163	$110	$96
2	$837	$545	$230	$167

** Cost in $/acft/yr*

DRAFT (1-29-2014)

4

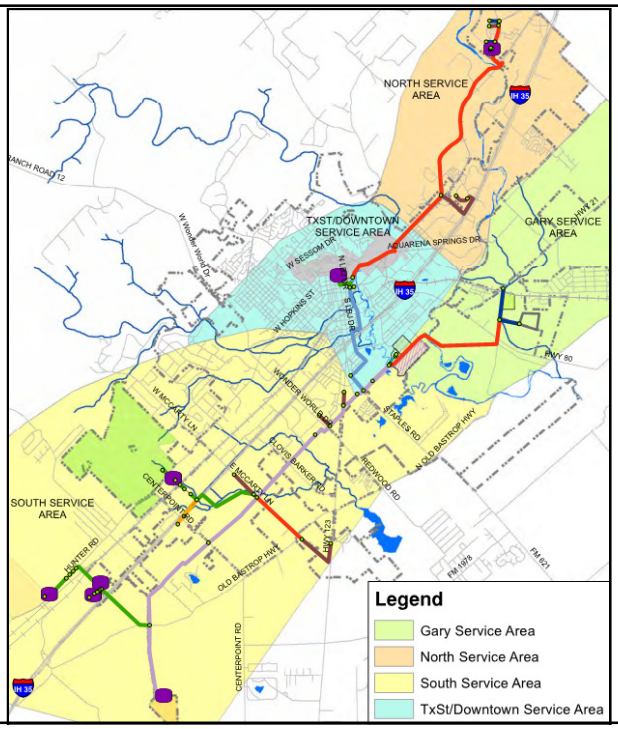
City of San Marcos

- Existing Recycled Water Program:
  - Existing users include a power generating plant and a cement manufacturing plant (224 acft)
  - Reclaimed water pump station located at the San Marcos WWTP
  - No additional treatment needed (Existing = Type 1)
  - 18-inch pipeline that extends approximately 8.5 miles
- Potential Demand estimated to be ~2,100 acft/yr
- Project costs are approximately $22.1 million
- Unit Cost = $1,032/acft/yr

DRAFT (1-29-2014)

5

City of San Marcos



DRAFT (1-29-2014)

6

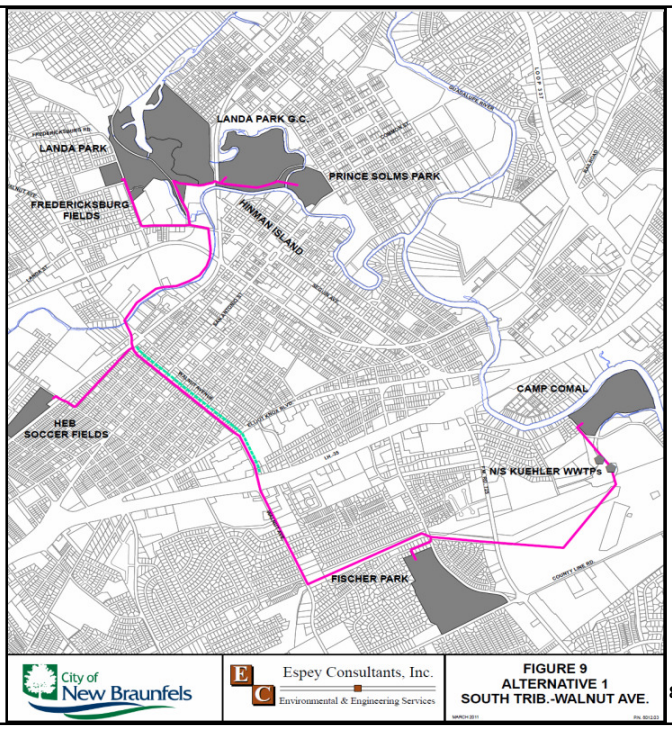
New Braunfels Utilities

- Existing Recycled Water Program:
  - Sundance Park (up to 2 MG/month)
  - 10-inch pipeline extends approximately 0.75 miles
  - Recycled water from Gruene WWTP
- Approximately 173 acres of potential irrigated parkland
- Proposed expanded system to rely on South Kuehler WWTP
- Potential Demand estimated to be 904 acft/yr
- Potential reduction in potable water use for irrigation
- Project costs are approximately $5.2 million
- Unit Cost = $566/acft/yr

DRAFT (1-29-2014)

7

New Braunfels Utilities



DRAFT (1-29-2014)

8

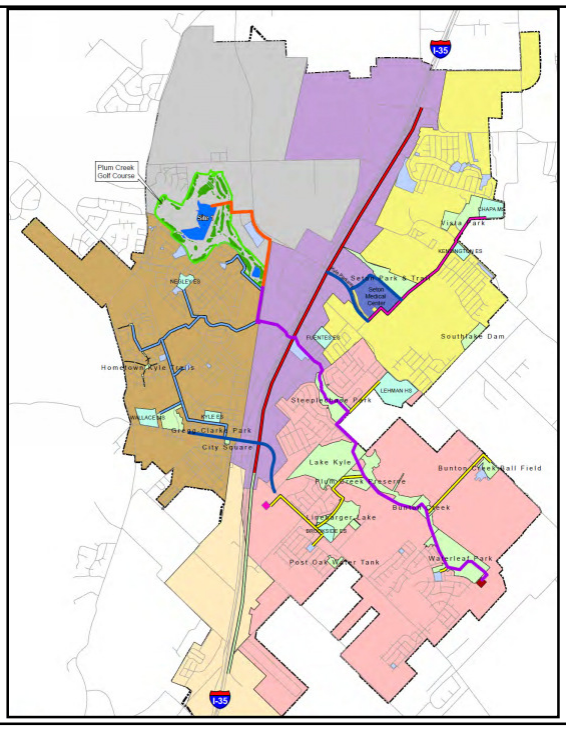
City of Kyle

- Recycled water currently in use
  - Plum Creek Golf Course (privately owned)
- Parks are presently maintained without supplemental irrigation
- Average wastewater flows are projected to exceed 4 MGD by 2035
- Additional treatment required for Type 1 standards
- Potential Demand estimated to exceed 1,845 acft/yr
- Project costs are approximately $11.2 million
- Unit Cost = $632/acft/yr

DRAFT (1-29-2014)

9

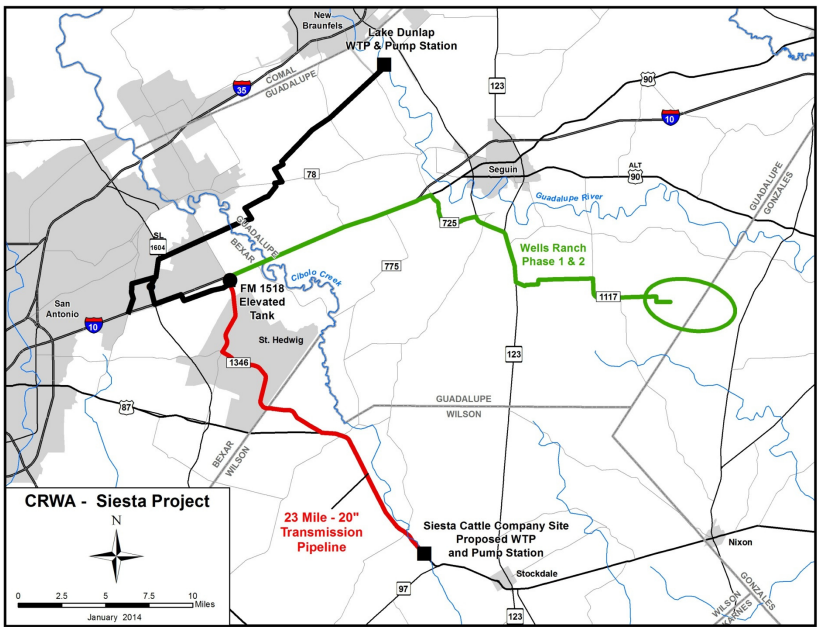
City of Kyle



DRAFT (1-29-2014)

10

CRWA Siesta Project



DRAFT (1-29-2014)

1

CRWA Siesta Project

- Source and Supply:
  - Total Project Size = 5,042 acft/yr
  - Amendment to existing CRWA's Siesta Water Right (42 acft/yr) on Cibolo Creek

    Consolidation (and potentially additional acquisitions) of other existing water rights on Cibolo Creek
    - Currently own or lease 3 additional water rights totalling 238 acft/yr
  - Amendment to add additional 4,762 acft/yr of diversion*
  - Purchase of reuse make-up water from upstream WWTPs (CCMA)
  - Alternate backup is Brackish Wilcox GW
  - Potential Customers are Existing CRWA Members

**Modeled with TCEQ Environmental Flow Standards on Cibolo Creek using FRAT*

2

DRAFT (1-29-2014)

CRWA Siesta Project

- Facilities:
  - Intake and Pump Station on Cibolo Creek
  - 23-mile, 20-inch Diameter Transmission Pipeline
  - 1 Booster Station
  - 7 MGD WTP
  - Delivery point is FM1518 Elevated Tank
  - Sized for Peak Monthly Delivery on Municipal Pattern

- Costs (Sept 2013 Dollars):
  - Capital Cost = $47,915,000
  - Project Cost = $68,798,000
  - Annual Cost = $9,507,000/yr
  - Unit Cost = $1,886/acft/yr

DRAFT (1-29-2014)

3

New Braunfels Utilities ASR Project

- **Purposes and Objectives**
  - Long-term supply during Drought of Record (DOR) conditions
  - Defer construction of second Water Treatment Plant
  - Meet seasonal demands when restrictions are active
  - Meet demands at ends of distribution system
  - Emergency supply

- **Current Potential Target Aquifers and Estimated Well Capacities (based on preliminary Phase 1 feasibility study)**
  - Trinity Aquifer
    - Lower Glen Rose: 500 gpm
    - Hosston-Sligo: 500 gpm
  - Brackish Edwards Aquifer: 750 gpm

DRAFT (1-30-2014)

1

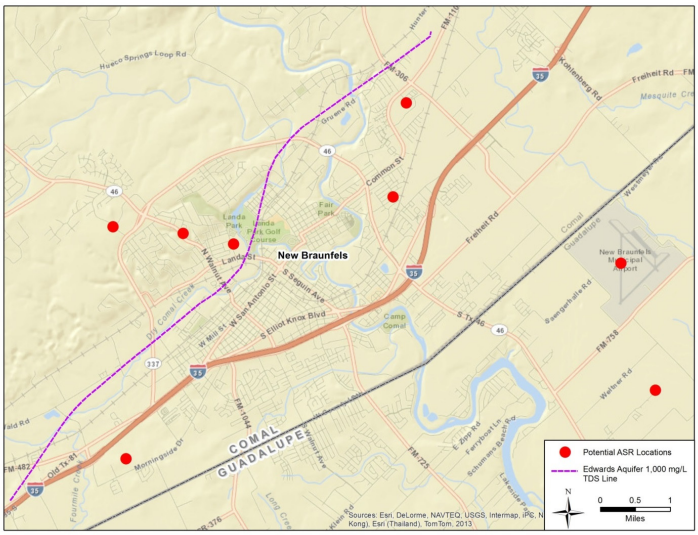
Current NBU Water Supply Sources

- Water Sources/Permits:
  - Run-of-River Water Rights (6,952 acft/yr) – Subject to Prior Appropriation and Special Conditions (GSA WAM)
  - Canyon Reservoir (9,720 acft/yr) – Firm
  - Edwards Aquifer (9,270 acft/yr) – Subject to cutbacks per EAHCP
  - Trinity Aquifer (725 acft/yr) – Additional capacity in development
- Total System Capacity = ~21.8 MGD
  - NBU Water Treatment Plant (Planning Purposes): ~7.5 MGD
  - Edwards Wells (Planning Purposes): ~14.3 MGD
  - Trinity Wells: 0.65 MGD

DRAFT (1-30-2014)

2

Potential ASR Well Locations
(Within NBU Service Area)



Information Provided by NBU via Report:
"Preliminary Evaluation of Aquifer Storage and Recovery as a Water Supply and Management Strategy" – ARCADIS, May 2012

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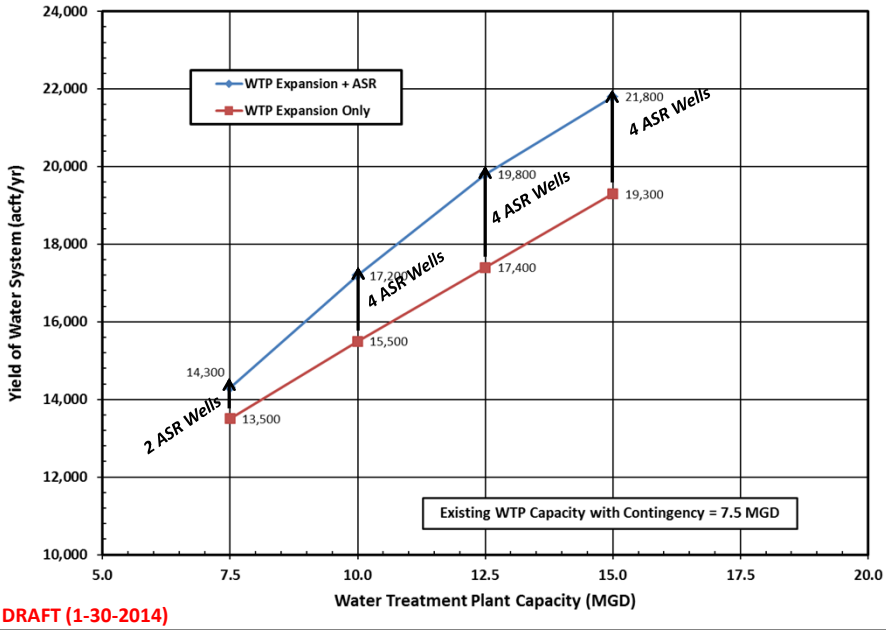
NBU ASR as WMS
(Based on Region L Analyses)



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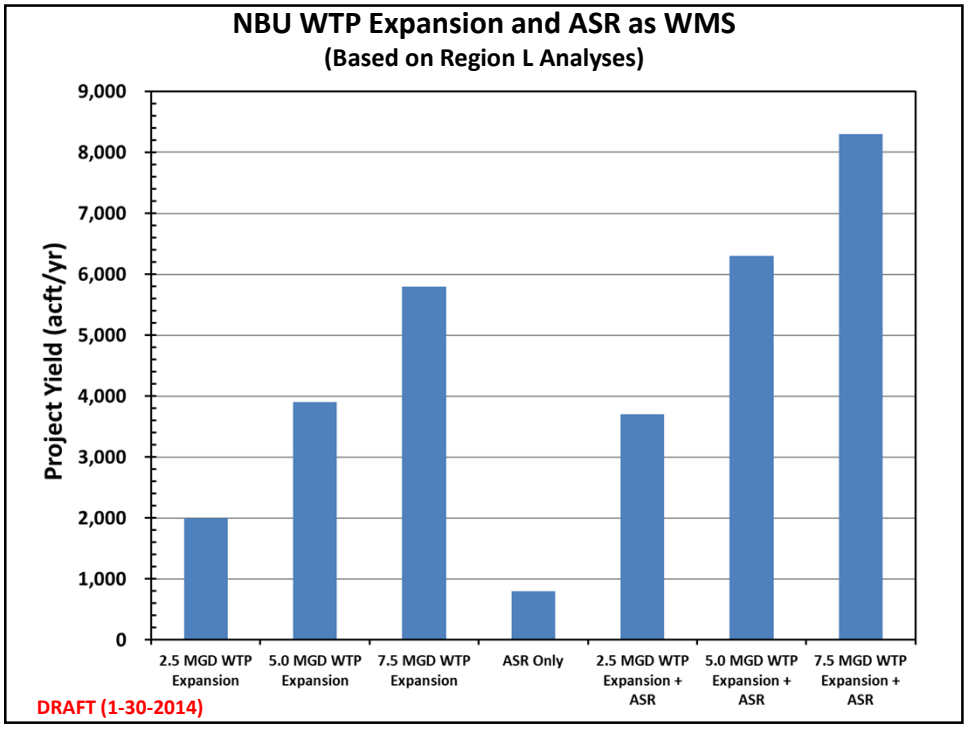
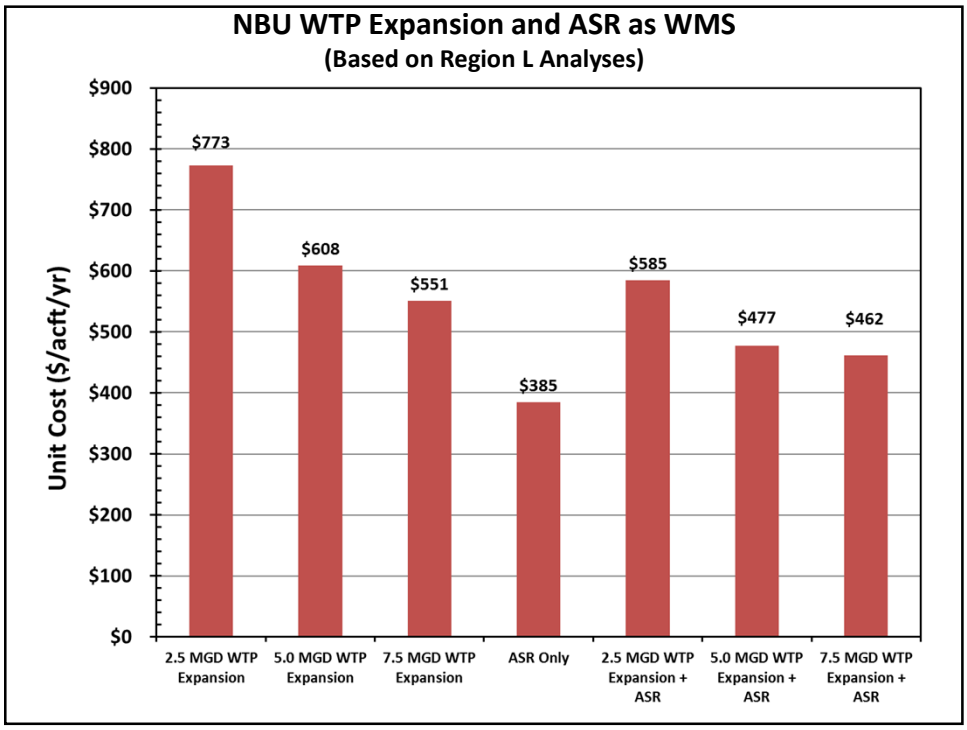

NBU WTP Expansion and ASR as WMS
(Based on Region L Analyses)
Project Yield (acft/yr)
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
2.5 MGD WTP Expansion
5.0 MGD WTP Expansion
7.5 MGD WTP Expansion
ASR Only
2.5 MGD WTP Expansion + ASR
5.0 MGD WTP Expansion + ASR
7.5 MGD WTP Expansion + ASR
DRAFT (1-30-2014)


NBU WTP Expansion and ASR as WMS
(Based on Region L Analyses)
Unit Cost ($/acft/yr)
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
$773
$608
$551
$385
$585
$477
$462
2.5 MGD WTP Expansion
5.0 MGD WTP Expansion
7.5 MGD WTP Expansion
ASR Only
2.5 MGD WTP Expansion + ASR
5.0 MGD WTP Expansion + ASR
7.5 MGD WTP Expansion + ASR

Current ASR Legal and Regulatory Issues

- **Groundwater Related**
  - **TCEQ:**
    - Underground Injection Control (UIC), Class V Injection Well Permit
    - Edwards Aquifer can be only source water for ASR well that transect the Edwards to underlying formation or terminates in Edwards
  - **EAA:**
    - Current Rules oriented toward natural recharge along streams in outcrop and recovery from remote wells in freshwater section of Edwards
    - Source Water Restrictions:
      - All waters except surface water being recharged through "natural recharge features"
      - No groundwater sources other than Edwards
    - Prior approval to authorize submitting recharge/recovery application to EAA
    - Natural recharge must be withdrawn within following 12-month period, and must account for losses unless permittee can document water still in storage
    - Separate Recharge and Recovery Permits are required
    - Rules provide for interlocal agreements between EAA and applicants
- **Surface Water Related**
  - Amend run-of-river water rights for ASR as purpose of use

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7

NBU ASR Project as WMS

- **Advantages**
  - Provides multiple benefits including: long term storage, seasonal storage/peaking, emergency supply, etc
  - Provides opportunity to fully utilize existing NBU permits, which postpones the acquisition of new water supplies
  - Provides opportunity to store water when available
  - Allows NBU to use existing infrastructure
  - Eventually, all sources of municipal drinking water can be stored using the NBU distribution system
  - Has minimum environmental impacts compared to other options
- **Concerns**
  - Rule waivers or changes with EAA and/or TCEQ are required.
  - Faulting and aquifer properties are not fully understood at this time
  - Long-term storage may result in loss of some injected water
- **Summary**
  - Demonstration wells and additional studies will confirm hydrogeology and storage locations within overall NBU study area

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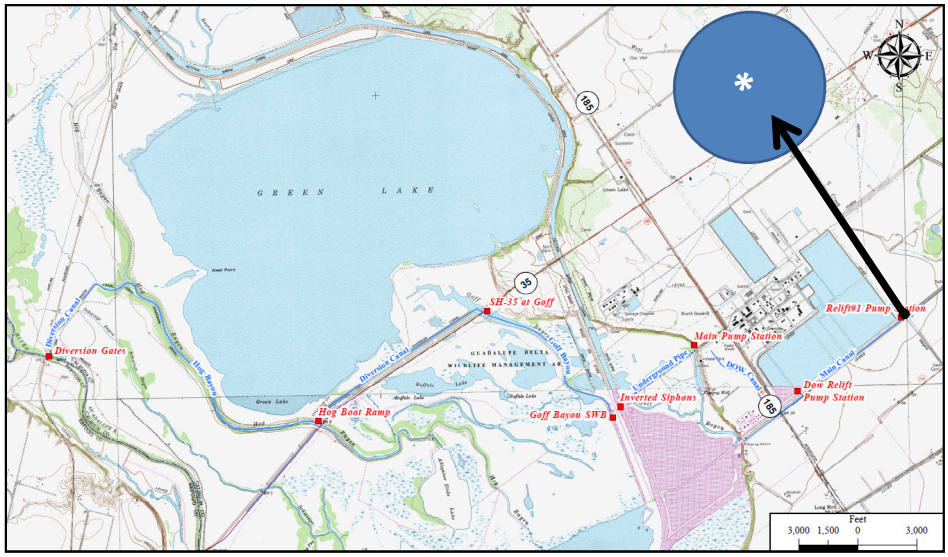
8

GBRA New Appropriation (Lower Basin)



**Location and size based on 25-foot depth to be determined*

DRAFT (1-29-2014)

1

GBRA New Appropriation (Lower Basin)

- Source and Supply:
  - Up to 189,484 acft/yr of New Diversion from Guadalupe River via Calhoun County Canal System, Maximum Diversion Rate of up to 500 cfs (Within existing 622 cfs maximum diversion rate)
  - Off-Channel Storage of up to 200,000 acft (Assumed 25-foot depth)
  - Diversions subject to TCEQ Adopted SB3 Environmental Flow Standards and full authorized use of existing water rights
  - Firm Yield of ~21,000 to ~43,000 acft/yr Municipal/Industrial Delivery

- Facilities:
  - Main Pump Station and Canal Upgrades (from 355 cfs to 500 cfs)
  - New Intake and Pump Station from Main Canal (~250 cfs)
  - 10-mile, 96-inch diameter Diversion Pipeline
  - Off-Channel Storage between 25,000 acft and 200,000 acft
  - Integration

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2

GBRA New Appropriation (Lower Basin)

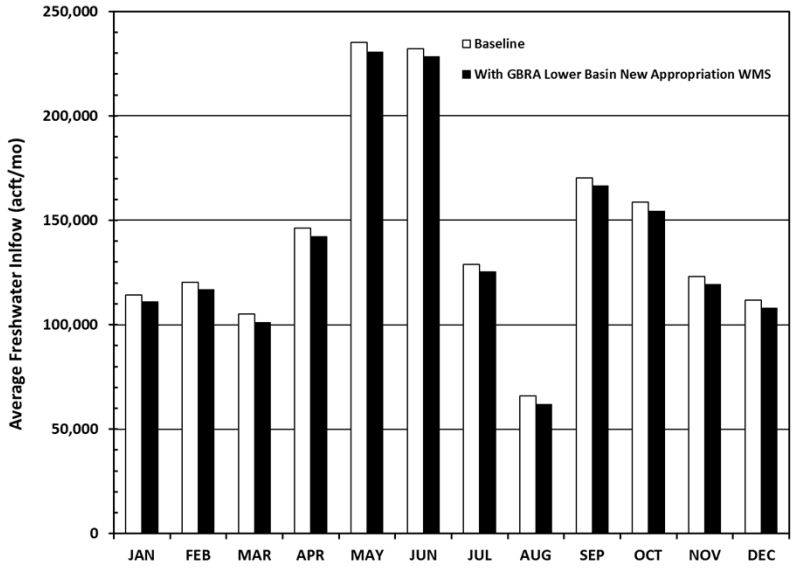
Off-Channel Reservoir Size	25,000 acft	50,000 acft	100,000 acft	150,000 acft	200,000 acft
Firm Yield (acft/yr)	20,900	26,100	34,300	42,000	43,000
Capital Facilities Cost ($)	$109,114,000	128,965,000	$159,743,000	$189,773,000	$214,250,000
Total Project Cost ($)	$156,788,000	190,298,000	$245,200,000	$298,355,000	$344,102,000
Annual Cost ($/yr)	$13,918,000	16,597,000	$20,806,000	$24,839,000	$28,080,000
Unit Cost ($/acft/yr)	$666	$636	$607	$591	$653

Note: Costs are based on Raw Water at the Reservoir(s) + Integration

DRAFT (1-29-2014)

3

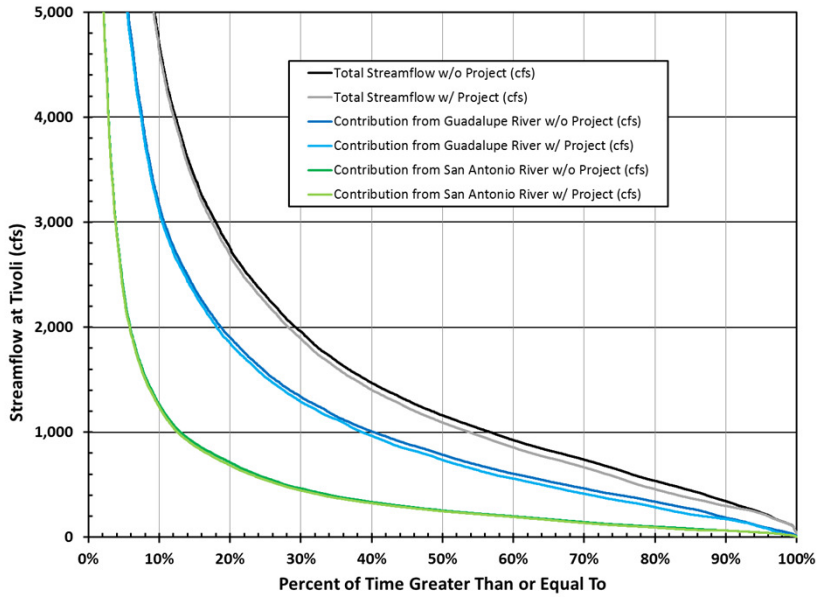
GBRA New Appropriation (Lower Basin)



DRAFT (1-29-2014)

4

GBRA New Appropriation (Lower Basin)



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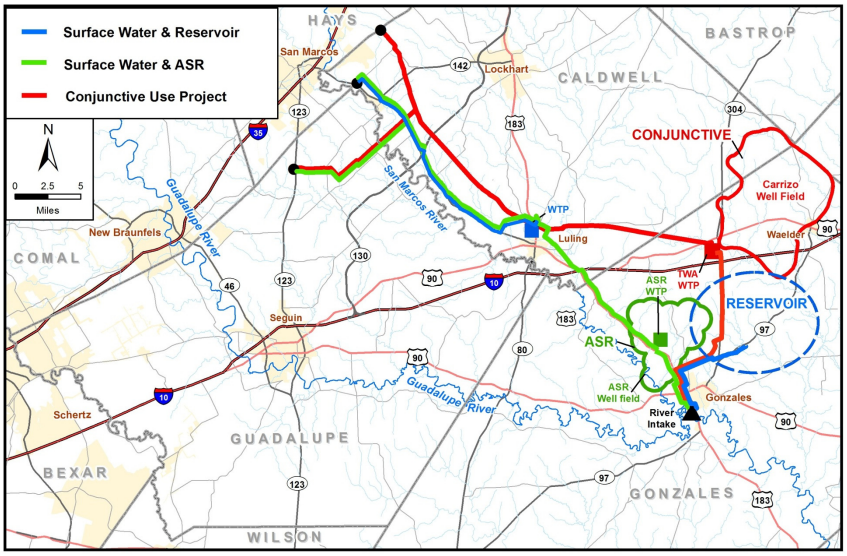
5

Guadalupe-Blanco River Authority
Mid-Basin Water Supply Project (MBWSP)



DRAFT (1-29-2014)

1

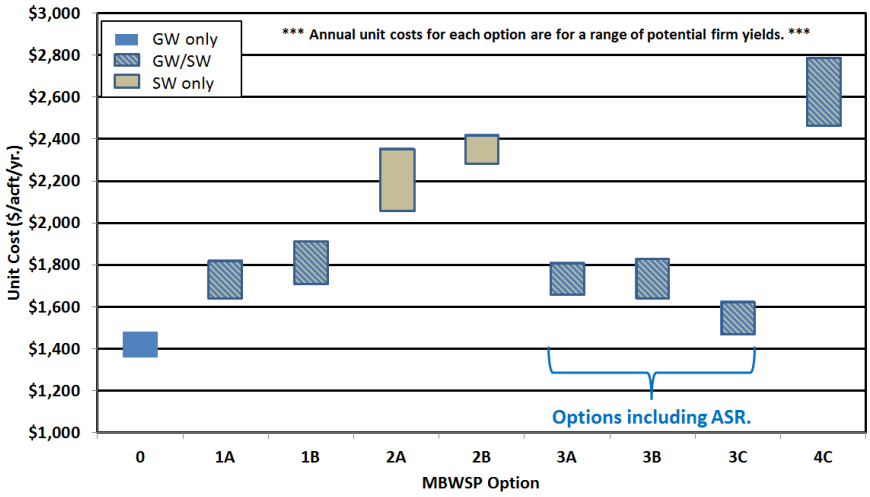
Mid-Basin Water Supply Project (MBWSP)
Engineering Feasibility Study

Option	Carrizo	Wilcox	Surface Water	Enhanced Recharge	ASR	Off-Channel Reservoir	Available Supply (acft/yr)			
							15,000	25,000	35,000	Max
0	X						X	--	--	20,000
1A	X		X					X	X	40,000
1B	X		X	X				X	X	46,000
2A			X			OCR1		X	X	40,000
2B			X			OCR2		X	X	40,000
3A	X		X		TWA			X	X	42,000
3B	X		X		Remote			X	X	50,000
3C			X		Remote			X	X	50,000
4A		X					--	--	--	7,000
4B		X	X				--	--	--	9,000
4C	X	X	X					X	X	35,000

DRAFT (1-29-2014)

2

Mid-Basin Water Supply Project (MBWSP) Engineering Feasibility Study



DRAFT (1-29-2014)

3

GBRA MBWSP in the 2016 South Central Texas Regional Water Plan (SCTRWP)

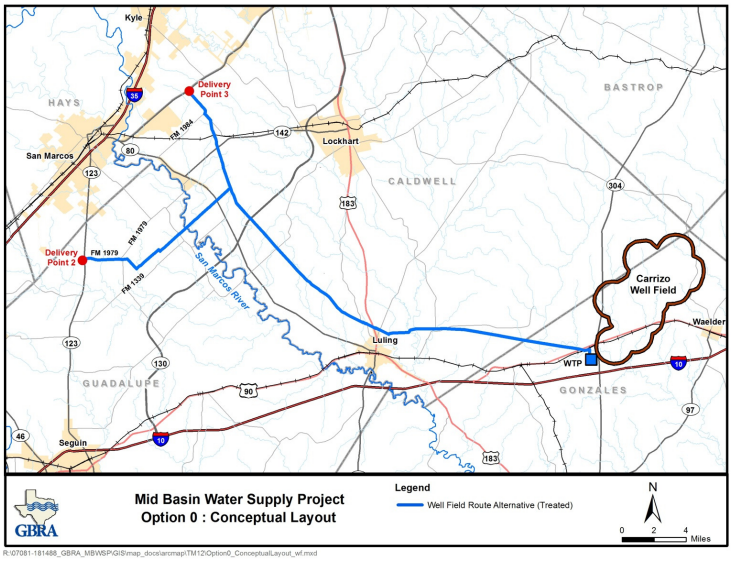
As more information becomes available, GBRA will likely propose that one of the following options from the MBWSP Feasibility Study be a Recommended water management strategy (WMS) and that the others be Alternative WMSs in the 2016 SCTRWP.

- Carrizo Groundwater (Option 0)
- Surface Water w/ Off-Channel Reservoir (Option 2A)
- Conjunctive Use w/ ASR (Option 3A)
- Surface Water w/ ASR (Option 3C)

DRAFT (1-29-2014)

4

Carrizo Groundwater (Option 0)



DRAFT (1-29-2014)

5

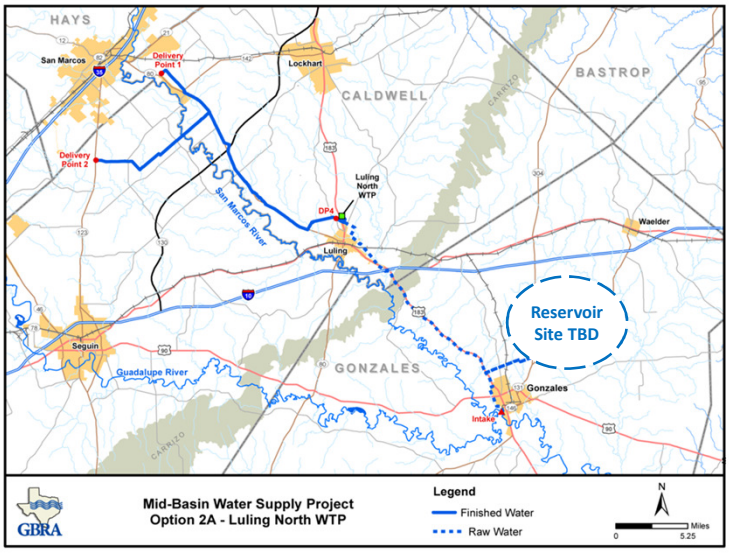
Carrizo Groundwater (Option 0)

- Source and Firm Supply:
  - 15,000 acft/yr from Carrizo Aquifer in Gonzales County Underground Water Conservation District (GCUWCD)
  - Permitted groundwater under Texas Water Alliance (TWA) leases
- Facilities (2.0 peaking factor):
  - 15 production wells (1430 gpm)
  - Water Treatment Plant (26.8 MGD)
  - 46 mile, 36-IN diameter finished water pipeline
  - two delivery locations and potential for tie-ins along the route
- Unit Cost: $1,481/acft/yr

DRAFT (1-29-2014)

6

Surface Water w/ Off-Channel Reservoir (Option 2A)



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7

Surface Water w/ Off-Channel Reservoir (Option 2A)

- Source and Firm Supply:
  - 25,000 acft/yr from Guadalupe River w/ Off-Channel Reservoir (OCR)
- Facilities (2.0 Peaking Factor):
  - 400 cfs Guadalupe river diversion above existing channel dam at Gonzales
  - 9 miles of 108-IN diameter raw water pipeline to OCR (site TBD)
  - 3,700 acre, 108,000 acft OCR (site TBD)
  - Water Treatment Plant (72 MGD)
  - 51 miles, 20-IN and 42-IN diameter finished water pipelines
  - Two delivery locations and potential for tie-ins along the route
- Unit Cost: $2,357/acft/yr

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8

Surface Water w/ Off-Channel Reservoir (Option 2A)

- Surface Water Availability:
  - Estimates of surface water available for diversion under a new appropriation from the Guadalupe River at Gonzales were calculated subject to senior water rights and environmental flow standards adopted by the TCEQ.
  - Relevant elements of Application No. 12378 include maximum annual diversion of 75,000 acft/yr from the Guadalupe River at Gonzales, maximum instantaneous diversion rate of 500 cfs, and off-channel storage of 125,000 acft.

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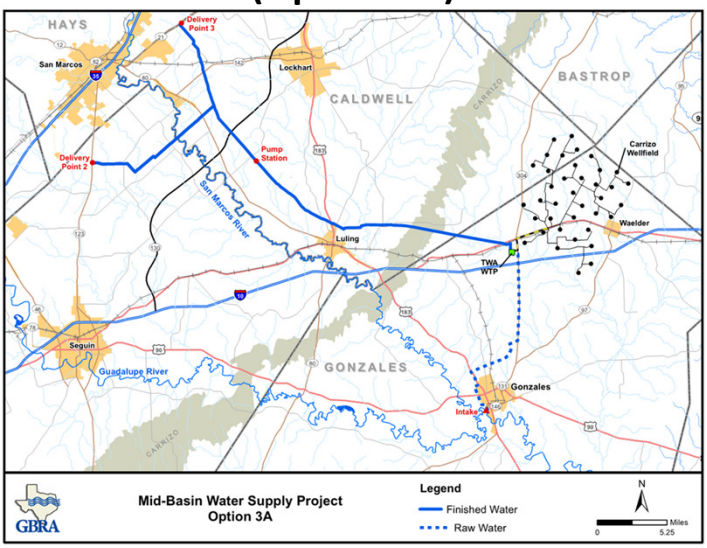
9

Conjunctive Use w/ ASR (Option 3A)



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10

Conjunctive Use w/ ASR (Option 3A)

- Sources and Firm Supply:
  - 42,000 acft/yr from Guadalupe River, Carrizo Aquifer in GCUWCD, and ASR in GCUWCD
  - Sources of Supply (Average): Surface Water = 25,600 acft/yr; Carrizo = 13,400 acft/yr; and Recovery = 3,000 acft/yr
- Operations:
  - Treated surface water delivered to participants with treated groundwater and stored surface water as back-up supplies
- Facilities (2.0 peaking factor):
  - 32 dual purpose wells (1,628 gpm peak/ 307 gpm average)
  - 70 cfs river intake
  - Water Treatment Plant (75 MGD)
  - 15 mile 64-IN diameter raw water pipeline
  - 46 mile, 60-IN and 36-IN diameter finished water pipelines
  - Two delivery locations and potential for tie-ins along the route
- Unit Cost: $1,657/acft/yr

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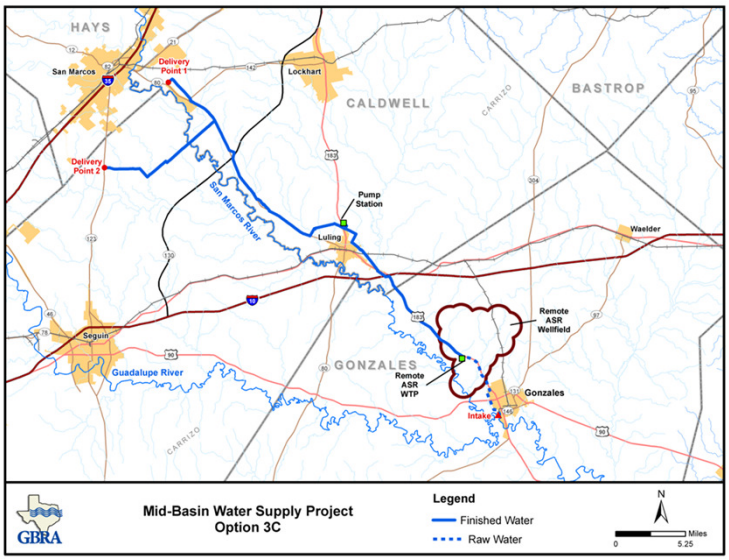
11

Surface Water w/ ASR (Option 3C)



DRAFT (1-29-2014)

12

Surface Water w/ ASR (Option 3C)

- Sources and Firm Supply:
  - 50,000 acft/yr from Guadalupe River and ASR in GCUWCD
  - Sources of Supply (Average): Surface Water = 31,100 acft/yr and Recovery = 18,900 acft/yr
- Operations:
  - Treated surface water delivered to participants and ASR storage with stored surface water as back-up supply
  - Interim back-up supply needed in early years
- Facilities (2.0 peaking factor):
  - 40 dual purpose wells (1,533 gpm peak/ 348 gpm average)
  - 140 cfs river intake
  - Water Treatment Plant (89 MGD)
  - 6 mile 66-IN diameter raw water pipeline
  - 45 mile, 66-IN, 36-IN diameter finished water pipelines
  - Two delivery locations and potential for tie-ins along the route
- Unit Cost: $1,467/acft/yr

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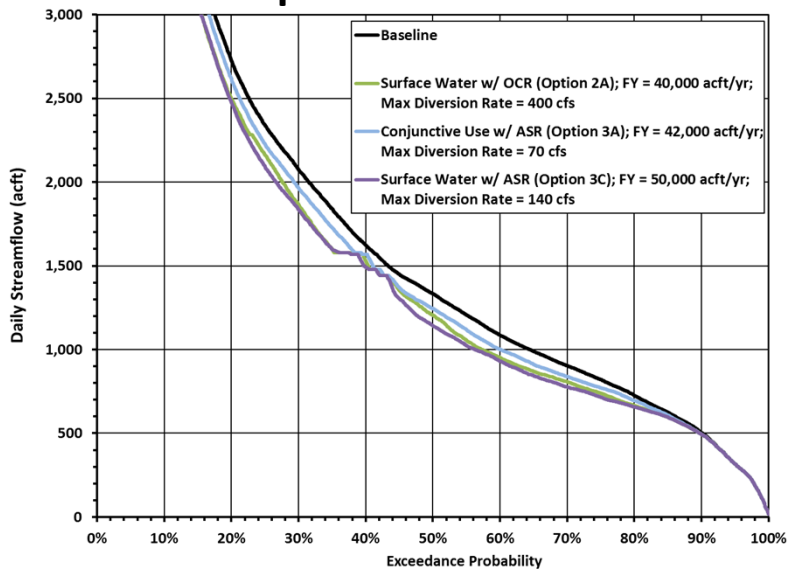
13

Potential Instream Flow Changes Guadalupe River at Gonzales



DRAFT (1-29-2014)

14

GBRA MBWSP in the 2016 South Central Texas Regional Water Plan (SCTRWP)

As more information becomes available, GBRA will likely propose that one of the following options from the MBWSP Feasibility Study be a Recommended water management strategy (WMS) and that the others be Alternative WMSs in the 2016 SCTRWP.

- Carrizo Groundwater (Option 0)
- Surface Water w/ Off-Channel Reservoir (Option 2A)
- Conjunctive Use w/ ASR (Option 3A)
- Surface Water w/ ASR (Option 3C)

DRAFT (1-29-2014)

15