MEMO

To:	Kevin Patteson, Executive Administrator
Through	Robert Mace, Deputy Executive Administrator RGM Larry French, Groundwater Resources Division Director
From:	Rima Petrossian
Date:	1/8/2015
Re:	Management Plan Approval for Coastal Bend Groundwater Conservation District

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Staff recommends that the Coastal Bend Groundwater Conservation District (CBGCD) management plan be approved as administratively complete.

CBGCD is due for the Executive Administrator's approval by Tuesday, February 10, 2015.

Texas Water Development Board
Groundwater Conservation District Management Plan Review and Approval Tracking

Reviewers Recommending the Plan for Approval

1) Stephen Allen — Date 12/19/2014
Stephen Allen, P.G., Geoscientist, Groundwater Technical Assistance

2) David Thorkildsen — Date 12/19/2014
David Thorkildsen, P.G., Geologist, Groundwater Technical Assistance

3) Mark Olden — Date 12/19/2014
Mark Olden, Natural Resource Specialist, Groundwater Technical Assistance

Recommended for Approval

1) _____ Date 1/7/2015
Rima Petrossian, Ph.D., P.G., Manager, Groundwater Technical Assistance

2) _____ Date 1.12.15
Larry French, P.G., Director, Groundwater Resources Division

3) _____ Date 1/12/15
Robert Mace, Ph.D., P.G., Deputy Executive Administrator, Water Science & Conservation

Approval

The groundwater conservation district management plan document submitted by:

Coastal Bend Groundwater Conservation District

for approval, as administratively complete under the requirements of 31 TAC Ch. 356, has been found by me, to be in fulfillment of said requirements.

_____ Date 1/15/15
Kevin Patteson, Executive Administrator, Texas Water Development Board

Texas Water Development Board

Subject:	Management Plan Approval for Coastal Bend GCD	Date: 1/9/15
Due Date:	February 10, 2015	
Comments:	Staff recommends that the CBGCD management plan be approved as administatively complete.	

Route to: √		Initial	Date	Comments
	C. Seaton			
	L. Graber			
	J. White			
6	K. Patteson	LG	1/15/15	
5	J. Stinson			
4	Barna/Nichols	JB DN	1/14 1/13	
	L. Trobman			
3	R. Mace	REM	1/15/15	
2	L. French	lf	1-12-15	
1	R. Petrossian	RP	1/9/2015	
	J. Walker			
	E. Jackson			
	J. Harrison			
	A. Landry			

Return to:	Rima Petrossian/Gayla Ray	Call Sandy 3-8043

Texas Water Development Board

Groundwater Conservation District Management Plan Checklist, effective December 6, 2012

District name: Coastal Bend Groundwater Conservation District ☑ Official

Reviewing staff: Stephen Allen

Date plan received: December 12, 2014

Date plan reviewed: December 19, 2014

A management plan shall contain, unless explained as not applicable, the following elements, 31 TAC §356.52(a):

	Citation of rule	Citation of statute	Present in plan and administratively complete	Source of data	Evidence that best available data was used	Notes
Is a paper hard copy of the plan available?	31 TAC §356.53(a)(1)		yes			
Is an electronic copy of the plan available?	31 TAC §356.53(a)(2)		yes			
1. Is an estimate of the modeled available groundwater in the District based on the desired future condition established under Section 36.108 included?	31 TAC §356.52(a)(5)(A)	TWC §36.1071(e)(3)(A)	yes	GR 10-028 MAG	yes	p. 12-13, App. E
2. Is an estimate of the amount of groundwater being used within the District on an annual basis for at least the most recent five years included?	31 TAC §356.52(a)(5)(B); §356.10(2)	TWC §36.1071(e)(3)(B)	yes	TWDB WUS	yes	p. 13-14, App. C
For sections 3-5 below, each district must use the groundwater availability modeling information provided by the TWDB in conjunction with available site-specific information provided by the district when developing the required estimates, 31 TAC §356.52(c):						
3. Is an estimate of the annual amount of recharge, from precipitation, if any, to the groundwater resources within the District included?	31 TAC §356.52(a)(5)(C)	TWC §36.1071(e)(3)(C)	yes	GR 13-025	yes	p. 14-15, App. F
4. For each aquifer in the district, is an estimate of the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams and rivers, included?	31 TAC §356.52(a)(5)(D)	TWC §36.1071(e)(3)(D)	yes	GR 13-025	yes	p. 15-16, App. F
5. Is an estimate of the annual volume of flow	31 TAC §356.52(a)(5)(E)	TWC §36.1071(e)(3)(E)				
a) into the District within each aquifer,			yes	GR 13-025	yes	p. 16, App. F
b) out of the District within each aquifer,			yes	GR 13-025	yes	p. 16, App. F
c) and between aquifers in the District,			yes	GR 13-025	yes	p. 16, App. F, reported as NA in GAM report
if a groundwater availability model is available, included?						
6. Is an estimate of the projected surface water supply within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(F)	TWC §36.1071(e)(3)(F)	yes	2012 SWP	yes	p. 17, App. C
7. Is an estimate of the projected total demand for water within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(G)	TWC §36.1071(e)(3)(G)	yes	2012 SWP	yes	p. 17, App. C
8. Did the District consider and include the water supply needs from the adopted state water plan?		TWC §36.1071(e)(4)	yes	2012 SWP	yes	p. 17, App. C
9. Did the District consider and include the water management strategies from the adopted state water plan?		TWC §36.1071(e)(4)	yes	2012 SWP	yes	p. 17, App. C
10. Did the district include details of how it will manage groundwater supplies in the district	31 TAC §356.52(a)(4)		yes			p. 8-10
11. Are the actions, procedures, performance, and avoidance necessary to effectuate the management plan, including specifications and proposed rules, all specified in as much detail as possible, included in the plan?		TWC §36.1071(e)(2)	yes			p. 17-18, link to rules included, and hardcopy of rules attached (App. B)
12. Was evidence that the plan was adopted, after notice and hearing, included? Evidence includes the posted agenda, meeting minutes, and copies of the notice printed in the newspaper(s) and/or copies of certified receipts from the county courthouse(s).	31 TAC §356.53(a)(3)	TWC §36.1071(a)	yes			hearing notices posted 10/17/14; adoption resolution dated 11/10/14
13. Was evidence that, following notice and hearing, the District coordinated in the development of its management plan with regional surface water management entities?	31 TAC §356.51	TWC §36.1071(a)	yes			plan sent to LCRA 12/01/14
14. Has any available site-specific information been provided by the district to the executive administrator for review and comment before being used in the management plan when developing the estimates required in subsections 31 TAC §356.52(a)(5)(C),(D), and (E)?	31 TAC §356.52(c)	TWC §36.1071(h)	NA			

Mark an affirmative response with YES
Mark a negative response with NO
Mark a non-applicable checklist item with N/A

Management goals required to be addressed unless declared not applicable	Management goal (time-based and quantifiable) 31 TAC §356.51	Methodology for tracking progress 31TAC §356.52(a)(4)	Management objective(s) (specific and time-based statements of future outcomes) 31 TAC §356.52 (a)(2)	Performance standard(s) (measures used to evaluate the effectiveness of district activities) 31 TAC §356.52 (a)(3)	Notes
Providing the most efficient use of groundwater 31 TAC 356.52(a)(1)(A); TWC §36.1071(a)(1)	15) yes	16) yes, p. 18	17) yes	18) yes	p. 18-19
Controlling and preventing waste of groundwater 31 TAC 356.52(a)(1)(B); TWC §36.1071(a)(2)	19) yes	20) yes, p. 18	21) yes	22) yes	p. 19
Controlling and preventing subsidence 31 TAC 356.52(a)(1)(C); TWC §36.1071(a)(3)	23) yes	24) yes, p. 18	25) yes	26) yes	p. 19
Addressing conjunctive surface water management issues 31 TAC 356.52(a)(1)(D); TWC §36.1071(a)(4)	27) yes	28) yes, p. 18	29) yes	30) yes	p. 20
Addressing natural resource issues that impact the use and availability of groundwater and which are impacted by the use of groundwater 31 TAC 356.52(a)(1)(E); TWC §36.1071(a)(5)	31) yes	32) yes, p. 18	33) yes	34) yes	p. 19-20
Addressing drought conditions 31 TAC 356.52(a)(1)(F); TWC §36.1071(a)(6)	35) yes	36) yes, p. 18	37) yes	38) yes	p. 20
Addressing	39)	40)	41)	42)	
a) conservation,	39a) yes	40a) yes, p. 18	41a) yes	42a) yes	p. 20-21
b) recharge enhancement,	39b) yes	40b) yes, p. 18	41b) yes	42b) yes	p. 21
c) rainwater harvesting,	39c) yes	40c) yes, p. 18	41c) yes	42c) yes	p. 22
d) precipitation enhancement, and	39d) NA	40d) NA	41d) NA	42d) NA	p. 21
e) brush control	39e) yes	40e) yes, p. 18	41e) yes	42e) yes	p. 22
where appropriate and cost effective 31 TAC 356.52(a)(1)(G); TWC §36.1071(a)(7)					
Addressing the desired future conditions established under TWC §36.108. 31 TAC 356.52(a)(1)(H); TWC §36.1071(a)(8)	43) yes	44) yes, p. 18	45) yes	46) yes	p.22
Does the plan identify the performance standards and management objectives for effecting the plan? 31 TAC §356.52(a)(2)&(3); TWC §36.1071(e)(1)			47) yes	48) yes	

Mark required elements that are present in the plan with YES
Mark any required elements that are missing from the plan with NO
Mark plan elements that have been indicated as not applicable to the district with N/A

Texas Water Development Board

Groundwater Conservation District Management Plan Checklist, effective December 6, 2012

District name: Coastal Bend GCD ☑ Official review ☐ Prereview

Reviewing staff: David Thorkildsen

Date plan received: 12/12/2014

Date plan reviewed: 12/19/2014

A management plan shall contain, unless explained as not applicable, the following elements, 31 TAC §356.52(a):

	Citation of rule	Citation of statute	Present in plan and administratively complete	Source of data	Evidence that best available data was used	Notes
Is a paper hard copy of the plan available?	31 TAC §356.53(a)(1)		Yes			
Is an electronic copy of the plan available?	31 TAC §356.53(a)(2)		Yes			
1. Is an estimate of the modeled available groundwater in the District based on the desired future condition established under Section 36.108 included?	31 TAC §356.52(a)(5)(A)	TWC §36.1071(e)(3)(A)	Yes	GAM Run 10-028 MAG	Yes	p. 12-13, App. E
2. Is an estimate of the amount of groundwater being used within the District on an annual basis for at least the most recent five years included?	31 TAC §356.52(a)(5)(B); §356.10(2)	TWC §36.1071(e)(3)(B)	Yes	TWDB WUS	Yes	p. 13-14, App. C
For sections 3-5 below, each district must use the groundwater availability modeling information provided by the TWDB in conjunction with available site-specific information provided by the district when developing the required estimates, 31 TAC §356.52(c):						
3. Is an estimate of the annual amount of recharge, from precipitation, if any, to the groundwater resources within the District included?	31 TAC §356.52(a)(5)(C)	TWC §36.1071(e)(3)(C)	Yes	GAM Run 13-025	Yes	p. 14-15, App. F
4. For each aquifer in the district, is an estimate of the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams and rivers, included?	31 TAC §356.52(a)(5)(D)	TWC §36.1071(e)(3)(D)	Yes	GAM Run 13-025	Yes	p. 15-16, App. F
5. Is an estimate of the annual volume of flow	31 TAC §356.52(a)(5)(E)	TWC §36.1071(e)(3)(E)				
a) into the District within each aquifer,			Yes	GAM Run 13-025	Yes	p. 16, App. F
b) out of the District within each aquifer,			Yes	GAM Run 13-025	Yes	p. 16, App. F
c) and between aquifers in the District,			Yes	GAM Run 13-025	Yes	p. 16, App. F, reported as NA
if a groundwater availability model is available, included?						
6. Is an estimate of the projected surface water supply within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(F)	TWC §36.1071(e)(3)(F)	Yes	2012 SWP	Yes	p. 17, App. C
7. Is an estimate of the projected total demand for water within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(G)	TWC §36.1071(e)(3)(G)	Yes	2012 SWP	Yes	p. 17, App. C
8. Did the District consider and include the water supply needs from the adopted state water plan?		TWC §36.1071(e)(4)	Yes	2012 SWP	Yes	p. 17, App. C
9. Did the District consider and include the water management strategies from the adopted state water plan?		TWC §36.1071(e)(4)	Yes	2012 SWP	Yes	p. 17, App. C
10. Did the district include details of how it will manage groundwater supplies in the district	31 TAC §356.52(a)(4)		Yes			p. 8-10
11. Are the actions, procedures, performance, and avoidance necessary to effectuate the management plan, including specifications and proposed rules, all specified in as much detail as possible, included in the plan?		TWC §36.1071(e)(2)	Yes			p. 17-18, App. B, link to rules provided, hard copy attached
12. Was evidence that the plan was adopted, after notice and hearing, included? Evidence includes the posted agenda, meeting minutes, and copies of the notice printed in the newspaper(s) and/or copies of certified receipts from the county courthouse(s).	31 TAC §356.53(a)(3)	TWC §36.1071(a)	Yes			p. Attached
13. Was evidence that, following notice and hearing, the District coordinated in the development of its management plan with regional surface water management entities?	31 TAC §356.51	TWC §36.1071(a)	Yes			p. Attached
14. Has any available site-specific information been provided by the district to the executive administrator for review and comment before being used in the management plan when developing the estimates required in subsections 31 TAC §356.52(a)(5)(C),(D), and (E)?	31 TAC §356.52(c)	TWC §36.1071(h)	NA			

Mark an affirmative response with YES
Mark a negative response with NO
Mark a non-applicable checklist item with N/A

Management goals required to be addressed unless declared not applicable	Management goal (time-based and quantifiable) 31 TAC §356.51	Methodology for tracking progress 31TAC §356.52(a)(4)	Management objective(s) (specific and time-based statements of future outcomes) 31 TAC §356.52 (a)(2)	Performance standard(s) (measures used to evaluate the effectiveness of district activities) 31 TAC §356.52 (a)(3)	Notes
Providing the most efficient use of groundwater 31 TAC 356.52(a)(1)(A); TWC §36.1071(a)(1)	15) Yes	16) p. 18 Yes	17) Yes	18) Yes	p. 18-19
Controlling and preventing waste of groundwater 31 TAC 356.52(a)(1)(B); TWC §36.1071(a)(2)	19) Yes	20) p. 18 Yes	21) Yes	22) Yes	p. 19
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Addressing drought conditions 31 TAC 356.52(a)(1)(F); TWC §36.1071(a)(6)	35) Yes	36) p. 18 Yes	37) Yes	38) Yes	p. 20
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a) conservation,	39a) Yes	40a) p.18 Yes	41a) Yes	42a) Yes	p. 20-21
b) recharge enhancement,	39b) Yes	40b) p. 18 Yes	41b) Yes	42b) Yes	p. 21
c) rainwater harvesting,	39c) Yes	40c) p. 18 Yes	41c) Yes	42c) Yes	p. 22
d) precipitation enhancement, and	39d) NA	40d) NA	41d) NA	42d) NA	p. 21
e) brush control	39e) Yes	40e) p. 18 Yes	41e) Yes	42e) Yes	p. 22
where appropriate and cost effective 31 TAC 356.52(a)(1)(G); TWC §36.1071(a)(7)					
Addressing the desired future conditions established under TWC §36.108. 31 TAC 356.52(a)(1)(H); TWC §36.1071(a)(8)	43) Yes	44) p. 18 Yes	45) Yes	46) Yes	p. 22
Does the plan identify the performance standards and management objectives for effecting the plan? 31 TAC §356.52(a)(2)&(3); TWC §36.1071(e)(1)			47) Yes	48) Yes	
Mark required elements that are present in the plan with YES Mark any required elements that are missing from the plan with NO Mark plan elements that have been indicated as not applicable to the district with N/A					

Texas Water Development Board

Groundwater Conservation District Management Plan Checklist, effective December 6, 2012

District name: Coastal Bend GCD ☑ Official ☐ Prereview

Date plan received: 12/12/2014

Reviewing staff: Mark Olden

Date plan reviewed: 12/19/2014

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Is an electronic copy of the plan available?	31 TAC §356.53(a)(2)		yes			
1. Is an estimate of the modeled available groundwater in the District based on the desired future condition established under Section 36.108 included?	31 TAC §356.52(a)(5)(A)	TWC §36.1071(e)(3)(A)	yes	GR10-028MAG	yes	page 12-13 App. E
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5. Is an estimate of the annual volume of flow	31 TAC §356.52(a)(5)(E)	TWC §36.1071(e)(3)(E)				
a) into the District within each aquifer,			yes	GR 13-025	yes	page 16 App. F
b) out of the District within each aquifer,			yes	GR 13-025	yes	page 16 App. F
c) and between aquifers in the District,			yes	GR 13-025	yes	page 16 App. F Reported as n/a in GAM report
if a groundwater availability model is available, included?						
6. Is an estimate of the projected surface water supply within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(F)	TWC §36.1071(e)(3)(F)	yes	2012 SWP	yes	page 17 App. C
7. Is an estimate of the projected total demand for water within the District according to the most recently adopted state water plan included?	31 TAC §356.52(a)(5)(G)	TWC §36.1071(e)(3)(G)	yes	2012 SWP	yes	page 17 App. C
8. Did the District consider and include the water supply needs from the adopted state water plan?		TWC §36.1071(e)(4)	yes	2012 SWP	yes	page 17 App. C
9. Did the District consider and include the water management strategies from the adopted state water plan?		TWC §36.1071(e)(4)	yes	2012 SWP	yes	page 17 App. C
10. Did the district include details of how it will manage groundwater supplies in the district	31 TAC §356.52(a)(4)		yes			page 8-10
11. Are the actions, procedures, performance, and avoidance necessary to effectuate the management plan, including specifications and proposed rules, all specified in as much detail as possible, included in the plan?		TWC §36.1071(e)(2)	yes			page 17-18 App. B, Link to rules, hardcopy attached
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13. Was evidence that, following notice and hearing, the District coordinated in the development of its management plan with regional surface water management entities?	31 TAC §356.51	TWC §36.1071(a)	yes			Attached
14. Has any available site-specific information been provided by the district to the executive administrator for review and comment before being used in the management plan when developing the estimates required in subsections 31 TAC §356.52(a)(5)(C),(D), and (E)?	31 TAC §356.52(c)	TWC §36.1071(h)	n/a			

Mark an affirmative response with YES
Mark a negative response with NO
Mark a non-applicable checklist item with N/A

Management goals required to be addressed unless declared not applicable	**Management goal** (time-based and quantifiable) 31 TAC §356.51	**Methodology for tracking progress** 31TAC §356.52(a)(4)	**Management objective(s)** (specific and time-based statements of future outcomes) 31 TAC §356.52 (a)(2)	**Performance standard(s)** (measures used to evaluate the effectiveness of district activities) 31 TAC §356.52 (a)(3)	**Notes**
Providing the most efficient use of groundwater 31 TAC 356.52(a)(1)(A); TWC §36.1071(a)(1)	15) yes	16) yes, page 18	17) yes	18) yes	page 18-19
Controlling and preventing waste of groundwater 31 TAC 356.52(a)(1)(B); TWC §36.1071(a)(2)	19) yes	20) yes, page 18	21) yes	22) yes	page 19
Controlling and preventing subsidence 31 TAC 356.52(a)(1)(C); TWC §36.1071(a)(3)	23) yes	24) yes, page 18	25) yes	26) yes	page 19
Addressing conjunctive surface water management issues 31 TAC 356.52(a)(1)(D); TWC §36.1071(a)(4)	27) yes	28) yes, page 18	29) yes	30) yes	page 20
Addressing natural resource issues that impact the use and availability of groundwater and which are impacted by the use of groundwater 31 TAC 356.52(a)(1)(E); TWC §36.1071(a)(5)	31) yes	32) yes, page 18	33) yes	34) yes	page 19-20
Addressing drought conditions 31 TAC 356.52(a)(1)(F); TWC §36.1071(a)(6)	35) yes	36) yes, page 18	37) yes	38) yes	page 20
Addressing	39)	40)	41)	42)	
a) conservation,	39a) yes	40a) yes, page 18	41a) yes	42a) yes	page 20-21
b) recharge enhancement,	39b) yes	40b) yes, page 18	41b) yes	42b) yes	page 21
c) rainwater harvesting,	39c) yes	40c) yes, page 18	41c) yes	42c) yes	page 22
d) precipitation enhancement, and	39d) n/a	40d) n/a	41d) n/a	42d) n/a	page 21
e) brush control	39e) yes	40e) yes, page 18	41e) yes	42e) yes	page 22
where appropriate and cost effective 31 TAC 356.52(a)(1)(G); TWC §36.1071(a)(7)					
Addressing the desired future conditions established under TWC §36.108. 31 TAC 356.52(a)(1)(H); TWC §36.1071(a)(8)	43) yes	44) yes, page 18	45) yes	46) yes	page 22
Does the plan identify the performance standards and management objectives for effecting the plan? 31 TAC §356.52(a)(2)&(3); TWC §36.1071(e)(1)			47) yes	48) yes	

Mark required elements that are present in the plan with YES
Mark any required elements that are missing from the plan with NO
Mark plan elements that have been indicated as not applicable to the district with N/A

COASTAL BEND GROUNDWATER CONSERVATION DISTRICT

RECEIVED
DEC 12 2014
Texas Water Development Board

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December 10, 2014

Kevin Patteson
Executive Administrator
Texas Water Development Board
1700 North Congress Avenue
P. O. Box 13231
Austin, TX 78711-3231

Mr. Patteson,

On behalf of the Coastal Bend Groundwater Conservation District, I am submitting to you our recently adopted 2014 CBGCD Management Plan. Included is a hard copy of the plan, an electronic version, and supporting documentation you may need to verify appropriate steps in approving this document.

If you have any questions, please feel free to contact me.

Best Regards,

Neil Hudgins
General Manager, Coastal Bend GCD

109 E. Milam
P.O. Box 341
Wharton, TX 77488

(979) 531-1412
(979) 531-1002 Fax

thedistrict@cbgcd.com
www.cbgcd.com

Coastal Bend
Groundwater Conservation District
Groundwater Management Plan

CBGCD Board Adoption: 10-30-03

Revised Adoption: 8-20-09

Revised Adoption: 11-10-14

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Coastal Bend Groundwater Conservation District

Groundwater Management Plan

November 2014

I. District Mission

The Coastal Bend Groundwater Conservation District (the District) is committed to manage and protect the groundwater resources of the District. The District is committed to maintaining a sustainable, adequate, reliable, cost effective and high quality source of groundwater to promote the vitality, economy and environment of the District. The District will work with and for the citizens of the District and cooperate with other local, regional and state agencies involved in the study and management of groundwater resources. The District shall take no action without a full consideration of the groundwater needs of the citizens of the District.

II. Purpose of Management Plan

In 1997 the 75th Texas Legislature established a statewide comprehensive regional water planning initiative with the enactment of Senate Bill 1 (SB1). Among the provisions of SB1 were amendments to Chapter 36 of the Texas Water Code requiring groundwater conservation districts to develop a groundwater management plan that shall be submitted to the Texas Water Development Board for certification as administratively complete. The groundwater management plan is specified to contain estimates on the availability of groundwater in the District, details of how the District would manage groundwater and management goals for the District. In 2001 the 77th Texas Legislature further clarified the water planning and management provisions of SB1 with the enactment of Senate Bill 2 (SB2).

In addition, the 79th Texas Legislature enacted HB 1763 in 2005 that requires joint planning among districts that are in the same Groundwater Management Area (GMA). These districts must jointly agree upon and establish the desired future conditions of the aquifers within their respective GMAs. Through this process, the districts will submit the desired future conditions (DFC) to the executive administrator of the Texas Water Development Board (TWDB) who, in turn, will provide each district within the GMA with the amount of Modeled Available Groundwater (MAG) within each district. The MAG will be based on the desired future conditions jointly established for each aquifer within the GMA.

The administrative requirements of the Chapter 36 Texas Water Code provisions for groundwater management plan development are specified in 31 Texas Administrative Code Chapter 356 of the Texas Water Development Board Rules. This plan fulfills all requirements for groundwater management plans in SB1, SB2, Chapter 36 Texas Water Code and administrative rules of the Texas Water Development Board.

III. Time Period of Management Plan

This plan shall be in effect for a period of ten years from the date of TWDB approval, unless a new or amended management plan is adopted by the District Board of Directors and approved by TWDB. This plan will be reviewed within five years as required by §36.1072(e), Water Code. The District will consider the necessity to amend the plan and re-adopt the plan with or without amendments as required by §36.1072(e), Water Code.

IV. Coastal Bend Groundwater Conservation District

The District was created in 2001 by the 77th Texas Legislature enacting HB 1038. This act is recorded in Chapter 1294 of the Acts of the 77th Texas Legislature. The District was confirmed by local election held in Wharton County on November 6, 2001 with 57.6 percent of the voters in favor of the District.

The District is located in Wharton County, Texas. The District boundaries are the same as the area and extent of Wharton County, Texas with the exception of approximately 800 acres of Colorado County annexed into the district in 2006. The District is bounded by Jackson, Colorado, Austin, Fort Bend, Brazoria and Matagorda Counties. As of the plan date, confirmed groundwater conservation districts (GCDs) exist in Austin, Colorado, Matagorda, Brazoria and Jackson Counties. The GCDs neighboring the District are: Bluebonnet GCD (Austin), Colorado County GCD (Colorado), Brazoria County GCD (Brazoria), Coastal Plains GCD (Matagorda) and Texana GCD (Jackson). The Fort Bend Subsidence District is located in Fort Bend County Figure.1

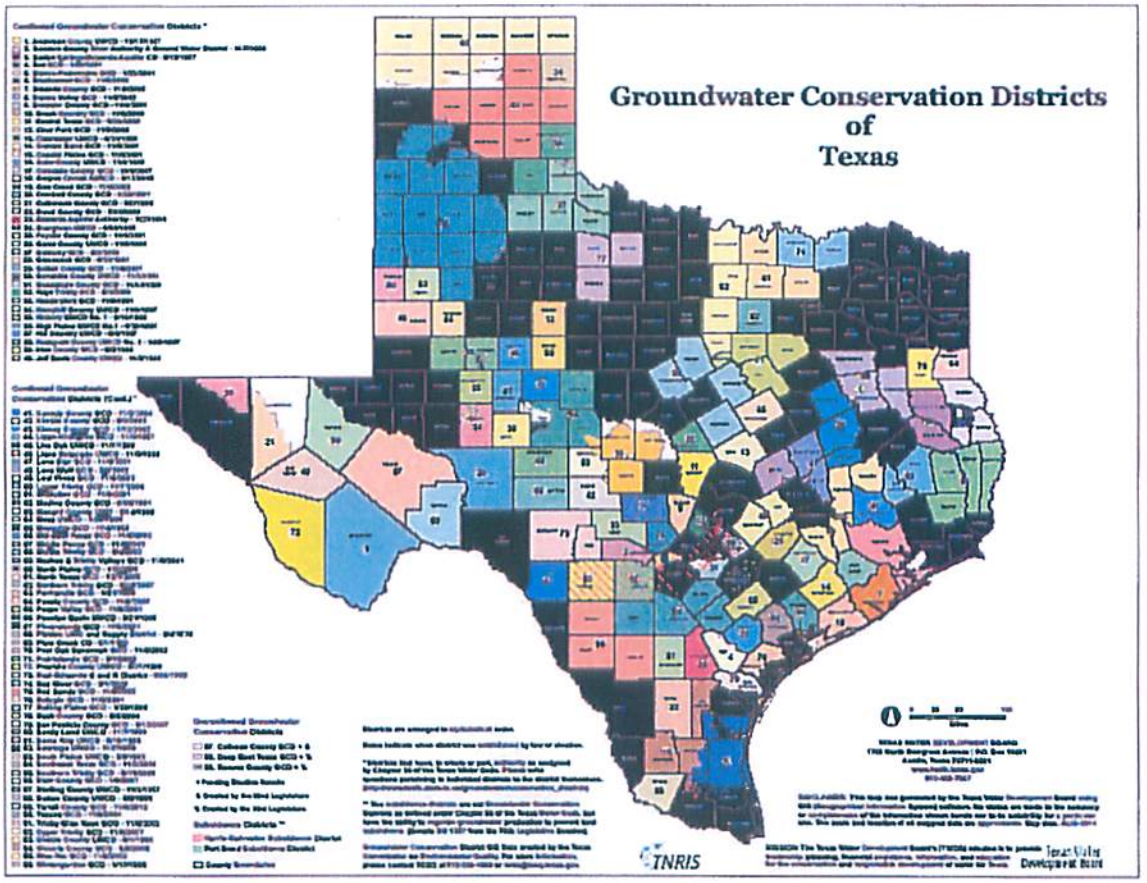

Figure 1. Neighboring Districts to Coastal Bend Groundwater Conservation District

The District is located in Groundwater Management Area (GMA) 15. Chapter 36 Texas Water Code authorizes the District to co-ordinate its management of groundwater with other GCDs in GMA 15. The other confirmed GCDs that are located in GMA 15 are: Fayette County GCD (Fayette), Pecan Valley GCD (DeWitt), Texana GCD (Jackson), Calhoun County GCD (Calhoun), Coastal Plains GCD (Matagorda), Colorado County GCD (Colorado), Victoria County GCD (Victoria), Evergreen UWCD (Karnes), Goliad County GCD (Goliad), Refugio County GCD (Refugio), and Bee County GCD (Bee). Figure. 2

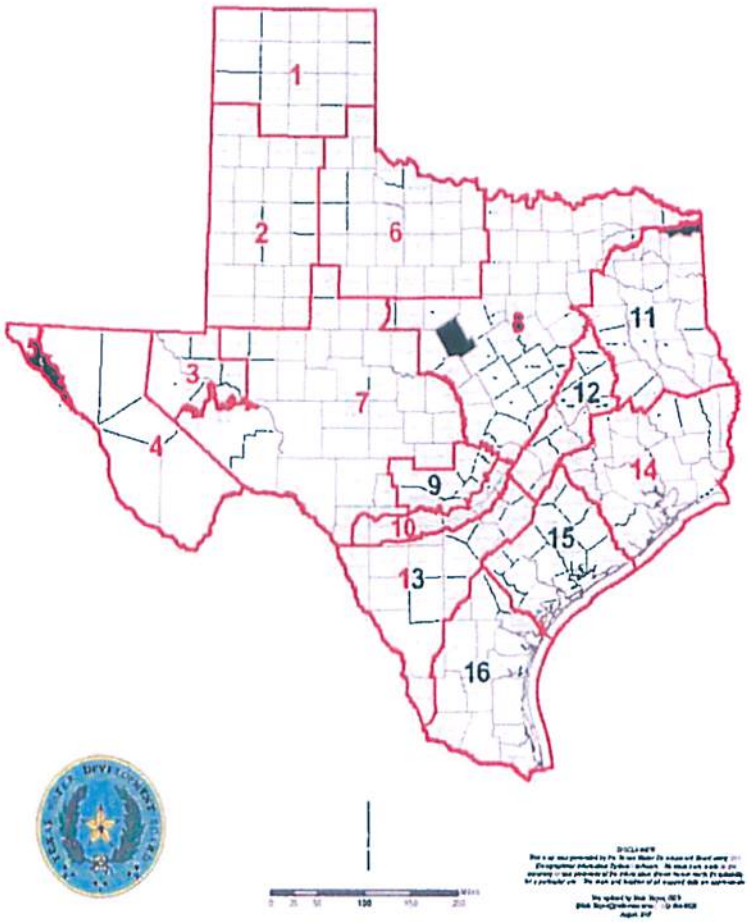

Figure 2. Groundwater Management Areas in Texas

The District Board of Directors is composed of five members elected to staggered four-year terms. Four directors are elected from county precincts and one director is elected at-large. The Board of Directors holds regular meetings at the District offices at 109 E. Milam in Wharton, Texas on the second Tuesday of each month unless otherwise posted. All meetings of the Board of Directors are public meetings noticed and held in accordance with all public meeting requirements. The Board of Directors meetings are announced on the District website www.cbgcd.com along with other items of interest posted by the District.

V. Authority of the District

The District derives its authority to manage groundwater within the District by virtue of the powers granted and authorized in the District's enabling act, HB 1038 of the 77th Texas Legislature. (Appendix A). The District, acting under authority of the enabling legislation, assumes all the rights and responsibilities of a groundwater conservation district specified in Chapter 36 of the Texas Water Code. Upon adoption of the District Rules (Appendix B) by the Board of Directors in a public meeting, the authority to manage the use of groundwater in

the District will be governed at all times by the due process specified in the District Rules. (Appendix B).

VI. Geological Formations and Aquifers

All groundwater pumped in Wharton County originates from the Gulf Coast Aquifer. The Gulf Coast Aquifer is a major aquifer paralleling the Gulf of Mexico coastline from the Louisiana border to the border of Mexico (George and others, 2011). The Gulf Coast Aquifer is comprised of, from shallowest to deepest, the Chicot Aquifer, the Evangeline Aquifer, the Burkeville Confining Unit, and the Jasper Aquifer, with parts of the Catahoula Formation acting as the Catahoula Confining System.

The most recent studies funded by the TWDB that delineate the structure and stratigraphy of the Gulf Coast Aquifer are by Young and others (2010, 2012). These studies subdivided the aquifer units into geological formations based on chronostratigraphic correlations. Figure 3 shows the relationships between geological formations and aquifers as defined by Young and others (2010, 2012) and study of the Catahoula Aquifer (LGB Guyton and INTERA, 2013). Figure 4 is a vertical cross-section through the Gulf Coast Aquifer that crosses through Wharton County.

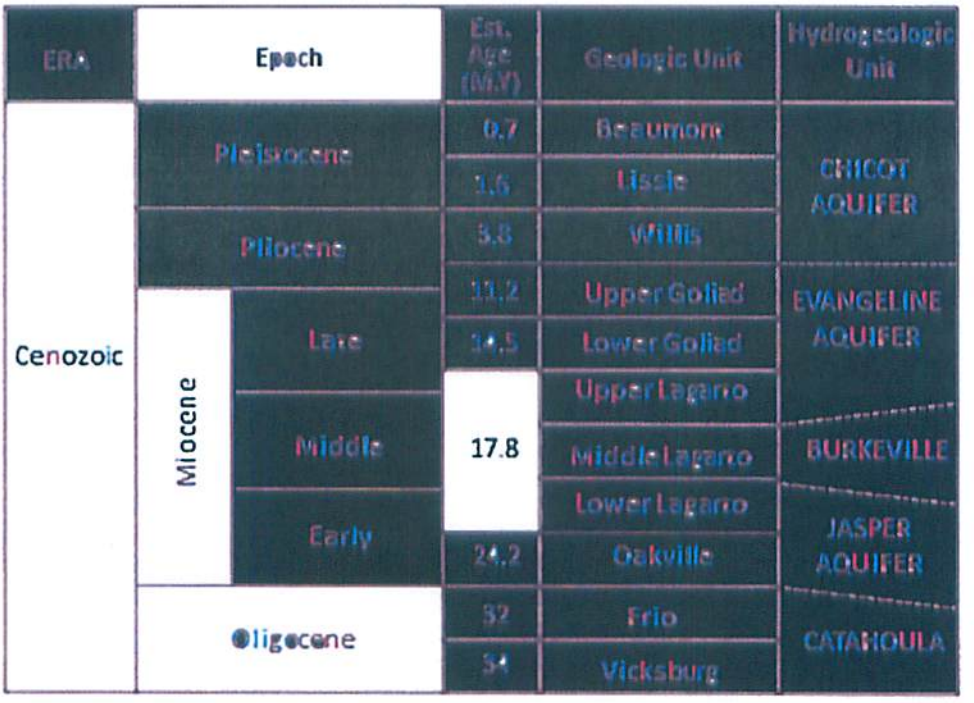

Figure 3. Geologic and Hydrologic Units of the Gulf Coast aquifer in Matagorda County, Modified from (based on Young and others (2010; 2012) and LGB Guyton and INTERA (2012)).

All of the District's registered wells are located in either the Chicot Aquifer or the Evangeline Aquifer. As shown in Figure 4, these two aquifers comprise the majority of the upper 1500 feet of the Gulf Coast Aquifer in Wharton. These two aquifers are described below.

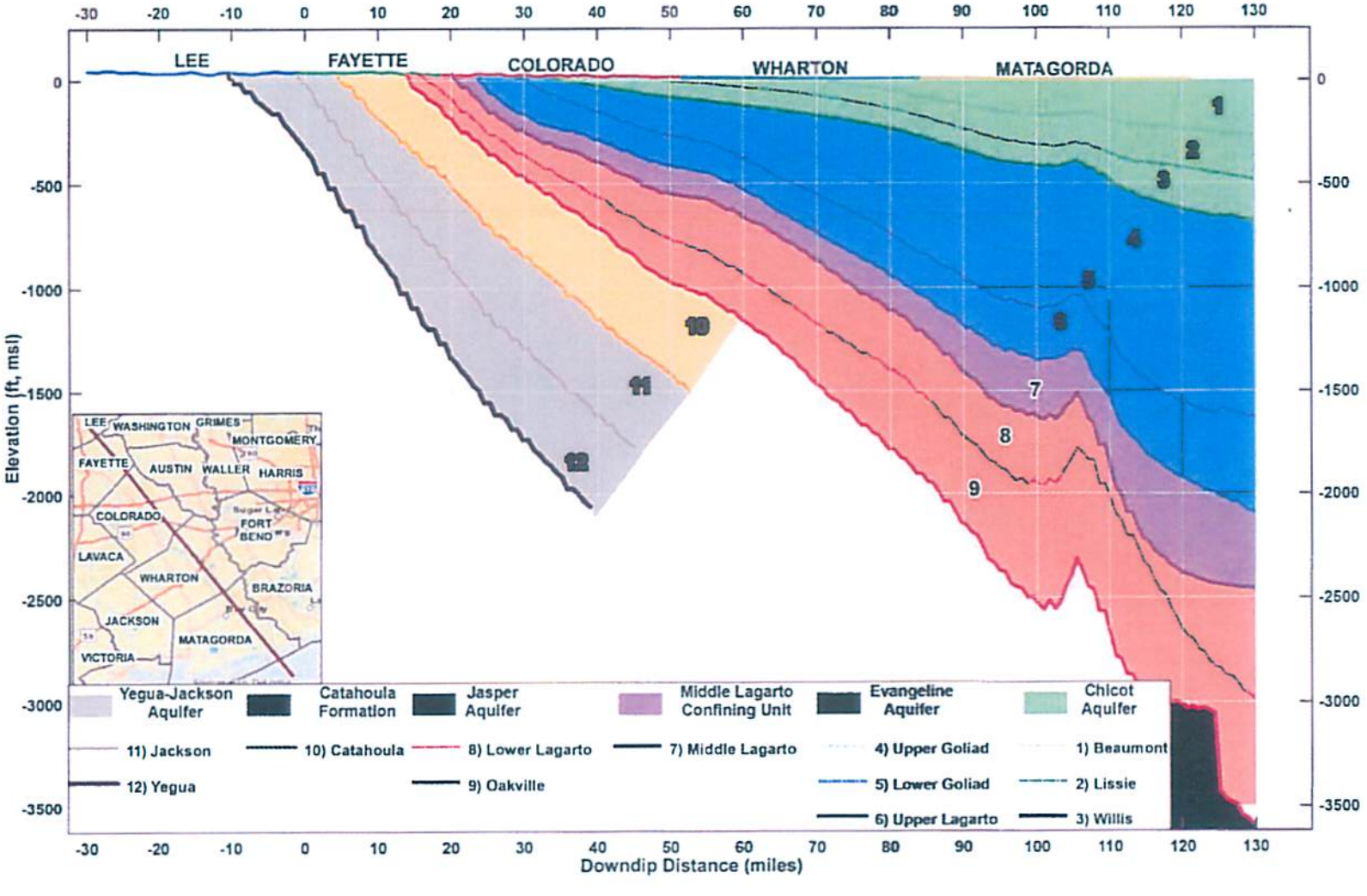

Figure 4. Vertical Cross-Section of the Geological Units through the middle of Wharton County

Chicot Aquifer - The Chicot Aquifer includes, from the shallowest to deepest, the Beaumont and Lissie Formations of Pleistocene age and the Pliocene-age Willis Formation. The Beaumont outcrop covers a large part of the lower coastal plain except where cut by modern river valleys or covered by Holocene wind-blown sand in south Texas. The Beaumont is often composed of clay-rich sediments transected by sandy fluvial and deltaic-distributary channels. Much of the original depositional morphology of Beaumont fluvial, deltaic, and marginal-marine systems, such as abandoned channels and relict beach ridges, can be seen at the surface in aerial photographs. At outcrop the Lissie is composed of fine-grained sand and sandy clay and unconformably overlies and onlaps the Willis (Morton and others, 1991). The Lissie is dominated by nonmarine depositional systems in the onshore part across most of the Texas Gulf Coast, although some shore-zone facies occur in Matagorda County as well as other coastal counties. At outcrop, the Willis is composed of gravelly coarse sand in several upward-fining successions that are interpreted as incised valley fills overlain by transgressive deposits (Morton and Galloway, 1991). Near the modern shoreline and offshore, Willis deltaic and marine systems record four cyclic depositional episodes bounded by transgressive shales (Galloway and others, 2000). Willis fluvial systems include dip-oriented sand-rich channel-fill facies and sand-poor interchannel areas, which grade toward the coast into shore-parallel deltaic and shore-zone sands and interdeltaic muddy bay deposits. Individual Willis sands vary widely in thickness from about 20 to 200 feet and are separated by muds of similar thickness (Knox and others, 2006).

Evangeline Aquifer- The Evangeline Aquifer includes the upper Goliad Formation of earliest Pliocene and late Miocene age, the lower Goliad Formation of middle Miocene age, and the upper unit of the Lagarto Formation (a member of the Fleming Group) of middle Miocene age. The Goliad Formation in Matagorda County was formed as part of the Eagle Lake Extrabasinal fluvial system. In this system the Goliad fluvial depositional systems comprise channel-fill and interchannel deposits (Young and others, 2012). Channel belts typically are 10 to 20 miles wide with about 50% sands and the interchannel deposits having less than 20% sand. The Upper Lagarto is comprised of deposits from the Fleming Group. The Fleming Group comprises several large fluvial systems that grade downdip into equally large delta and shore-zone systems (Rainwater, 1964; Doyle, 1979; Spradlin, 1980; DuBar, 1983; Galloway and others, 1982, 1986). In Matagorda, the Fleming sands tend to be align parallel to the shoreline and to have sand contents between 10 and 40% (Young and others, 2012).

Burkeville - The Burkeville Confining Unit is represented by the middle unit of the Lagarto Formation of middle and early Miocene age, which is the chronostratigraphic layer with the most widespread clayey interval between the Evangeline and Jasper Aquifers.

- the Jasper Aquifer includes the lower Lagarto unit of early Miocene age, the early Miocene Oakville sandstone member of the Fleming Group, and the sandy intervals of the Oligocene-age Catahoula Formation.

VII. Geography of the District

The District is located within the Gulf Coastal Plains region of Texas. The topography of the District ranges from gently rolling terrain in the northern part of the District to very gently rolling in the south. There are three major drainages in the District; Tres Palacios Creek in the western part, the Colorado River in the central part and the San Bernard River in the eastern part. The principal cross-roads of the District are State Highway 71 and U.S. Highway 59.

The major population centers in the district are the Cities of Wharton and El Campo. Other population centers of the District are Boling-Iago, Danevang, East Bernard, Egypt, Glen Flora, Hungerford, Lane City, Lissie, Louise and Pierce. (Texas Almanac, 2000)

Agriculture is one of the principal economic activities in the District. The District incorporates the leading rice producing region in Texas. However, the production of cotton, corn, grain sorghum, soybeans, turf grass, eggs and beef cattle production are also significant agricultural activities. Other principal economic activities in the District include production of oil and gas, mining of sulfur and gravels, waterfowl and big-game hunting and varied type of manufacturing. (Texas Almanac, 2000)

VIII. Management of Groundwater Supplies

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The District will evaluate and monitor groundwater conditions and regulate production consistent with this plan and the District Rules (Appendix B). Production will be regulated as needed to conserve groundwater, and protect groundwater users, in a manner not to unnecessarily and adversely limit production or impact the economic viability of the public, landowners and private groundwater users and achieve the Desired Future Conditions. In consideration of the importance of groundwater to the economy and culture of the District, the District will identify and engage in activities and practices that will permit groundwater production and, as appropriate, protect the aquifer and groundwater in accordance with this Management Plan and the District's rules (Appendix B). A monitoring well network will be maintained to monitor aquifer conditions within the District. The District will make a regular assessment of water supply and groundwater storage conditions and will report those conditions as appropriate in public meetings of the Board or public announcements. The District will undertake investigations, and co-operate with third-party investigations, of the groundwater resources within the District, and the results of the investigations will be made available to the public upon being presented at a meeting of the Board.

The District will amend the current rules to implement this plan to regulate groundwater withdrawals by means of well spacing and production limits as appropriate to implement this Plan. In making a determination to grant a permit or limit groundwater withdrawals, the District will consider the available evidence and, as appropriate and applicable, weigh the public benefit against the individual needs and hardship.

To accomplish the purposes of Texas Water Code Chapter 36, and to achieve the stated purposes and goals of the District, including managing the sustainability of the aquifers and preventing significant, sustained water-level declines within the aquifers, the District shall manage total groundwater production on a long-term basis to achieve the applicable desired future condition. The District may establish production limits on new regular permits or existing permits. All permits are issued subject to any future production limits adopted by the District.

The factors that the District may consider in making a determination to grant a drilling and operating or operating permit or limit groundwater withdrawals will include:

1. The purpose of the rules of the District;
2. The equitable distribution of the resource;
3. The economic hardship resulting from grant or denial of a permit, or the terms prescribed by the permit;
4. This Management Plan and Desired Future Conditions of the District as adopted in Joint Planning under §36.108, Water Code; and
5. The potential effect the permit may have on the aquifer, and groundwater users.

The transport of groundwater out of the District will be regulated by the District according to the Rules of the District (Appendix B).

In pursuit of the District's mission of protecting the groundwater resources and achieving the Desired Future Conditions, the District may require adjustment of groundwater withdrawals in accordance with the Rules (Appendix B) and Management Plan. To achieve this purpose, the District may, at the Board's discretion after notice and hearing, amend or revoke any permit for non-compliance, or reduce the production authorized by permit for the purpose of protecting the aquifer and groundwater availability. The determination to seek the amendment of a permit will be based on aquifer conditions observed by the District as stated in the District's rules. The determination to seek revocation of a permit will be based on compliance and non-compliance with the District's rules and regulations. The District will enforce the terms and conditions of permits and the rules of the District, as necessary, by fine and enjoining the permit holder in a court of competent jurisdiction as provided for in Chapter 36, Water Code.

As allowed under §36.116(b), Water Code, in promulgating rules, the district may preserve historic or existing use to the maximum extent practicable. If production limitations are necessary, historic user permits and regular permits will be required to reduce permits based on aquifer levels. The Board will determine if permit limits are necessary, and will consider:

1. the modeled available groundwater determined by the executive administrator;
2. the executive administrator's estimate of the current and projected amount of groundwater produced under exemptions granted by District Rules (Appendix B) and §36.117, Water Code;
3. the amount of groundwater authorized under permits previously issued by the District;
4. a reasonable estimate of the amount of groundwater that is actually produced under permits issued by the District; and
5. yearly precipitation and production patterns.

Permit limitations will be triggered if average aquifer levels decline below the Desired Future Condition. The first permit limitations will be triggered when aquifer levels drop at least one foot below the Desired Future Condition level; the second permit limitations will be triggered when aquifer levels drop at least two feet below the Desired Future Condition level; the third permit limitations will be triggered when aquifer levels drop at least four feet below the Desired Future Condition level. The percentage reduction will be based on hydrogeologic calculations of that amount of production that must be reduced to restore aquifer levels above the Desired Future Condition level. The exact amount of percentage reduction for each type of permit will be established by rule.

The District will employ reasonable and necessary technical resources at its disposal to evaluate the groundwater resources available within the District and to determine the effectiveness of regulatory or conservation measures. A public or private user may appeal to the Board for discretion in enforcement of the provisions of the water supply deficit contingency plan on grounds of adverse economic hardship or unique local conditions. The exercise of discretion by the Board shall not be construed as limiting the power of the Board.

IX. Desired Future Conditions - (§36.108, Water Code, and 31 TAC 356.5 (a)(5)(A))

Per §36.001, Water Code, "Desired future condition" means a quantitative description, adopted in accordance with §36.108, Water Code, of the desired condition of the groundwater resources in a management area at one or more specified future times. To establish a Desired future condition, the District shall participate in the joint planning process in GMA 15 as defined per §36.108, Water Code, including establishment of Desired Future Conditions (DFCs) for management areas within the District.

Based on the GMA 15 joint planning resolution dated 15 July 2010 (Hudgins, 2011), the District agreed to adopt the following Desired Future Condition:

> "An average drawdown of the Gulf Coast Aquifer within the GMA 15 boundary of 12 feet relative to year 1999 starting conditions in accordance with Table 7 of GAM Run 10-008 Addendum."

Figure 5 shows Table 7 of Gam Run 10-008 Addendum (Wade, 2010) (Appendix D). Currently, the District has no registered wells that intersect either the Burkeville or the Jasper

Table 7 GMA 15 12 feet scenario
Drawdown after 60 years (in feet, 1999 Starting Conditions)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	0.0	25.6	0.6	--	--	0.6	0.6
Bee	3.3	14.2	10.5	9.7	5.1	8.9	8.5
Calhoun	-0.9	9.7	2.1	2.6	--	2.1	2.1
Colorado	5.9	9.8	8.1	14.7	21.3	13.3	12.8
DeWitt	0.3	5.6	4.8	15.0	23.0	15.3	15.4
Fayette	--	14.2	14.2	42.4	49.3	42.2	42.1
Gohad	-1.2	3.7	2.6	7.4	9.3	6.0	5.4
Jackson	13.4	17.1	15.2	12.1	19.6	15.1	16.1
Karnes	--	-0.2	-0.2	16.1	15.7	14.3	13.7
Lavaca	5.3	5.6	5.5	14.7	29.4	16.1	16.7
Matagorda	3.3	19.0	8.1	14.8	--	8.7	8.1
Refugio	0.6	32.2	15.1	12.8	--	14.7	15.1
Victoria	-9.2	4.1	-2.3	3.5	7.8	1.0	0.0
Wharton	12.7	5.8	9.3	19.3	21.6	14.7	13.1
Overall	**3.7**	**10.8**	**7.4**	**13.5**	**21.1**	**12.0**	**11.5**

Pumping (AF/yr) 12 feet scenario

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	1,863	--	1,863	--	--	1,863	1,863
Bee	3,707	5,480	9,187	17	289	9,493	9,476
Calhoun	2,939	63	3,002	--	--	3,002	3,002
Colorado	24,937	23,102	48,039	--	918	48,957	48,957
DeWitt	1,019	7,071	8,090	128	6,408	14,626	14,498
Fayette (GMA 15)	--	906	906	157	7,408	8,490	8,314
Fayette (GMA 12)	--	--	--	--	339	339	339
Gohad	714	10,582	11,296	306	102	11,704	11,398
Jackson	55,772	20,615	76,387	--	--	76,387	76,387
Karnes	--	105	105	261	2,865	3,231	2,970
Lavaca	3,695	12,647	15,742	151	4,496	20,389	20,238
Matagorda	36,386	9,513	45,899	--	--	45,899	45,899
Refugio	6,379	22,951	29,330	--	--	29,330	29,330
Victoria	8,159	27,539	35,698	--	--	35,698	35,698
Wharton	110,822	67,676	178,498	--	--	178,498	178,498
Overall (GMA 15)	**255,792**	**208,250**	**464,042**	**1,039**	**22,486**	**487,567**	**486,528**

8

Aquifer.

Figure 5. Table 7 from GAM Run Addendum 10-008 (Wade, 2010) (Appendix D)

For the purpose of joint planning in GMA 15, the District considers the Burkeville Formation and Jasper Aquifer as non-relevant aquifers. Thus, the District will not have a DFC for the

Burkeville and the Jasper Aquifer. For the Chicot and the Evangeline Aquifers, the District will manage groundwater supplies to achieve a DFC of not more than 9.3 ft of average drawdown in the Chicot and Evangeline Aquifers over the period from 1999 to 2060. To manage the Chicot and Evangeline Aquifers so that 9.3 ft DFC will not be violated, the District will adopt rules to regulate groundwater withdrawals by means of well spacing and production limits as appropriate.

X. Modeled Available Groundwater - (§36.1071(e)(3)(A), Water Code and 31 TAC 356.5(a)(5)(A))

Modeled available groundwater is defined in §36.001, Water Code, as "the amount of water that the executive administrator determines may be produced on an average annual basis to achieve a desired future condition established under §36.108, Water Code. Table X.1 provides the MAG values for Wharton County as determined by the GAM Run 10-028 MAG (Hill and Oliver, 2011) (Appendix E). These MAG values are based on the DFC established by GMA 15 (Hudgins, 2013).

Table X.1 Modeled Available Groundwater (acre-feet/yr) for the Gulf Coast Aquifer in Wharton County as Determined by GAM Run 10-028 MAG (Hill and Oliver, 2011) (Appendix E)

Year	Modeled Available Groundwater (MAG) (acre-feet/yr)
2010	178,493
2020	178,493
2030	178,493
2040	178,493
2050	178,493
2060	178,493

The MAGs listed in Table X.1 were developed through the application of Version 1.01 of the groundwater availability model for the central portion of the Gulf Coast Aquifer (Chowdhury and others, 2004). This model includes four layers represent the Chicot Aquifer (layer 1), the Evangeline Aquifer (layer 2), the Burkeville Unit (layer 3), and the Jasper Aquifer including portions of the Catahoula Unit (layer 4). Wade (2010) provides the description of the methods, assumptions, and results of the groundwater availability model simulations.

The District will consider the MAGs in Table X.1 along with other factors, when issuing permits. Implicit in this consideration is recognition of the limitation of the groundwater availability model simulations (see Wade, 2010) and the TWDB disclaimer associated with MAG report (Hill and Oliver, 2011) that:

> "Given the limitations, users of this information are cautioned that the modeled available groundwater numbers should not be considered a definitive,

permanent description of the amount of groundwater that can be pumped to meet the adopted desired future condition. Because the application of the groundwater model was designed to address regional scale questions, the results are the most effective on a regional scale. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or a particular time."

XI. Groundwater Monitoring

The District will maintain a monitoring well network that will be used by the District to obtain measured water levels, and will also utilize any data from wells monitored by TWDB. Groundwater monitoring will be designed to monitor changes in groundwater conditions over time. The District encourages well owners to volunteer wells to be used as part of the monitoring network. The District will accept wells into, or replace an existing well in, the monitoring network. The selection process will consider the well proximity to other monitoring wells, to permitted and exempt wells, to streams, and to geographic and political boundaries. If no suitable well locations can be found to meet the monitoring objectives in a specific aquifer or management zone, the District may evaluate the benefits of converting an oil and gas well to a water well, drilling and installing a new well, or using modeled water levels for that area until such time as a suitable well can be obtained for monitoring.

2

XII. Estimate of the Amount of Groundwater Used in the District on Annual Basis - (§36.1071(e)(3)(B), Water Code, and 31 TAC 356.5 (a)(5)(B))

The data for groundwater use within the District for years 2000-2011 were obtained from the Texas Water Development Board (TWDB) Water use surveys (See Appendix C).

Table XII.1. Wharton County Historic Groundwater Use (source: TWDB Water Use Survey, 2014)

Year	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2011	7,350	150	38	0	181,384	1,111	190,033
2010	6,005	153	54	0	118,336	1,145	125,693
2009	6,557	231	55	0	121,315	1,188	129,346
2008	6,354	241	56	0	129,867	1,077	137,595
2007	5,749	208	0	0	80,464	1,047	87,468
2006	6,538	183	0	0	108,100	1,082	115,903
2005	6,531	149	0	0	88,120	997	95,797
2004	5,926	148	0	0	104,910	204	111,188
2003	6,267	112	0	0	127,806	199	134,384
2002	6,196	53	0	0	127,888	194	134,331
2001	6,293	133	0	0	131,934	193	138,553

2000	6,324	486	0	0	125,055	750	132,615

The Coastal Bend GCD began permitting non-exempt wells in 2005. Since that time, annual water use reports were collected from each permitted user in the District at the end of each calendar year. Exempt uses (*) were calculated based on the initial well registration of a well owner. The actual reported data for groundwater use within the District for years 2005-2013 is shown below in Table XII.2.

Table XII.2 Coastal Bend Groundwater Conservation Total Groundwater Use
Source: CBGCD database – August 2014

Type of Use	2005	2006	2007	2008	2009	2010	2011	2012	2013
Aquaculture	5939	10,068	6,606	9,683	12,460	9,075	8,712	10,174	
Com./Ind.	614	631	1,175	1,202	1,736	1,872	2,226	567	
1st Crop Rice	77,112	52,568	33,924	47,190	72,716	54,336	79,996	69,012	75,363
2nd Crop Rice	24,169	18,683	8,586	11,247	14,034	12,961	16,122	18,185	17,586
Corn	2,912	6,130	4,218	13,464	13,603	5,212	14,696	9,773	11,947
Cotton	3,417	1,791	599	3,816	4,690	2,533	7,300	2,783	3,686
Municipal	4,139	4,114	3,803	4,157	4,477	3,760	3,338	4,212	4,055
Nursery	2,259	2,790	2,965	2,301	3,257	3,387	4,486	4,600	4,116
Turfgrass	24,156	23,913	16,678	22,839	21,390	19,044	20,067	12,843	13,992
Soybeans	1,737	1,181	293	3,646	3,608	1,506	2,308	762	2,870
Milo	199	1,420	66	1,449	992	159	863	611	1,667
Waterfowl	3,422	4,683	4,807	6,628	5,452	6,346	6,664	8,763	8,620
Pasture/Hay	4,069	6,710	1,018	6,845	14,341	3,518	20,169	6,436	6,863
Recreational	0	0	227	414	385	433	0	0	199
*Domestic	1,700	1,702	1,702	1,730	1,733	1,733	TWDB	TWDB	TWDB
*Livestock	792	680	1,026	754	747	748	Exempt	Exempt	Exempt
*Other Use	233	241	241	279	299	299	Use: 3,814	Use: 3,814	Use: 3,814
Total GW (ac-ft)	158,869	137,305	85,932	137,624	175,920	129,942	190,759	153,313	161,981

On average, agricultural irrigation accounts for approximately 95% of Coastal Bend GCD's total groundwater use. Municipalities use 3-4% with the remainder of use being exempt use.

XIII. Estimate of the Annual Recharge from Precipitation to the Groundwater Resources within the District - (§36.1071(e)(3)(C), Water Code, and 31 TAC 356.5 (a)(5)(C))

The average amount of groundwater recharge from precipitation was estimated using Groundwater budget studies that employed the Central Gulf Coast Aquifer Model (Chowdhury and others, 2004) and the Lower Colorado River Basin Model (Young and others, 2010). The GAM runs were carried out by the Texas Water Development Board and

the results were described in the report (GAM Run 13-025, Goswami, 2013) (Appendix F). The LCRB Model Runs were performed by INTERA. The annual recharge estimate represents the average recharge from 1981-1999. The average annual recharge estimates in Table XIII.1 are 20,109 ~100,000 AF/yr based on the Central Gulf Coast Aquifer Model and the Lower Colorado Aquifer Model, respectively. As shown in Table XIII.1, all recharge from precipitation occurs in the Chicot Aquifer. One of the reasons for the large difference between the recharge values is the different numerical construction in the two models. The LCRB model has significantly smaller grid spacing and model layers than the GAM so that it can better represent the shallow flow zone (Toth, 1963, 1966, 1970). The shallow flow zone is the upper portion of a groundwater flow system that is primarily responsible for baseflow into the rivers and streams and has hydraulic head gradients, which control flow directions that largely mimic the topographic gradients. In addition, the LCRB model accounts for the recharge that results from irrigation/flooding of rice fields.

Table XIII.1 Estimate of the Annual Recharge from Precipitation to the Groundwater Resources within the District rounded to nearest 1 acre-foot.

Aquifer	Recharge from Precipitation	
	Central Gulf Coast GAM	Lower Colorado Basin Model
Gulf Coast Aquifer System	20,109	229,593

XIV. Estimate of the Annual Volume of Water That Discharges From the Aquifer to Springs and Any Surface Water Bodies, Including Lakes, Streams, and Rivers - (§36.1071(e)(3)(D), Water Code, and 31 TAC 356.5 (a)(5)(D))

The surface water-groundwater exchanges between various components average over the 1981-1999 time-frame is present in Table XIV.1. The Central Gulf Coast Aquifer Model (Chowdhury and others, 2004) and the Lower Colorado River Basin Model (Young and others, 2010). The GAM runs were carried out by the Texas Water Development Board and the results were described in the report (GAM Run 13-025, Goswami, 2013) (Appendix F). The LCRB Model Runs were performed by INTERA. Negative values indicate discharge out of aquifer. The results indicated that over the 1981-1999 time frame, there is a net loss of water from the Chicot Aquifer to surface water bodies. One of the reasons for the large difference between the water exchange values that the two models have very different numerical grids and construction. The LCRB model has significantly smaller grid spacing and model layers than does the GAM so that it can better represent the shallow flow zone (Toth, 1963, 1966, 1970). The shallow flow zone is the upper portion of a groundwater flow system that is primarily responsible for baseflow into the rivers and streams and has hydraulic head gradients, which control flow directions that largely mimic the topographic gradients.

Table XIV.1. Estimate of the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers rounded to nearest 1 acre-foot.

Aquifer	Net Surface Water-Groundwater Water Exchange (AF/yr)	
	Central Gulf Coast GAM	Lower Colorado Basin Model
Gulf Coast Aquifer System	14,614[1]	65,888

[1]This total includes 146 acre-feet per year spring discharge and 14,468 acre-feet per year leakage to streams.

Note: negative values indicate a net loss of groundwater to surface water

XV. Estimate of Annual Volume of Flow Into and Out of the District Within Each Aquifer and Between Aquifers in the District, If a Groundwater Availability Model is Available - (§36.1071(e)(3)(E), Water Code and 31 TAC 356.5(a)(5)(E))

The lateral movement of water (inflow into and out of the district) across the district boundaries is referred to as horizontal exchanges. Water budget calculations were made by TWDB for each year during the 1980-1999 time frame over the entire Coastal Bend GCD. Vertical exchanges represent the cross-formational flows within the District boundaries among various aquifer formations. Table XV.1 shows water budget calculations based on results from the Central Gulf Coast (GAM Run 13-025, Goswami, 2013) (Appendix F). Table XV.2 shows water budget calculations based on results from the Lower Colorado River Basin Model (INTERA, 2013).

Table XV.1. Estimate of annual volume of flow into and out of District rounded to nearest 1 acre-foot based on results from the Gulf Coast Central GAM

Aquifer	Lateral Flow Into the District (acre-ft/yr)	Lateral Flow Out of the District (acre-ft/yr)	Flow Between Aquifer and Overlying Geologic Unit [1] (acre-ft/yr)
Gulf Coast Aquifer System	55,548	25,453	NA

Note: NA – not applicable

[1] positive values indicate flow into the aquifer; negative numbers indicate flow out of the aquifer

Table XV.2. Estimate of annual volume of flow between each aquifer in the District rounded to nearest 1 acre-foot based on results from the Lower Colorado River Basin Model

Aquifer	Flow Into the District (acre-ft/yr)	Flow Out of the District t(acre-ft/yr)	Flow Between Aquifer and Overlying Geologic Unit [1] (acre-ft/yr)
Gulf Coast Aquifer System	63,190	43,450	NA

Note: NA – not applicable

[1] positive values indicate flow into the aquifer; negative numbers indicate flow out of the aquifer

XVI. Projected Surface Water Supply in the District, According to the Most Recently Adopted State Water Plan - (§36.1071(e)(3)(F), Water Code, and 31 TAC 356.5(a)(5)(F))

The projected surface water supply in the district, according to the most recently adopted state water plan, is provided in Appendix C, in the Table titled, "Projected Surface Water Supplies-TWDB 2012 State Water Plan."

XVII. Projected Total Demand For Water in the District According to the Most Recent Adopted State Water Plan - (§36.1071(e)(3)(G), Water Code, and 31 TAC 356.5(a)(5)(G))

The projected total demand for water in the district, according to the most recently adopted state water plan, is provided in Appendix C, in the Table titled, "Projected Water Demands: TWDB 2012 State Water Plan Data."

XVIII. Water Supply Needs and Water Management Strategies Included in the Adopted State Water Plan - (§36.107(e)(4), Water Code, and 31 TAC 356.5(a)(7))

The water supply needs for the district, according to the most recently adopted state water plan, is provided in Appendix C, in the Table titled, "Projected Water Supply Needs: TWDB 2012 State Water Plan Data."

The water management strategies for the district, according to the most recently adopted state water plan, is provided in Appendix C, in the Table titled, "Projected Water Management Strategies: TWDB 2012 State Water Plan Date."

XIX. Actions, Procedures, Performance and Avoidance Necessary to Effectuate the Plan

The District will implement the provisions of this management plan and will utilize the objectives of the plan as a guide for District actions, operations and decision-making. The District will ensure that its planning efforts, activities and operations are consistent with the provisions of this plan.

The District will amend the current rules to implement this plan in accordance with Chapter 36 of the Texas Water Code and all rules will be followed and enforced. The development of rules will be based on the best scientific information and technical evidence available to the District.

http://www.cbgcd.com/20131112%20CBGCD%20Rules%20FINAL.pdf

The District will encourage cooperation and coordination in the implementation of this plan. All operations and activities will be performed in a manner that encourages the cooperation of the citizens of the District and with the appropriate water management entities at the state, regional and local level.

XX. Methodology for Tracking the District's Progress in Achieving Management Goals

The general manager of the District will prepare and submit an annual report (Annual Report) to the District Board of Directors. The Annual Report will include an update on the District's performance in achieving the management goals contained in this plan. The general manager will present the Annual Report to the Board of Directors Within ninety (90) days following the completion of the District's Fiscal Year, beginning in the fiscal year starting on October 1, 2013. A copy of the annual audit of District financial records will be included in the Annual Report. The District will maintain a copy of the Annual Report on file for public inspection at the District offices, upon adoption by the Board of Directors.

XXI. Management Goals

1) Providing for the Most Efficient Use of Groundwater in the District.

1.1 Objective – Each year, the District will require 100 percent of new exempt or permitted wells that are constructed within the boundaries of the District to be registered with the District in accordance with the District Rules (Appendix B).

1.1 Performance Standard – The number of exempt and permitted wells registered by the District for the year will be incorporated into the Annual Report submitted to the Board of Directors of the District.

1.2 Objective – Each year, the District will regulate the production of groundwater by maintaining a system of permitting the use of groundwater within the boundaries of the District in accordance with the District Rules (Appendix B).

1.2 Performance Standard – Each year the District will accept and process applications for the permitted use of groundwater in the District in accordance with the permitting process established by District Rules (Appendix B). The number and type of applications made for the permitted use of groundwater in the District and, the number and type of permits issued by the District will be included in the Annual Report given to the Board of Directors.

1.3 Objective – The District will conduct an investigation to evaluate the aquifers of the district and the production of groundwater within the district in preparation of establishing a monitor well network within the boundaries of the District.

1.3. **Performance Standard** – Each year the District will utilize the monitor well network to take samples of water quality and to conduct regular measurements of the changing water-levels in the aquifers of the District. The District will monitor the water levels in at least 10 wells monthly throughout the District. The District will also annually test the water quality in at least one well for each county precinct in Wharton County. A progress report on the work of the District regarding monitoring the water quality and water-levels of aquifers within the District will be included in the Annual Report of the District each year.

2) Controlling and Preventing the Waste of Groundwater in the District.

2.1 **Objective** – Each year, the District will make an evaluation of the District Rules (Appendix B) to determine whether any amendments are recommended to decrease the amount of waste of groundwater within the District.

2.1 **Performance Standard** – The District will include a discussion of the annual evaluation of the District Rules (Appendix B) and the determination of whether any amendments to the rules are recommended to prevent the waste of groundwater in the Annual Report of the District provided to the Board of Directors.

2.2 **Objective** – Each year, the District will provide at least one article annually on the District's website on eliminating and reducing wasteful practices in the use of groundwater.

2.2 **Performance Standard** – Each year, a copy of the information provided on the District's website regarding groundwater waste reduction will be included in the District's Annual Report to be given to the District Board of Directors.

3) Controlling and Preventing Subsidence.

3.1 **Objective** – Each year, the District will hold a joint meeting with neighboring Groundwater Conservation Districts focused on sharing information regarding subsidence and the control and prevention of subsidence through the regulation of groundwater use.

3.1 **Performance Standard** – Each year, a summary of the joint meeting on subsidence issues will be included in the Annual Report submitted to the Board of Directors of the District.

3.2 **Objective** – Each year, the District will provide one article annually on the District's website to educate the public on the subject of subsidence.

3.2 **Performance Standard** – The Annual Report submitted to the Board of Directors will include a copy of the article posted on the District's website.

4) Natural Resource Issues That Affect the Use and Availability of Groundwater or are affected by the Use of Groundwater.

4.1 **Objective** – Each year the District will inquire to the Texas Railroad Commission asking whether any new salt water or waste disposal injection wells have been permitted by the Texas Railroad Commission to operate within the District.

4.1 Performance Standard – Each year a copy of the letter to the Texas Railroad Commission asking for the location of any new salt water or waste disposal wells permitted to operate within the District will be included in the Annual Report submitted to the Board of Directors of the District along with any information received from the TRC.

4.2 Objective – Each year the District will request the Texas Railroad Commission to provide a copy of the results of integrity tests performed on salt water or waste disposal injection wells permitted by the Texas Railroad Commission to operate within the District.

4.2 Performance Standard – Each year a copy of the letter to the Texas Railroad Commission requesting the results of the integrity testing performed on salt water or waste disposal injection wells permitted by the Texas Railroad Commission to operate within the District will be included in the Annual Report submitted to the Board of Directors of the District along with any information received from the TRC.

5) Conjunctive Surface Water Management Issues.

27
29
30

5.1 Objective – Each year, the District will participate in the regional planning process by attending 50% of the Region K and Region P Regional Water Planning Group meetings to encourage the development of surface water supplies to meet the needs of water user groups in the District.

5.1 Performance Standard – The percentage of meetings attended by a District representative at the Region K and Region P Regional Water Planning Group meetings will be noted in the Annual Report presented to the District Board of Directors.

6) Addressing Drought Conditions.

35
37
38

6.1 Objective – Each month, the District will download the updated Palmer Drought Severity Index (PDSI) map and other related information from the National Weather Service – Climate Prediction Center website. Additional information is available from TWDB at the following website:

http://waterdatafortexas.org/drought/

6.1 Performance Standard – Quarterly, the District will make an assessment of the status of drought in the District and prepare a quarterly briefing to the Board of Directors. The downloaded PDSI maps and other related information will be included with copies of the quarterly briefing in the District Annual Report to the Board of Directors.

7) Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, or Brush Control, where appropriate and cost-effective.

Conservation

7.1 **Objective** – The District will annually submit an article regarding water conservation for publication to at least one newspaper of general circulation in the District.

7.1 **Performance Standard** – A copy of the article submitted by the District for publication to a newspaper of general circulation in the District regarding water conservation will be included in the Annual Report to the Board of Directors.

7.2 **Objective** – The District will develop or implement a pre-existing educational program for use in public or private schools located in the District to educate students on the importance of water conservation.

7.2 **Performance Standard** – A summary of the educational program developed or implemented by the District for use in public or private schools located in the District will be included in the Annual Report to the Board of Directors for every year this plan is active.

7.3 **Objective** – Each year, the District will include an informative flier on water conservation with at least one mail out to groundwater use permit holders distributed in the normal course of business for the District.

7.3 **Performance Standard** – The District's Annual Report will include a copy of the informative flier distributed to groundwater use permit holders regarding water conservation and the number of fliers distributed.

Recharge Enhancement

7.4 **Objective** – Each year, the District will provide one article relating to recharge enhancement on the District web site.

7.4 **Performance Standard** – Each year, the District annual report will include a copy of the information that has been provided on the District web site relating to recharge enhancement.

Precipitation Enhancement

Precipitation enhancement is not an appropriate or cost-effective program for the District at this time because there is not an existing precipitation enhancement program operating in nearby counties in which the District could participate and share costs. The cost of operating a single-county precipitation enhancement program is prohibitive and would require the District to increase taxes. Therefore, this goal is not applicable to the District at this time.

Brush Control

7.5 Objective – Each year, the District will provide one article relating to Brush Control on the District web site.

7.5 Performance Standard – Each year, the District annual report will include a copy of the information that has been provided on the District web site relating to Brush Control.

Rainwater Harvesting

7.6 Objective – Each year, the District will provide one article relating to Rainwater Harvesting on the District web site.

7.6 Performance Standard – Each year, the District annual report will include a copy of the information that has been provided on the District web site relating to Rainwater Harvesting.

8) Addressing Desired Future Conditions (DFCs)

8.1 Management Objective:

At least once every three years, the District will monitor water levels and evaluate whether the change in water levels is in conformance with the DFCs adopted by the District. The District will estimate total annual groundwater production for each aquifer based on the water use reports, estimated exempted use, and other relevant information, and compare these production estimates to the MAGs listed in Table X.1.

8.1 Performance Standard:

1. At least once every three years, the general manager will report to the Board the measured water levels obtained from the monitoring wells within each Management Zone, the average measured drawdown for each Management Zone calculated from the measured water levels of the monitoring wells within the Management Zone, a comparison of the average measured drawdowns for each Management Zone with the DFCs for each Management Zone, and the District's progress in conforming with the DFCs.

2. At least once every three years, the general manager will report to the Board the total permitted production and the estimated total annual production for each aquifer and compare these amounts to the MAGs listed in Figure 5 for each aquifer that is declared by the district to be relevant.

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Appendix A
Enabling Act
Chapter 8829, Special District Local Laws Code

SPECIAL DISTRICT LOCAL LAWS CODE

TITLE 6. WATER AND WASTEWATER

SUBTITLE H. DISTRICTS GOVERNING GROUNDWATER

CHAPTER 8829. COASTAL BEND GROUNDWATER CONSERVATION DISTRICT

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8829.001. DEFINITIONS. In this chapter:

(1) "Board" means the district's board of directors.

(2) "Director" means a board member.

(3) "District" means the Coastal Bend Groundwater Conservation District.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.002. NATURE OF DISTRICT. The district is a groundwater conservation district in Wharton County created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.003. FINDINGS OF PUBLIC USE AND BENEFIT. (a) The district is created to serve a public use and benefit.

(b) All land and other property included in the district will benefit from the works and projects accomplished by the district under the powers conferred by Section 59, Article XVI, Texas Constitution.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.004. DISTRICT TERRITORY. The district's boundaries are coextensive with the boundaries of Wharton County, Texas, unless the district's territory has been modified under:

(1) Subchapter J, Chapter 36, Water Code; or

(2) other law.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.005. DISTRICT NAME CHANGE. The board may change the district's name when the district annexes territory.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.006. CONFLICTS OF LAW. (a) Except as otherwise provided by this chapter, if there is a conflict between this chapter and Chapter 36 or 49, Water Code, this chapter controls.

(b) If there is a conflict between Chapters 36 and 49, Water Code, Chapter 36 controls.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

SUBCHAPTER B. BOARD OF DIRECTORS

Sec. 8829.051. COMPOSITION OF BOARD; TERMS. (a) Except as provided by Section 8829.056(b), the district is governed by a board of five directors.

(b) Directors serve staggered four-year terms.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.052. ELECTION OF DIRECTORS. (a) Except as provided by Section 8829.056, this section and Sections 8829.053 and 8829.054 govern the election and qualifications of directors.

(b) Directors are elected according to the commissioners precinct method as provided by this section.

(c) One director is elected by the voters of the entire district. One director is elected from each county commissioners precinct by the voters of that precinct.

(d) A person shall indicate on the application for a place on the ballot:

(1) the precinct that the person seeks to represent; or

(2) that the person seeks to represent the district at large.

(e) At the first election after the county commissioners precincts are redrawn under Section 18, Article V, Texas Constitution, a new director is elected from each precinct. The directors shall draw lots to determine which two directors shall serve two-year terms and which two directors shall serve four-year terms.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.053. ELECTION DATE. (a) The district shall hold an election in the district to elect directors on the first Tuesday after the first Monday in November of each even-numbered year.

(b) The district shall hold elections for the directors for:

(1) Precincts 1 and 3 every four years after 2004; and

(2) Precincts 2 and 4 and the district at large every four years after 2002.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.054. QUALIFICATIONS FOR OFFICE. (a) To be qualified to be a candidate for or to serve as director at large, a person must be a registered voter in the district.

(b) To be a candidate for or to serve as director from a county commissioners precinct, a person must be a registered voter of that precinct.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.055. BOARD VACANCY. (a) The board shall appoint a replacement to fill a vacancy in the office of any director.

(b) The appointed replacement serves until the next directors' election.

(c) If the position is not scheduled to be filled at the next election, the person elected to fill the position serves only for the remainder of the unexpired term.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.056. COMPOSITION OF BOARD AND ELECTION OF DIRECTORS FOLLOWING ANNEXATION. (a) If the district annexes territory, the board of directors of the district by resolution shall adopt an appropriate and equitable method for:

(1) electing directors for the district;

(2) drawing voting district boundaries if required by the method adopted; and

(3) maintaining staggered terms for the directors.

(b) If the district annexes territory, the board by resolution may add one or more directors as provided by Section 36.051, Water Code.

(c) If the board votes to add a director to represent annexed territory under Subsection (b), at an election to ratify annexation under Section 36.328, Water Code, the board may include on the ballot the names of candidates for director to represent the annexed territory on the board. A director elected under this subsection serves until an election is held under Subsection (d).

(d) A method of electing directors adopted under Subsection (a):

(1) supersedes the method of electing directors provided by Sections 8829.052-8829.054; and

(2) applies beginning with the election held on the first date provided by Section 8829.053 that:

(A) occurs after the date the annexation of the territory is final; and

(B) allows sufficient time to comply with any requirements of law.

(e) The method of electing directors provided by Sections 8829.052-8829.054 applies until an election is held under Subsection (d).

(f) To be eligible to be a candidate for or to serve as a director of the district under this section, a person must:

(1) be a registered voter of the district; and

(2) comply with each requirement stated in a resolution adopted under Subsection (a).

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.057. REVISION OF VOTING DISTRICTS. (a) The board may revise voting districts as necessary or appropriate.

(b) If the board adopts a method for electing directors based on voting districts, the board shall revise each district

after each federal decennial census to reflect population changes.

(c) When the boundaries of the voting districts are redrawn, a director serving on the effective date of the change, or elected or appointed before the effective date of the change to a term of office beginning on or after the effective date of the change, serves the term or the remainder of the term in the district to which elected or appointed even though the change in district boundaries places the person's residence outside the district for which the person was elected or appointed.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

SUBCHAPTER C. POWERS AND DUTIES

Sec. 8829.101. GROUNDWATER CONSERVATION DISTRICT POWERS AND DUTIES. Except as provided by this chapter, the district has the rights, powers, duties, privileges, and functions provided by the general law of this state, including Chapter 36, Water Code, applicable to groundwater conservation districts created under Section 59, Article XVI, Texas Constitution.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Sec. 8829.102. REGIONAL COOPERATION. (a) In recognition of the need for uniform regional monitoring and regulation of common, scientifically recognized groundwater sources, and within designated management areas, the district shall establish rules that:

(1) require the permitting of each water well that is:

(A) not exempted from permitting by Chapter 36, Water Code; and

(B) capable of producing more than 25,000 gallons each day;

(2) provide for the prevention of waste, as defined by Section 36.001, Water Code;

(3) provide for timely capping or plugging of abandoned wells; and

(4) require reports to be filed with the district on each new, nonexempt water well.

(b) A report required under Subsection (a)(4) must include:

(1) the driller's log;

(2) a description of the casing and pumping equipment installed;

(3) the capacity of the well; and

(4) the intended use of the water.

(c) To further regional continuity, the district shall:

(1) seek to participate in at least one coordination meeting annually with each adjacent district that shares an aquifer with the district;

(2) coordinate the collection of data with adjacent districts in a manner designed to achieve uniformity of data quality;

(3) coordinate efforts to monitor water quality with adjacent districts, local governments, and state agencies;

(4) investigate any groundwater pollution with the intention of locating its source and report its findings to adjacent districts and appropriate state agencies;

(5) provide to adjacent districts annually an inventory of new water wells in the district and an estimate of groundwater production within the district; and

(6) include adjacent districts on the mailing lists for district newsletters, seminars, public education events, news articles, and field days.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Amended by:

Acts 2011, 82nd Leg., R.S., Ch. 91 (S.B. 1303), Sec. 22.022, eff. September 1, 2011.

SUBCHAPTER D. FINANCIAL PROVISIONS

Sec. 8829.151. DISTRICT REVENUE. To pay the district's maintenance and operating costs, the district may:

(1) impose an ad valorem tax at a rate not to exceed five cents for each $100 of taxable value of property in the district;

(2) assess general production fees;

(3) solicit and accept grants from any public or private source; and

(4) assess a transfer fee on water exported from the district.

Added by Acts 2009, 81st Leg., R.S., Ch. 1139 (H.B. 2619), Sec. 1.05, eff. April 1, 2011.

Appendix B
District Rules

RULES OF THE

COASTAL BEND
GROUNDWATER CONSERVATION DISTRICT

ADOPTED ON:
APRIL 13, 2004

ORIGINAL EFFECTIVE DATE:
MAY 15, 2004

AMENDED ON:
June 26, 2012
November 12, 2013
February 11, 2014
June 10, 2014

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RULES OF THE

COASTAL BEND
GROUNDWATER CONSERVATION DISTRICT

Board of Directors

Ronald Gertson - President
Precinct 2

L.G. Raun - Vice President
Precinct 3

E.A Weinheimer – Secretary
At Large

Arthur A. Priesmeyer
Precinct 4

Leonard Wittig
Precinct 1

General Manager

Neil Hudgins

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CHAPTER 1. GENERAL PROVISIONS

SUBCHAPTER A: GENERAL

§1.1 PURPOSE OF RULES

(a) The purpose of these Rules of the Coastal Bend Groundwater Conservation District is to implement the powers and duties of the District under its Enabling Act, Texas Water Code Chapter 36, and other applicable laws and to establish the general policies and procedures of the District.

(b) The District's Rules are promulgated under the District's statutory authority to achieve the following objectives: to provide for conserving, preserving, protecting, and recharging of the groundwater or of a groundwater reservoir or its subdivisions in order to control subsidence, or prevent waste of groundwater. The District's orders, rules, regulations, requirements, resolutions, policies, guidelines, or similar measures have been implemented to fulfill these objectives.

(c) The Rules of the Coastal Bend Groundwater Conservation District will guide, define, and achieve the District goals of water conservation and pollution prevention in an effort to preserve, protect, and enhance the groundwater within the District's jurisdictional boundaries.

§1.2 USE AND EFFECT OF RULES

(a) The District uses these Rules as guides in the exercise of the powers conferred to it by law and in the accomplishment of the purposes of the Enabling Act. They may not be construed as a limitation or restriction on the exercise of any discretion, where it exists; nor shall they be construed to deprive the District or Board of the exercise of any powers, duties or jurisdiction conferred by law; nor shall they be construed to limit or restrict the amount and character of data or information that may be required to be collected for the proper administration of the Enabling Act.

(b) Except as otherwise specified, these rules are effective on the date of adoption by the Board of Directors. References to Texas Water Code Chapter 36 include subsequent revisions and are effective upon the effective date of these Rules or upon the effective date of subsequent amendments to Texas Water Code Chapter 36.

§1.3 AMENDING RULES

The Board may, following notice and hearing, amend these Rules or adopt new rules from time to time.

§1.4 HEADINGS AND CAPTIONS

The section and other headings and captions contained in these Rules are for reference purposes only and may not affect in any way the meaning or interpretation of these Rules.

§1.5 CONSTRUCTION OF RULES

(a) Unless otherwise expressly provided for in these Rules, the past, present and future tense shall each include the other; the masculine, feminine and neuter gender shall each include the other; and the singular and plural number shall each include the other.

(b) The verbs "may," "can," "might," "should," or "could" are used when an action is optional or may not apply in every case. The verbs "will," "shall," or "must" are used when an action is required. The verb "cannot" is used when an action is not allowed or is unachievable.

§1.6 SEVERABILITY

In case any one or more of the provisions contained in these Rules shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability may not affect any other Rules, or provisions hereof, and these Rules shall be construed as if such invalid, illegal, or unenforceable rule or provision had never been contained herein.

§1.7 SAVINGS CLAUSE

If any section, sentence, paragraph, clause, or part of these Rules should be held or declared invalid for any reason by a final judgment of the courts of this state or of the United States, such decision or holding may not affect the validity of the remaining portions of these Rules; and the Board does hereby declare that it would have adopted and promulgated such remaining portions irrespective of the fact that any other sentence, section, paragraph, clause, or part thereof may be declared invalid.

§1.8 COMPUTING TIME

In computing any period of time prescribed or allowed by these Rules, by order of the Board, or by any applicable statute, the day of the act, event, or default from which the designated period of time begins to run, is not to be included, but the last day of the period so computed is to be included, unless it be a Saturday, Sunday, or legal holiday on which the District is closed, in which event the period runs until the end of the next day that is neither a Saturday, Sunday, or a legal holiday on which the District is closed.

§1.9 TIME LIMITS

Applications, requests, or other papers or documents required or permitted to be filed under these Rules must be received for filing at the District, within the time limit, if any, for such filing. The date of receipt and not the date of posting is determinative.

§1.10 REGULATORY COMPLIANCE

Where District Rules and regulations are more stringent than those of other governmental entities, the District Rules and regulations shall control, provided the rules and regulations are within the scope of the District's statutory authority and are not otherwise preempted by state or federal law.

SUBCHAPTER B: GENERAL OPERATIONS

§1.20 MEETINGS OF THE BOARD

The Board of Directors will hold regular meetings at least quarterly. In addition, the Board may hold special meetings at the request of the President or two Directors. All Board meetings will be held in accordance with Chapter 551 of the Texas Government Code.

SUBCHAPTER C: RULEMAKING PROCEDURES

§1.40 APPLICABILITY

This subchapter applies to rulemaking by the District but does not apply to internal personnel rules or practices, bylaws, statements regarding internal management or organization, or other statements not of general applicability.

§1.41 PUBLIC HEARINGS ON PROPOSED RULES

(a) The Board shall hold at least one public hearing on proposed rules prior to adoption of the proposed rules as final rules.

(b) The Board may direct the General Manager or another person to serve as the presiding officer and to conduct the public hearings on the proposed rules.

(c) Public hearings will be conducted in the manner the Board or General Manager deems most suitable to conveniently, inexpensively, and expeditiously provide a reasonable opportunity for interested persons to submit relevant data, views, or arguments, in writing or orally, on proposed rules.

§1.42 NOTICE OF PUBLIC HEARINGS ON PROPOSED RULES

(a) The Board will set a time and place for any public hearing on proposed rules of the District.

(b) The General Manager shall give prior notice of the public hearing at least twenty (20) days before the public hearing by posting the notice in the location where notices of the District's Board meetings are posted and by publishing the notice in one or more newspapers of general circulation within the District, unless the Board determines an emergency to public health or safety exists.

(c) The notice shall advise the public of the following:

(1) the proposed agenda;

(2) the date, place, and time the public hearing is to be convened;

(3) the date and time by which written comments must be filed with the District; and

(4) the place at which written comments must be filed with the District.

§1.43 ADOPTION OF RULES

(a) The Board may adopt proposed rules as final rules at any time after the completion of the public hearing(s) and after the close of the written comment period.

(b) The Board will compile its rules and make them available for public use and inspection at the District's principal office.

CHAPTER 2. DEFINITIONS

§2.1 APPLICABILITY

(a) The District employs two types of definitions. General definitions apply to all Rules of the District. Specific definitions apply only to the chapter in which they are located. Specific definitions applying only to a particular chapter are set out in that chapter.

(b) The District follows the definitions of terms set forth in Texas Water Code Chapter 36 and other definitions as set forth herein.

§2.2 DEFINITIONS

Unless the context clearly indicates a contrary meaning, the following words and terms shall have the following meanings in these Rules:

(1) **"Abandoned well"** - a well, other than a monitor well, that has not been used for twelve consecutive months. A well is considered to be in use in the following cases:

(A) a non-deteriorated well which contains the casing, pump, and pump column in good condition; or

(B) a non-deteriorated relief well.

(2) **"Acre Foot"** - the volume of water necessary to cover one acre of land one foot deep or 325,851 gallons.

(3) **"Aggregate System"** - two or more wells that are permitted by the District for a total aggregate withdrawal.

(4) **"Aggregate Withdrawal"** - the amount of water withdrawn from two or more wells permitted for a total pumpage volume of all wells in the aggregate.

(5) **"Agriculture or Agricultural Use"** - any use or activity involving agriculture as defined in Texas Water Code Section 36.001, including but not limited to aquaculture; irrigation to cultivate the soil to produce crops; the practice of floriculture, viticulture, silviculture, and horticulture, including nursery grower operations; raising, feeding, or keeping animals for breeding or production of food or fiber or other products with a tangible commercial value; planting cover crops, wildlife management; or raising or keeping equine animals.

(6) **"Annular Space"** - the space between two cylindrical objects, one of which surrounds the other, such as the space between the walls of a drilled hole and the installed casing.

(7) **"Aquifer"** - a geologic formation with water sufficient quantities to make the production of water from this formation feasible for beneficial use.

(8) **"Artesian Zone"** - a zone where water is confined in an aquifer under pressure so that the water will rise in the well casing or drilled hole above the bottom of the confining bed overlying the aquifer.

(9) **"AWWA"** - American Water Works Association.

(10) **"Beneficial Use"** - the use of groundwater in a nonwasteful manner for one or more economically beneficial purposes including but not limited to agricultural use, domestic use, stock-raising, municipal use, mining, industrial use including manufacturing, commercial use, non-agricultural irrigation, recreational use, oil and gas operations, or other uses including extraction for the purposes of remediation, injection operations, or leachate operations.

(11) **"Board"** - the Board of Directors of the Coastal Bend Groundwater Conservation District.

(12) **"Capped Well"** - a well that is closed or capped with a covering capable of preventing surface pollutants from entering the well and sustaining weight of at least 400 pounds. A well cap must be constructed in such a way that the covering cannot be easily removed by hand.

(13) **"Casing"** - a watertight pipe installed in an excavated or drilled hole, temporarily or permanently, to maintain the hole sidewalls against caving, advance the borehole, and in conjunction with cementing or bentonite grouting, to confine the groundwater to their respective zones or origin, or to prevent surface contaminant infiltration.

(14) **"Cement Grout"** - a mixture of water and cement, which may also include a bentonite clay component.

(15) **"Commercial Use"** - a well used to supply water to properties or establishments in business to provide goods or services or repairs and use water either in those processes or incidental to the maintenance of the property or establishment including landscape irrigation; or a well used to supply water to a business establishment primarily for employee and customer sanitary purposes.

(16) **"Conservation"** - those water saving practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that more water is made available for future or alternative uses.

(17) **"Director"** - an elected or appointed member of the Board of Directors of the Coastal Bend Groundwater Conservation District.

(18) **"Desired Future Condition"** - the desired, quantified condition 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, as defined by participating groundwater conservation districts within Groundwater Management Area 15 as part of the joint planning process.

(19) **"De-watering Well"** - an artificial excavation that is constructed to produce groundwater for the purpose of lowering the water table or potentiemetric surface in order to prevent flooding in an excavation, mine, construction project, building or other economic activity and is not primarily for the purpose of utilizing the groundwater that is produced.

(20) **"Discharge"** - the volume of water that passes a given point within a given period of time.

(21) **"District"** - the Coastal Bend Groundwater Conservation District.

(22) **"Domestic Use"** - the use of water by an individual or a household to support domestic activity. Such use may include water for drinking, washing, or culinary purposes; for irrigation of lawns, or of a family garden or orchard; for water of domestic animals; and for water recreation including aquatic and wildlife enjoyment. If the water is diverted, it must be diverted solely through the efforts of the user. Domestic use does not include water used to support activities for which consideration is given or received or for which the product of the activity is sold.

(23) **"Drill"** - drilling, equipping, completing wells, or modifying the size of wells or well pumps/motors (resulting in an increase in pumpage volume) whereby a drilling or service rig must be on location to perform the activity.

(24) **"Drilling Permit"** - a permit issued by the District authorizing a well owner or well operator to drill or otherwise construct a water well.

(25) **"Enabling Act"** - the District's enabling legislation Chapter 8829, Special District Local Laws Code, in conjunction with Texas Water Code Chapter 36, as amended.

(26) **"Existing well"** - a well in existence on December 31, 2012.

(27) **"Export"** - the transfer of groundwater out of the District.

(28) **"Export Fee"** - a fee assessed by the District for groundwater that is exported out of the District. The fee may be assessed against pumpage from permitted and unpermitted wells.

(29) **"Extraction well"** - a well used to extract contaminated fluids from the subsurface for the purpose of conducting an environmental remediation.

(30) **"Fees"** - charges imposed by the District pursuant to a Rule, an Order, or the Enabling Act.

(31) **"Fiscal Year"** - the business year of the District beginning October 1 of each year and ending on September 30 of the following year.

(32) **"Goal level"** - the aquifer level at the maximum amount of drawdown as defined by the Desired Future Condition.

(33) **"Groundwater or Underground Water"** - water located beneath the earth's surface but does not include water produced with oil and gas production or water that is discharged from a relief well or associated piezometer.

(34) **"Groundwater Reservoir"** - a specific subsurface water-bearing reservoir having ascertainable boundaries and containing groundwater.

(35) **"Gulf Coast Aquifer"**- groundwater located in the Chicot, Evangeline or Jasper formations and related water bearing units.

(36) **"Hazardous Conditions"** - any groundwater quality condition that may be detrimental to public health or affect the beneficial use of water from the aquifer.

(37) **"Historic User"** - a permittee who owns an existing well and operated that well for a beneficial use prior to December 31, 2012.

(38) **"Historic Use Period"** - January 1, 2005 through December 31, 2012.

(39) **"Hydrogeological Report"** - a report that identifies the availability of groundwater in a particular area and formation, and also addresses the issues of quantity and quality of that water and the impacts of pumping that water on the surrounding environment including impacts to nearby or adjacent wells.

(40) **"Incidental Use"** - a minor beneficial use of water incident to but not the primary purpose of the overall water use. Transport of water outside the District by a permittee that totals 5% or less, but in no case more than 5,000,000 gallons, of the permittee's annual permitted pumpage is considered incidental use (15.34 acre foot).

(41) **"Industrial Use"** - the use of water integral to the production of primary goods or services provided by industrial, manufacturing or commercial facilities and used primarily in the building, production, manufacturing, or alteration of a product or goods, or a well used to wash, cleanse, cool, or heat such goods or products.

(42) **"Interim historic user"** - a permittee whose permit was issued prior to November 12, 2013, but whose well was not drilled or operated prior to December 31, 2012. To qualify as an interim historic user the permittee must operate the well no later than December 31, 2014.

(43) **"Injection well"**- an artificial excavation or opening in the ground made by digging, boring, drilling, jetting, driving, or some other method, and used to inject, transmit, or dispose of industrial and municipal waste or oil and gas waste into a subsurface stratum; or a well initially drilled to produce oil and gas used to transmit, inject, or dispose of industrial and municipal waste or oil and gas waste into a subsurface stratum; or a well used for the injection of any other fluid; but the term does not include any surface pit, surface excavation, or natural depression used to dispose of industrial and municipal waste or oil and gas waste.

(44) **"Leachate well"** - a well used to remove leachate from soil or groundwater. For the purposes of this definition, "leachate" means a liquid that has percolated through or drained from solid waste or hazardous waste and contains soluble, suspended, or miscible materials removed from such waste.

(45) **"Licensed Water Well Driller"** - any person who holds a license issued by the State of Texas pursuant to the provisions of the Texas Water Well Drillers Act and the substantive rules of the Texas Department of Licensing and Regulation's Water Well Drillers and Pump Installers Program.

(46) **"Licensed Water Well Pump Installer"** - any person who holds a license issued by the State of Texas pursuant to the provisions of the Texas Water Well Pump Installers Act and the substantive rules of the Texas Department of Licensing and Regulation's Water Well Drillers and Pump Installers Program.

(47) **"Meter"** - a water flow measurement device that meets AWWA standards for the applicable line size, pressures, and flows, and is properly installed according to the manufacturer's specifications.

(48) **"Modify"** - to alter the physical or mechanical characteristics of a well, its equipment, or production capabilities. This does not include repair of equipment, well houses or enclosures, or replacement with comparable equipment.

(49) **"Monitor or Observation Well"** - a well used for collecting water-quality or water-level data.

(50) **"Mean Sea Level (MSL)"** - an average sea level reference datum determined by the National Oceanic and Atmospheric Administration. Used as a reference in the measurement of elevations.

(51) **"Municipal use"** - the use of water in a public water system for residential, commercial, or public and institutional uses, including the application of potable water for irrigation of golf courses, parks and recreational uses.

(52) **"Nonexempt Well"** - a well required to obtain a permit for the production of groundwater from within the District and required to report groundwater use.

(53) **"Open or Uncovered Well"** - an artificial excavation at least 10 feet deep and not more than six feet in diameter, that is dug or drilled either for the purpose of producing groundwater, or for injection, monitoring, or de-watering, and is not capped or covered.

(54) **"Operate or Operations"** - to produce or cause to produce water from a well or to use a well for injection or closed loop heat exchange purposes.

(55) **"Operating Permit"** - a permit issued by the District authorizing groundwater withdrawals in the amounts and under the conditions stated in the permit.

(56) **"Overpumpage"** - to produce water from a well in excess of the amount authorized to be withdrawn in accordance with the permitted pumpage volume issued by the District.

(57) **"Person"** - includes a corporation, individual, organization, cooperative, government or governmental subdivision or agency, business trust, estate, trust, partnership, association, or any other legal entity.

(58) **"Plug"** - to close a well permanently in accordance with approved District standards.

(59) **"Potable Water"** - water that is safe for human consumption in that it is free from impurities in amounts sufficient to cause disease or harmful physiological effects.

(60) **"Potentiometric Surface"** - the elevation to which water from a specific aquifer will rise in a well.

(61) **"Public Water System"** - a system that provides water for human consumption as defined by the rules of the Texas Commission on Environmental Quality.

(62) **"Pumpage or Groundwater Production"** - all groundwater withdrawn from the ground, measured at the wellhead.

(63) **"Permit Amendment"** - a minor or major change in a permit.

(64) **"Recharge Zone"** - the area of the aquifer in which water infiltrates the surface and enters aquifer.

(65) **"Recreational Use"** - the use of water for fishing, swimming, water skiing, boating, hunting, and other forms of water recreation, including aquatic and wildlife enjoyment, golf course or similar development.

(66) **"Red Tag"** - an official seal, tag, or label placed on a well or its equipment, or the act of placing the tag or label, to indicate that further pumping of groundwater, or operation of the well, or continuing with other District regulated activities is not permitted by the District, will be in violation of District Rules, and may subject the well owner or well operator to civil suit or penalties.

(67) **"Regular Permit"** - a permit issued by the District authorizing a specific amount of groundwater withdrawals during the specified term of years utilizing a particular point of withdrawal (or in aggregate with other points of withdrawal) for a particular purpose of use and place of use.

(68) **"Relief Well"** - an artesian well and associated piezometers used to maintain the structural integrity of a reservoir embankment system or other similar structures.

(69) **"Replacement Well"** - a well that is drilled to replace an existing well where (a) the existing well that is being replaced is permanently closed, (b) the replacement well is drilled within 2500 feet from the closed well, and (c) the well will be used to produce the same amount of groundwater and for the same purpose of use as the original well.

(70) **"Rules"** - standards and regulations promulgated by the District.

(71) **"Salt dome"** - geologic structure resulting from the upward movement of a salt mass caused by gravitational instability of a low density salt layer overlain by a high density layer.

(72) **"Special Provisions"** - conditions or requirements added to a permit that may be more or less restrictive than the Rules as a result of circumstances unique to a particular situation.

(73) **"Spring"** - a point(s) of natural discharge from an aquifer.

(74) **"Stratum"** - a layer of rock having a similar composition throughout.

(75) **"Surface Completion"** - sealing off access of undesirable water, surface material, or other potential sources of contamination to the well bore by proper casing or cementing procedures.

(76) **"Subsidence"** - sinking of a portion of the land surface resulting from removal of fluids from subsurface reservoirs such as oil and gas deposits, groundwater, or salt domes.

(77) **"Total Dissolved Solids (TDS)"** - a measurement of the quantity of minerals, chemicals, elements, or other matter contained in a state of solution by water.

(78) **"Transportation Permit"** - a permit issued by the District authorizing transfer of groundwater outside the District's boundaries.

(79) **"User"** - a person who produces, distributes, or uses water from the aquifer(s).

(80) **"Water Level Elevation or Altitude"** - the measure or estimate of a water surface in a well or aquifer as measured in feet relative to mean sea level.

(81) **"Water Meter Seal"** - a physical seal that is installed in or on the water meter to prevent tampering with meter readings.

(82) **"Water-Quality Report"** - a report prepared by the Texas Department of Health, the U.S.G.S. or any other governmentally or District-approved laboratory that is the product of testing the water for bacteria, solids, elements, chemicals, or contaminants.

(83) **"Water Table"** - the upper boundary of the saturated zone in an unconfined aquifer.

(84) **"Water Tight Seal"** - a seal that prohibits the entrance of liquids or solutions, including water, that may enter through the wellhead and potentially, contaminate the well.

(85) **"Water Table Zone"** - that part of the aquifer confined only by atmospheric pressure (water levels will not rise in the well above the water table).

(86) **"Well"** - any artificial excavation or borehole constructed for the purposes of exploring for or producing groundwater, or for injection, monitoring, or de-watering purposes.

(87) **"Well Elevation"** - the ground surface elevation of the well bore.

(88) **"Well Log"** - an accurately kept record made during the process of drilling on forms prescribed by the Texas Department of Licensing and Registration (TDLR), showing the depth of the well bore, thickness of the formations, character of casing installed, together with any other data or information required by the Water Well Drillers Team; or any other special purpose well log that may be available for a given well, such as a gamma ray log, a temperature log, an electric log, or a caliper log.

(89) **"Well owner or well operator"** - the person who owns the land upon which a well is located or is to be located or the person who operates a well or a water distribution system supplied by a well.

(90) **"Well Pumps and Equipment"** - devices and materials used to obtain water from a well, including the seals and safeguards necessary to protect the water from contamination.

(91) **"Well Registration"** - the creation of a record of the well by use and a well identification number for purposes of registering the well as to its geographic location and for notification to the well owner or well operator in cases of spills or accidents, data collection, record keeping and for future planning purposes.

(92) **"Withdraw or Withdrawal"** - the act of extracting groundwater by pumping or any other method, other than the discharge of natural springs.

CHAPTER 3. REGISTRATION, PERMITS, FEES, AND OTHER REQUIREMENTS

SUBCHAPTER A: SCOPE AND APPLICABILITY

§3.1 REGISTRATION REQUIRED

(a) Except for those types of wells listed in Subsection (c), all wells within the District whether exempt or non-exempt from permitting are required to be registered with the District on forms approved by the General Manager.

(b) Registration of an existing, exempt well will provide the well owner or well operator of the well with evidence that the well existed before the effective date of these Rules for purposes of determining historic user status. Registration of an existing, exempt well will also include the well in the spacing protections provided by Chapter 6.

(c) The following types of wells are not required to be registered with the District: leachate wells, extraction wells, injection wells, relief wells, and dewatering wells.

§3.2 REGISTRATION OF EXISTING WELLS

(a) The well owner or well operator of an existing well, except for those types of wells listed in Subsection 3.1(c), located in the District shall register the well by completing an application form provided by the District and submitting the completed form to the District.

(b) District staff will review the application and make a preliminary determination of whether the well meets the exemptions from permitting provided in Section 3.5. If the preliminary determination is that the well is not exempt, the District staff will inform the registrant of any further application information or fees required to process the application as a permit application.

(c) The well owner or well operator of an existing well must be fully compliant with all registration requirements and other applicable provisions of these Rules by December 31, 2004.

§3.3 REGISTRATION OF NEW WELLS

(a) All new wells, except for those types of wells listed in Subsection 3.1(c), must be registered by the well owner or well operator, or the water well driller prior to being drilled, equipped or completed.

(b) The owner, operator, or water well driller shall register the new well by completing an application form provided by the District and submitting the application to the District for review and approval. District staff will review the application and make a preliminary determination of whether the well meets the exemptions from permitting and will inform

the registrant of their determination within five business days of receipt of the completed application.

(c) If the staff's preliminary determination is that the well is exempt, the registrant may begin drilling or other activity immediately upon receiving the approved registration.

(d) If the preliminary determination is that the well is not exempt, the District staff will inform the registrant of any further application information or fees required to process the application as a permit application.

(e) If the preliminary determination is that the well is not exempt, the well may not be drilled, equipped, completed, or substantially altered without first obtaining the appropriate permit or amendment thereto from the District.

(f) A violation of this Rule occurs on the first day the drilling, equipping, completion, or alteration without the appropriate registration or permit begins and continues each day thereafter until the appropriate registration or permit is issued.

(g) A registration will expire and be considered null and void by the District if the well is not drilled within six months of the date the registration is approved. The registrant must file a new registration application and receive approval from the District before drilling may commence.

§3.4 PERMIT REQUIREMENTS

(a) Except as otherwise stated in Subsection (e) of this section, a permit from the District is required prior to drilling, equipping, completing, operating, or producing groundwater from any non-exempt well within the District. It is a violation of these Rules for a well owner or well operator, the water well driller, or any other person acting on behalf of the well owner or well operator, to drill, equip, complete, operate, or produce groundwater from a non-exempt well within the District without first obtaining the proper permit or permit amendment.

(b) A well must remain properly permitted unless and until the power source is disconnected or the well casing or discharge pipe is capped or plugged.

(c) An application for a permit, permit amendment, or permit renewal shall be submitted in accordance with Subchapter B of this Chapter.

(d) The well owner or well operator of an existing well or an applicant for a new well must be fully compliant with the permitting requirement of this section by March 1, 2005.

(e) The District shall issue the following types of permits:

(1) Drilling Permits;

(2) Operating Permits; and

(3) Transportation Permits.

§3.5. EXEMPTIONS FROM PERMITTING

(a) The following wells are not required to have a permit from the District:

(1) a well used solely for domestic use or for providing water for livestock or poultry that is either drilled, completed, or equipped so that it is incapable of producing more than 25,000 gallons of groundwater per day (17.36 gpm);

(2) a well used solely to supply water for a rig that is actively engaged in drilling or exploration operations for an oil or gas well permitted by the Railroad Commission of Texas provided that the person holding the Railroad Commission permit is responsible for drilling and operating the water well and the well is located on the same lease or field associated with the drilling rig;

(3) a water well authorized under a permit issued by the Railroad Commission of Texas under Natural Resources Code Chapter 134, provided the withdrawals are no greater than the amount necessary for mining activities specified in the Railroad Commission permit, regardless of any subsequent use of the water;

(4) a well used for domestic use or agricultural use if the well owner or well operator provides a signed statement that the well will not produce more than five million gallons (15.34 acre feet) of water per year;

(5) leachate wells, extraction wells, injection wells, relief wells and dewatering wells; and

(6) monitoring wells that produce less than 5,000 gallons per year.

(b) A well exempt under Subsection (a) will lose its exempt status and the well owner or well operator must obtain a permit to continue operating the well if the well is subsequently used for a purpose or in a manner that is not exempt under Subsection (a).

(c) An well owner or well operator of a well exempt under Subsection (a)(3) shall equip the well with a meter meeting the specifications provided in Chapter 4 of these Rules and shall report monthly to the District:

(1) the total amount of water withdrawn during the month;

(2) the quantity of water necessary for mining activities; and

(3) the quantity of water withdrawn for other purposes.

(d) In order to determine if a well is exempt under Subsection (a)(4), the Board may require the well owner or well operator to submit information verifying the amount of annual production from the well. If the Board determines that there is no reasonable basis for determining the amount of production, the Board may require that a water meter be installed within a specified time period.

(e) A water well exempt under Subsection (a) shall be:

(1) registered in accordance with these Rules; and

(2) equipped and maintained so as to conform to the District's rules requiring installation of casing, pipe, and fittings to prevent the escape of groundwater from a groundwater reservoir to any reservoir not containing groundwater and to prevent the pollution or harmful alteration of the character of the water in any groundwater reservoir.

(f) The driller of a well exempted under Subsection (a) shall file the drilling log with the District.

(g) Groundwater withdrawn from a well exempt from permitting under this section and subsequently exported outside the boundaries of the District requires notice to the District and is subject to any applicable production and export fees.

(h) A water well exempt under subsection (a)(2) and (a)(3) must either be plugged or transferred to the owner of the surface estate within 90 days after the exploration or mining operations are complete and well owner or well operator shall provide notice to the District that the plugging or transfer is complete.

§3.6. HISTORIC USER STATUS

(a) A well owner or well operator of an existing, non-exempt well that was completed and operational prior to December 31, 2012 will be granted historic user status for the well.

(b) Well owners or well operators who meet the requirements of this section and submit the appropriate information with their permit application or permit renewal application will be granted historic user status and classified as historic users. Well owners that meet the definition of interim historic users will be classified as such.

(1) The amount of historic use will be based on either:

(i) evidence of actual beneficial use without waste during any three consecutive years during the historic use period as evidenced by usage reports based on meter readings; or

(ii) the maximum number of acres actually irrigated and reported to the District during any three consecutive years during the historic period, multiplied by the presumed amount for beneficial use per acre for the reported crop as established under subsection (c).

(2) The amount of historic use for municipal/industrial users will be based on the highest use during any one calendar year during the historic period, times three.

(3) The amount of historic use for an interim historic user will be based on the average amount of groundwater actually withdrawn and beneficially used during calendar year 2013 or 2014 (or an average of both years if groundwater is withdrawn during both years) times three.

(c) Presumptions for the amount of groundwater beneficially used during the historic use period shall be established by Board resolution providing a schedule for each crop or beneficial use category.

(d) Historical user status is granted conditionally and is dependent on the specific owner and type of use. Historical user status is not a vested right of the permittee and may not be transferred by the permittee. The Board will transfer a historic user status designation to a replacement well or to a person who purchases or otherwise receives ownership of a well owned by a historic user provided that the new well owner or well operator maintains the same type of use of the well and fulfills any applicable requirements of the District. Historical user status may be revoked by the Board for violation of any terms or conditions of the permit, obtaining the permit by misrepresentation or failure to disclose relevant facts, or failure to comply with any applicable rules, regulations, fee schedule, special provisions, requirements, or orders of the District.

(e) The addition of new wells for groundwater withdrawals authorized for aggregation pursuant to Section 3.21 does not affect the well owner's status as an historic user or the preservation of historic use as to all such withdrawals except to the extent that any increase in the total amount of withdrawals authorized is attributed to the new wells.

(f) The District reserves the right to amend this section to expand the historic user classification to include additional permittees based on the hydrogeological conditions of the aquifer and other data and information collected by the District.

§3.7. REQUEST FOR INTERIM HISTORIC USER STATUS

A well owner who qualifies as an historic user but did not drill the well until after January 1, 2010 may request Interim Historic User status. Such a request must be provided along with the permit renewal application and provide evidence of the amount actually withdrawn and beneficially used during the historic use period along with any explanation or justification as to why the Board should grant interim historic user status and allow the well owner to establish their historic use amount based on the average amount of groundwater actually withdrawn and beneficially used during calendar year 2013 or 2014 (or an average of both years if groundwater is withdrawn during both years) times three.

SUBCHAPTER B: APPLICATION REQUIREMENTS AND PROCESSING

§3.10 PREPARATION OF AN APPLICATION

(a) **Form of Application.** Application for a well registration, permit, permit amendment, or permit renewal shall be made on forms provided by the District. Applications shall be in writing and sworn to.

(b) **Proper Registrant, Applicant, or Declarant.** The application must be submitted and signed by the well owner or well operator, or an authorized agent of the well owner or well operator. The agent may be required to provide the District with a notarized authorization from the landowner.

(c) **Completeness of an Application.** An application shall be considered administratively complete if it includes all information required to be included in the application; is properly completed and signed; is accompanied by payment of all applicable fees, including any penalties or past due fees; and includes any maps, documents, or supplementary information requested by the Board or staff. A determination of administrative completeness will be made by the General Manager.

(d) **Action on Incomplete Applications.** The District will not take action on an application that is not administratively complete or has not proceeded in a manner consistent with District Rules. An application may be rejected as not administratively complete if the District finds that substantive information required by the application or District staff is missing, false, or incorrect. Applicants submitting incomplete applications will be notified by the District in writing.

§3.11 REQUIREMENTS FOR APPLICATIONS

(a) A separate application is required for each well.

(b) **Content Requirements.** An application must contain the following information in sufficient detail to be acceptable to the District:

(1) **Minimum Requirements.** All applications shall include the following:

(A) the name, mailing address, and phone number of the applicant and the owner of the property on which the well is or will be located;

(B) if the applicant is other than the owner of the property or authorized agent for the owner of the property, documentation establishing the applicable authority to construct and operate a well for the proposed use;

(C) a detailed statement of the nature and purpose of the various proposed uses and the amount of groundwater proposed to be used for each purpose, including the anticipated pumpage volumes for each year of the permit term, the number of cultivated acres being irrigated and estimated crop type, if applicable, and any alternative water sources being used by the applicant;

(D) the location of the well and the estimated maximum instantaneous rate at which water will be withdrawn from the well; and for a proposed aggregate system, a description of the system and the estimated annual pumpage for the system;

(E) the proposed location(s) of use of the water from the well;

(F) the proposed casing size and pump capacity;

(G) evidence that the water withdrawn under the permit will be put to a beneficial, non-wasteful use at all times and that the applicant will comply with all District Rules, orders, and permit provisions;

(H) a water well closure plan or a declaration that the applicant will comply with well plugging and capping guidelines set forth in these Rules and will report well closures to the District;

(I) water conservation plan, if the applicant is required by law to have a water conservation plan;

(J) a drought contingency plan, if the applicant is required by law to have a drought contingency plan; and

(K) any other information deemed necessary for the evaluation of the application by the General Manager or the Board.

(2) **Additional Requirements.** An application for a transportation permit shall include the following additional information:

(A) the location of the proposed receiving area for the water to be transferred and the availability of water in the District and in the proposed receiving area during the period for which the water supply is requested;

(B) a detailed statement of the nature and purpose of the various proposed uses in the proposed receiving area and the amount of groundwater to be used for each purpose;

(C) information describing the projected effect of the proposed exportation of water on aquifer conditions, depletion, subsidence, and existing permit holders or other groundwater users within the District;

(D) evidence that the project is included in the current approved regional water plan or State Water Plan; and

(E) a technical description of the facilities to be used for transportation of the groundwater and a time schedule for construction thereof.

(c) **Hydrogeological Assessment and Aquifer Test Report.** The following permit applications shall be accompanied by a current hydrogeological assessment of the projected effects of the requested groundwater use and an aquifer test report:

- An application for a new well that involves the production of more than 1800 acre-feet of groundwater annually;
- An application for a new well that will be aggregated by the District with other new or existing wells that involves the aggregate production of more than 1800 acre-feet of groundwater annually;
- An application for an amendment to an existing permit that would:
  - increase the total authorized withdrawals to an amount greater than has been authorized by any previous permit issued for production from that well or well system; and
  - Increase the total or aggregate production to more than 1800 acre-feet of groundwater annually.

The requirements of this subsection do not apply to a permit application for a replacement well.

(1) The hydrogeological assessment must address the area of influence, drawdown, and other pertinent information required by the District. The assessment must address the ultimate planned use of the well and the impacts of that use. The assessment shall be prepared by a Professional Geoscientist. The assessment shall include hydrogeologic information addressing and specifically related to the proposed water pumpage levels at the proposed pumpage site. Applicants may not rely solely on assessments or reports previously filed with or prepared by the District. The Board shall make the final determination of whether a hydrogeological assessment meets the requirements of this subsection. An application will not be considered administratively complete unless the assessment is approved by the Board.

(2) An aquifer test report must be submitted within 60 days of the date the well construction is completed. The well must be equipped for the test to produce water at a rate similar to its ultimate planned use, and the report must address the impacts of that use including the area of influence, drawdown, recovery time, and other pertinent information required by the District. The report must address the ultimate planned use of the well and the impacts of that use. The report shall be prepared by a Professional Geoscientist. Applications may not rely solely on studies or reports previously filed with or prepared by the District. The Board shall make the final determination of whether an aquifer test report meets the requirements of the subsection. Failure to submit an aquifer test report is a violation of these Rules and shall be grounds for cancellation of the permit.

(d) **Fees Included with Application.** The application must be accompanied by the application processing fee, inspection fee, or other fees as appropriate. Such fees must be paid before an application may be declared administratively complete. Application processing fees are non-refundable.

(e) **Activities Not Considered Export.** For purposes of this section, the following activities are not considered to be an export of groundwater:

(1) the export of groundwater from the District for incidental use as defined in Chapter 2 of these Rules;

(2) the export of groundwater for an agricultural operation that overlaps or is adjacent to the District boundary; or

(3) the export of groundwater that occurs as a result of the distribution of water within a single, aggregate system of a retail public water system that overlaps the District boundary.

§3.12 SCHEDULING AND NOTICE OF HEARING ON AN APPLICATION

(a) **General Manager Recommendation.** Once an application has been declared administratively complete by the General Manager, a technical review of the application will be performed and the General Manager will prepare a recommendation to the Board. The General Manager's recommendation shall include a summary of the facts related to the application and General Manager's recommendations for Board action on the application.

(b) **Scheduling of Hearing.** Unless these Rules specifically provide that a hearing is not required for an application, the General Manager or Board will schedule the application for a hearing at a regular or special meeting of the Board. The Board may schedule hearings for additional dates, times, and places if the hearing is to be presided over by a hearings examiner. The General Manager or Board may schedule more than one application for consideration at a hearing. Well registrations do not require a hearing or Board action.

(c) **Notice of Hearings.** The General Manager shall give notice of all hearings involving permit applications in the following manner:

(1) Notice of the date, time, and location of the hearing shall be sent, by certified mail, return receipt requested, to the applicant in writing at least ten calendar days before the date of the hearing. The notice to the applicant shall include the General Manager's recommendation on the application.

(2) Notice of the hearing shall be published at least once in a newspaper of general circulation within the District. The date of publication may not be less than ten calendar days before the date of the hearing.

(3) A copy of the notice shall be posted at the District office and at the county courthouse in the place where notices are usually posted. The date of posting may not be less than ten calendar days before the date of the hearing.

(d) **Contents of Notice.** The notice shall include:

(1) the name of the applicant;

(2) the date, time, and location of the hearing;

(3) the address or approximate location of the well or proposed well;

(4) a brief explanation of the proposed permit or permit amendment, including any requested amount of groundwater, the purpose of the proposed use, and any change in use; and

(5) any other information the General Manager or Board deems relevant or appropriate.

§3.13 HEARING PROCEDURES

(a) **General Provisions.** The board president, or another board member designated by the president, or the hearings examiner shall serve as the presiding officer for the hearing.

(b) **Hearing Registration.** The District may require each person who attends a hearing to submit a hearing registration form stating the person's name, address, whom the person represents, and whether the person wishes to testify.

(c) **Conduct of Hearings.** Hearings will be conducted in the manner the presiding officer deems most suitable to conveniently, inexpensively, and expeditiously provide a reasonable opportunity for interested persons to submit relevant data, views, or arguments, in writing or orally. In addition, the presiding officer may:

(1) convene the hearing at the time and place specified in the notice;

(2) set any necessary additional hearing dates;

(3) establish the order for presentation of evidence;

(4) administer oaths to all persons presenting testimony;

(5) examine persons presenting testimony;

(6) limit testimony or the presentation of evidence to persons who, in the presiding officer's determination, are affected by the subject matter of the hearing;

(7) allow testimony to be submitted in writing and may require that written testimony be sworn to;

(8) ensure that information and testimony are introduced as conveniently and expeditiously as possible without prejudicing the rights of any party; and

(9) prescribe reasonable time limits for testimony and the presentation of evidence.

(d) Continuance. The presiding officer may continue a hearing from time to time and from place to place without providing notice under Section 3.12 by announcing at the hearing the time, date, and location of the continued hearing.

(e) Recording. The District shall prepare and keep a record of each hearing in the form of either minutes, or audio or video recording, or court reporter transcription, or the report described by Subsection (f) of this section. If a hearing is transcribed at the request of a party to the hearing, the presiding officer may assess the costs associated with producing the transcript to one or more parties. If a hearing involves a contested application, then the District shall keep a record of the hearing in the form of audio or video recording or a court reporter transcription.

(f) Report. The presiding officer shall submit a report to the Board not later than the 30th day after the date a hearing is concluded, unless the hearing was conducted by a quorum of the board. If the hearing was conducted by a quorum of the board, the presiding officer shall determine at the presiding officer's discretion whether to prepare and submit a report to the Board under this section. The report must include:

(1) a summary of the subject matter of the hearing;

(2) a summary of the evidence or public comments received; and

(3) the presiding officer's recommendations or a proposal for decision for board action on the subject matter of the hearing.

§3.14 ACTION ON APPLICATIONS

(a) Before granting or denying a permit, in whole or in part, the District shall consider whether the application conforms to the requirements prescribed by these Rules and Texas Water Code Chapter 36 and is accompanied by the prescribed fees and whether the applicant is in compliance with the District's rules.

(b) An application shall be considered administratively complete if it includes all required information; is signed; is accompanied by payment of all applicable fees, including any penalties or past due fees; and includes any maps, documents, or supplementary information requested by the Rules, Board or staff. A determination of administrative completeness will be made by the General Manager.

(c) The District will not take action on an application that is not administratively complete or has not proceeded in a manner consistent with District Rules. An application may be rejected as not administratively complete if the District finds that substantive information required by the application or District staff is missing, false, or incorrect. Incomplete applications will be returned to the applicant with a list of deficiencies and may be reconsidered once the deficiencies are corrected.

(d) The General Manager will schedule administratively complete applications for a public hearing, and shall publish notice of the public hearing in accordance with these rules.

(e) In determining whether to issue a permit, and in setting, the terms and provisions of the permit including the maximum authorized withdrawal, the District shall consider the purposes of the District and all other relevant factors, including, but not limited to:

(1) the amount and purposes of use for which water is needed;

(2) whether the proposed use of water is dedicated to a beneficial, non-wasteful use;

(3) whether the proposed use of water is consistent with the District's certified groundwater management plan and any applicable spacing requirements, production limits, and drought restrictions;

(4) the projected effect of the proposed use on aquifer conditions, including depletion, subsidence, spring flow, impacts on groundwater quality, or effects on existing permit holders or other groundwater users within the District;

(5) whether the applicant has agreed that reasonable diligence will be used to conserve water and protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure; and

(6) whether the applicant is in compliance with all applicable District Rules.

(f) The District shall make a written determination granting or denying, in whole or in part, the application.

§3.15 TERM OF PERMITS

(a) Permit terms are as follows:

(1) A drilling permit shall be considered null and void by the District if the well is not drilled and completed within twelve months of the date the permit is issued. The applicant must file a new permit application and obtain a new permit before drilling may commence.

(2) Operating Permits are effective for a term of three years, unless otherwise stated on the permit. The Board may issue an operating permit with a term longer than three years, but not to exceed five years, when doing so aids the District in the performance of its duties and accomplishing the goals of the Enabling Act. The Board may issue an operating permit with a term of less than three years for the purpose of causing the permit to align with a renewal schedule established by the Board.

(3) Transportation Permits are effective for a term of three years if construction of a conveyance system has not been initiated prior to the issuance of the permit; or 30 years if construction of a conveyance system has been initiated prior to the issuance of the permit. A permit issued for a 3-year permit term shall automatically be extended to

30 years if construction of a conveyance system is begun before the expiration of the initial 3-year term.

(b) The permit term will be shown on the permit.

§3.16 PERMIT ISSUANCE AND FORMAT

(a) **Permit Contents.** The permit shall include the following information in a format approved by the General Manager:

(1) the name and address of the person to whom the permit is issued;

(2) the state well number or District-assigned well number for the well;

(3) the date the permit is issued;

(4) the date the permit is to expire;

(5) the location of the well(s);

(6) the maximum withdrawal authorized during the permit term;

(7) the type or purpose(s) of use of the groundwater;

(8) the place of use of the groundwater;

(9) the historic user status of the permittee, if applicable;

(10) a requirement that the water withdrawn under the permit be put to a beneficial use at all times;

(11) any other conditions, provisions, or restrictions the District prescribes; and

(12) any other information the District deems necessary.

(b) **Corrections or Administrative Modifications.** The General Manager, on his own or at the request of the permittee, may make non-substantive corrections or administrative modifications to any permit either by reissuing the permit or by issuing an endorsement to the permit, without observing formal amendment or public notice procedures. The General Manager must notify the permittee and file a copy of the endorsement or corrected permit in the District's official records.

§3.17 PERMIT CONDITIONS

(a) All permits are granted subject to these Rules, orders of the Board, and the laws of the State of Texas. Each permit issued shall be subject to the following conditions:

(1) The permit is granted in accordance with the provisions of the Enabling Act in conjunction with Texas Water Code Chapter 36, and the Rules and orders of the District.

(2) The permit confers no vested rights in the holder. The permit may be revoked or suspended or its conditions may be modified or amended pursuant to the requirements of the Enabling Act and any applicable Rules and orders of the District.

(3) The drilling and operation of the well for the authorized use shall be conducted in such a manner as to avoid waste, pollution, or harm to the aquifer.

(4) The permittee shall maintain records estimating the amount of groundwater withdrawn each month, the purpose of the withdrawal, and the total amount of water exported, if any. The permittee shall describe the method or technique used to estimate water withdrawn. Such records shall be available for inspection by District representatives. Monthly use shall be reported to the District in the annual pumpage report on a form approved by the District. Immediate written notice shall be given to the District in the event a withdrawal exceeds the quantity authorized by the permit.

(5) The well site shall be reasonably accessible to District representatives for inspection. The permittee agrees to cooperate fully in any reasonable inspection of the well site and related monitoring or sampling by District representatives.

(6) The application pursuant to which a permit has been issued is incorporated in the permit, and the permit is granted on the basis of and contingent upon the accuracy of the information supplied in that application and in any amendments thereof. A finding that false information has been supplied shall be grounds for immediate revocation of the permit. In the event of conflict between the provisions of the permit and the contents of the application, the provisions of the permit shall control.

(7) Driller's logs must be submitted to the District within sixty (60) days of the drilling of a well. Failure to submit a driller's log will be grounds for revocation of a permit.

(8) Violation of the permit's conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is a violation of these Rules and shall be punishable by civil penalties as provided by the Enabling Act and these Rules. Each day a violation continues is a separate violation, and each day pumping continues after reaching the amount authorized to be withdrawn on the permit constitutes a separate violation.

(9) If special provisions on a permit are inconsistent with other provisions or regulations of the District, the special provisions shall prevail.

(10) Public water system permittees should maintain at least 85 percent accountability. If losses or unaccounted for water exceeds 15 percent, the District may require the public water system permittee to submit a report to the District outlining the steps the permittee will take to improve system accountability. Unaccounted for water is presumed to be waste unless the permittee can provide evidence the water was put to a beneficial use.

(b) In addition to the standard permit provisions, the Board may add special permit provisions to address specific circumstances for that permit or pumping location.

(c) If the hydrogeological assessment, aquifer test report or other evidence indicates a likelihood of unreasonable off-site impact from well operations, the Board may add a special provision requiring the permittee to install monitoring wells. "Unreasonable off-site impacts" include significant, sustained aquifer drawdown that may impact neighboring wells or result in subsidence.

(d) If at any time the board receives evidence that an operating well or well system is causing harm to the aquifer or neighboring properties, causing unreasonable off-site impacts, causing subsidence, the Board may, on its own motion, reopen the permit for additional hearings. At the conclusion of the hearing the Board may revoke, suspend, terminate, cancel, modify or amend the permit in whole or in part as needed to alleviate the harm.

§3.18 PERMIT RENEWAL

(a) Well owners or well operators shall make application to renew permits required under these Rules prior to the expiration of the current permit term. A permit expires on the date the permit term ends unless the permit is renewed prior to that date. The Board may continue a permit while considering an application to renew that permit. An application to renew a permit must be filed on a form provided by the District. The well owner or well operator shall indicate on the renewal application form whether any changes to the well, well operations, purpose of use, or special conditions are requested.

(b) Permit renewals may be approved by the General Manager without notice or hearing if the amount of authorized withdrawal remains the same or decreases and the terms and conditions of operation listed in the permit have not change. The General Manager may refer any application to renew a permit to the Board.

(c) If the well owner or well operator seeks to increase the amount of authorized withdrawal, or otherwise change any of the permit terms or conditions in the renewal application, the application will be scheduled for a hearing and consideration by the Board under Section 3.12.

(d) If aquifer conditions at or near the well or well field indicate excessive drawdown or subsidence, or if aquifer conditions indicate the need for groundwater withdrawal rate reduction, the Board may renew the permit at a lower authorized withdrawal amount or with additional special provisions either limiting the rate of withdrawal or requiring other adjustments to mitigate the impact of the groundwater withdrawals. The Board may consider waivers signed by landowners affected by the aquifer drawdown in setting the special permit provisions.

§3.19 PERMIT AMENDMENTS

(a) It is a violation of these Rules for a permittee to violate any condition, provision, or restriction contained in a permit issued by the District. A permittee must apply for and receive an amendment to their permit prior to changing any term, provision, or restriction in the permit.

(b) Amendment Types:

(1) Minor amendments include a request to:

(A) change the name or address of the well owner;

(B) decrease the maximum authorized withdrawal;

(C) increase the maximum authorized withdrawal by ten percent or less of the total permitted pumpage for users permitted for more than 12,000,000 gallons annually;

(D) increase the maximum authorized withdrawal by up to 2,000,000 gallons annually for users permitted for 12,000,000 gallons or less;

(E) convert two or more wells individually permitted by the same permittee into an aggregate system under one permit; and

(F) transfer of a permit in its entirety to a new landowner, well owner or well operator.

(2) All other amendments, including all amendments to permits involving the export of groundwater, are major amendments.

(c) Minor amendments may be granted by the General Manager without notice, hearing, or further action by the Board. If two or more minor amendments are requested during any permit term for an increase in maximum authorized withdrawal, and the combined increase in volume requested in the amendments exceeds the limits described in Subsection (b) for minor amendments, then the amendment will be considered a major amendment.

(d) Major amendments shall be subject to all the requirements and procedures applicable to issuance of a new permit for a new well.

(e) An application for permit amendment shall be made on forms supplied by the District and a processing fee established by the Board. No application processing fee will be required from permittees requesting a decrease in maximum authorized withdrawal.

(f) An amendment to change the name of a well owner must be submitted within 90 days of the transfer of ownership, and the owner's name on file with the District shall be responsible for all forms, reports and fees due until the District approves the amendment.

§3.20 PERMIT REVOCATION, CANCELLATION, OR MODIFICATION

(a) A permit is not a vested right of the holder.

(b) After notice and an opportunity for hearing, a permit may be revoked, suspended, terminated, canceled, modified, or amended in whole or in part for cause, including, but not limited to (i) violation of any conditions of the permit, (ii) obtaining the permit by misrepresentation or failure to disclose relevant facts, or (iii) failure to comply with any applicable Rules, regulations, fee schedule, special provisions, requirements, or orders of the District. The permittee shall furnish to the District upon request, and within a reasonable time, any information to determine whether cause exists for revoking, suspending, terminating, canceling, modifying, or amending a permit.

§3.21 AGGREGATION

(a) In issuing a permit, the authorized withdrawal for a given well may be aggregated, at the discretion of the District, with the authorized withdrawal from other permitted wells designated by the District. The geographic location of each well and integrated distribution systems will be considered in determining whether or not to allow aggregation of withdrawal of groundwater.

(b) For the purpose of categorizing wells by the amount of groundwater production, when wells are permitted with an aggregate withdrawal, the aggregate value shall be assigned to the group, rather than allocating to each well its prorated share or estimated production. Water withdrawn from each well shall be independently measured or metered.

§3.22 TEMPORARY EMERGENCY APPROVALS

(a) **Basis for Temporary Emergency Permit.** Upon application to the District, the General Manager may issue a temporary emergency permit that authorizes the withdrawal of water from a well not currently drilled or permitted, or from a permitted well that has already pumped the full amount authorized by the permit. An application for a temporary emergency permit must present sufficient evidence that:

(1) no suitable alternative supply of water is immediately available to the applicant; and

(2) an emergency need for the groundwater exists such that issuance of the permit is necessary in order to prevent an immediate and serious threat to human life or health or to prevent extensive and severe property damage or economic loss to the applicant or intended recipient of the water.

(b) **Action on Request.** The General Manager may rule on any application for a temporary emergency permit without notice, hearing, or further action by the Board, or with such notice and hearing as the General Manager deems practical and necessary under the circumstances. The General Manager may deny an application for a temporary

emergency permit on any reasonable ground, including, but not limited to, a determination that the applicant is currently in violation of these Rules or Texas Water Code Chapter 36, that the applicant has a previously unresolved violation on record with the District, or that the application does not meet the requirements of this Rule. Written notice of the ruling shall be given to the applicant. Any applicant may appeal the General Manager's ruling by filing, within ten business days of the General Manager's ruling, a written request for a hearing before the Board. The Board will hear the applicant's appeal at the next available regular Board meeting.

(c) **Board notification.** The General Manager shall inform the Board of any temporary emergency permits granted. On the motion of any Board member, and a majority concurrence in the motion, the Board may overrule the action of the General Manager.

(d) **Permit Fee.** The permit fee to be assessed for a temporary emergency permit under this Rule shall be the same as a permit issued under Section 3.14.

(e) **Term of Temporary Emergency Permit.** No temporary emergency permit may be issued unless an application for a permit issued under Section 3.14 has been filed with the District addressing the same well. The term of any temporary emergency permit issued by the General Manager under this rule shall extend only until the Board makes a final decision on the application for the permit under Section 3.14.

§3.23 FINAL DECISION: APPEAL

(a) **Board Action.** After the record is closed and a permitting matter is submitted to the Board, the Board may take the matter under advisement, continue it from day to day, reopen or rest the matter, refuse the action sought, grant the action sought in whole or part, or take any other appropriate action. Board action takes effect at the conclusion of the meeting in which the Board took the action and is not affected by a request for rehearing.

(b) **Requests for Rehearing.** A decision of the Board may be appealed by requesting a rehearing before the Board within 20 calendar days of the Board's decision. Such a rehearing request must be filed at the District Office in writing and must state clear and concise grounds for the request. Such a rehearing request is mandatory with respect to any decision or action of the Board before an appeal may be brought. The Board's decision is final and appealable if no request for rehearing is made within the specified time, upon the Board's denial of the request for rehearing, or upon the Board's rendering of a decision after rehearing. If the rehearing request is granted by the Board, the date of the rehearing will be within 45 calendar days thereafter unless otherwise agreed to by the parties to the proceeding. The failure of the Board to grant or deny a request for rehearing within 90 calendar days of the date of submission will be deemed to be a denial of the request.

(c) **Requests for Rehearing of a Contested Case Hearing.** For any matter considered during a contested case hearing, only a party to the contested case proceeding may file a motion for rehearing. On or before the date of filing of a motion for rehearing, the party filing the motion shall mail or deliver a copy of the motion to all parties with certification of service furnished to the District. The motion shall contain:

(1) the name and representative capacity of the person filing the motion;

(2) the style and official docket number assigned by the hearings examiner;

(3) the date of the decision or order; and

(4) the grounds for the motion, including a concise statement of each allegation of error.

(d) Costs of Record on Appeal. A party who appeals a final decision in a contested case shall pay all costs of preparation of the record of the proceeding that is required to be transmitted to the reviewing court. A charge imposed is considered to be a court cost and may be assessed by the court in accordance with the Texas Rules of Civil Procedure.

(e) Appeal of Final Decision. Not later than the 60th day after the date on which the decision became final and appealable, parties affected by the final decision of the Board in a contested case may file suit under TEX. WATER CODE § 36.251, to appeal the decision. A party may not file suit if a motion for rehearing was not timely filed. The record in a contested case hearing shall include the following:

(1) all pleadings, motions and intermediate rulings;

(2) evidence received or considered;

(3) a statement of matters officially noticed;

(4) questions and offers of proof, objections and rulings on them;

(5) summaries of the results of any conferences held before or during the hearing;

(6) proposed findings, exceptions and briefs;

(7) any decision, opinion or report issued by the hearings examiner;

(8) pre-filed testimony;

(9) all memoranda or data submitted to or considered by the hearings examiner; and

(10) the final order and all interlocutory orders.

§3.24 APPLICABILITY

Contested case hearings may be requested in connection with the following applications:

(1) drilling permits;

(2) operating permits;

(3) transport permits; and

(4) major amendment to any existing permit.

§3.25 PROCEDURAL OPTIONS AVAILABLE TO APPLICANTS

(a) Applicants filing applications subject to a contested case hearing may respond to the proposed action of the General Manager in the following manner:

(1) if the applicant agrees with the proposed action, and no other affected person requests a contested case hearing, and the matter will be taken directly to the Board for final action as an uncontested matter;

(2) if the applicant disagrees with the proposed action, and no other affected person requests a contested case hearing, the applicant may offer to settle the matter. If the matter is settled, the application may be taken directly to the Board for final action. If the matter is unable to be settled, the application may be taken directly to the Board for final action as a contested matter, although one not referred to contested case hearing. The applicant, General Manager, and other affected persons may present their respective positions to the Board and allow the Board to take final action at the Board meeting without a contested case hearing; or

(3) file a notice of request for contested case hearing.

(b) The Board will process the third-party request by first determining if the person has a personal justiciable interest in the application. In the event a third-party request is filed and approved, any settlement under one of the alternatives in Subsection (a) requires the consent of the third-party protestant.

(c) Applicants choosing not to file a request for a contested case hearing and instead pursue one of the alternatives in Subsection (a), waive any right to a contested case hearing upon the expiration of the filing deadline.

(d) The Board is not bound by a settlement agreed to by the parties.

§3.26 PERSONS ENTITLED TO A CONTESTED CASE HEARING

The following persons or entities have a personal justiciable interest in, and are entitled to a contested case hearing on, applicable applications:

(1) the applicant for the permit being contested;

(2) a person that owns a registered or permitted well that may be adversely impacted if the protested application is granted.

§3.27 REQUESTS FOR CONTESTED CASE HEARING

(a) A request for a contested case hearing must be in writing and be filed on the date noticed for the public hearing before the end of the hearing, regardless of any continuance of the public hearing.

(b) A contested case hearing request must substantially comply with the following:

(1) give the name, address, daytime telephone number, and fax number, of the person filing the request. If the request is made by a corporation, partnership, or other business entity, the request must identify the entity and one person by name, address, daytime telephone number, and fax number, who shall be responsible for receiving all official communications and documents for the entity;

(2) state the basis upon which the person believes that a contested case hearing is appropriate;

(3) state whether the person requesting the contested case hearing is the applicant for that permit, holder of another groundwater withdrawal permit, or owner of a registered well;

(4) request a contested case hearing;

(5) provide any other information requested in the notice of proposed action and technical summary; and

(6) be verified by an affidavit.

(c) Where a request for a contested case hearing is filed by a person other than the applicant, a copy of that request must be served on the applicant at or before the time that the request is filed. The request shall include a certificate indicating the date and manner of service and the name and address of all persons served.

(d) If a person is requesting a contested case hearing on more than one application, a separate request must be filed in connection with each application.

§3.28 PROCESSING OF HEARING REQUESTS

(a) If a complete hearing request is timely filed, District staff will schedule the hearing request for consideration by the Board.

(b) At least 20 days prior to a meeting at which the Board will consider the request, District staff will provide notice to the applicant, General Manager and any persons who filed a timely hearing request.

(c) Affected persons may submit a written response to the hearing request no later than 10 days before a Board meeting at which the Board will evaluate that request. Responses

must be filed with the District and served on the General Manager, the applicant and any other persons who timely filed a hearing request in connection with that matter.

(d) The person requesting a hearing may submit a written reply to a response no later than 5 days before the scheduled Board meeting at which the Board will evaluate the hearing request. All replies shall be filed with the District and served on the same day on the general manager, the applicant, and any other person who timely filed a hearing request.

(e) The Board may refer the hearing request to SOAH instead of scheduling the hearing before the Board. Following the hearing, SOAH will provide a proposal for decision to the Board of Directors for action by the Board.

§3.29 ACTION BY BOARD

(a) The determination of whether a hearing request should be granted is not a contested case hearing.

(b) The Board will evaluate the hearing request at a scheduled Board meeting and may determine that the person requesting the hearing:

(1) does not have a personal justiciable interest not common to the general public affected by the application and deny the hearing request; or

(2) has a personal justiciable interest relating not common to the general public affected by the application and schedule the application for a contested case hearing.

(c) If the Board grants the request for a contested case hearing, the Board shall assign a Hearings examiner or delegate the matter to SOAH. The Hearings examiner shall:

(1) schedule a preliminary hearing;

(2) at least 21 days after the preliminary hearing, schedule an evidentiary hearing; and

(3) following the evidentiary hearing, prepare a proposal for decision including proposed findings of fact and conclusions of law, and transmit that proposal to the Board.

(d) The Board shall schedule a final hearing where it will consider the evidence and testimony presented during the evidentiary hearing and the hearings examiner's proposal for decision.

(e) Following the final hearing, the Board may:

(1) grant the application;

(2) grant the application with conditions; or

(3) deny the application.

§3.30 DELEGATION TO SOAH

(a) By order, the Board may delegate to SOAH the authority to conduct hearings designated by the Board.

(b) If the Board refers a contested case hearing to SOAH, then the applicable rules of practice and procedure of SOAH (1 TEX. ADMIN. CODE Ch. 155) govern any contested case hearing of the District, as supplemented by this subchapter.

(c) If the Board refers a contested case hearing to SOAH, the administrative law judge who conducts the contested case hearing shall serve as the hearings examiner and consider applicable District rules and policies in conducting the hearing. However, the District may not supervise the administrative law judge.

(d) If the Board refers a contested case hearing to SOAH, the District may not attempt to influence the findings of facts or the administrative law judge's application of the law in a contested case hearing except by proper evidence and legal argument.

(e) If requested by the applicant or other party to a contested case, the district shall contract with the State Office of Administrative Hearings to conduct the hearing. The party must file such a request not later than the 14th day before the date the evidentiary hearing is scheduled to begin. The Board order granting the contested case hearing may designate a location for the hearing inside the boundaries of the District or in Travis County at a location designated by SOAH. The party requesting the hearing before the SOAH shall pay all costs associated with the contract for the hearing and shall, before the hearing begins, deposit with the District an amount sufficient to pay the contract amount. At the conclusion of the hearing, the District shall refund any excess money to the paying party.

§3.31 SERVICE OF DOCUMENTS

(a) For any document filed with the hearings examiner in a contested case, the person filing that document must serve a copy on all parties.

(b) A document presented for filing must contain a certificate of service indicating the date and manner of service and the name and address of each person served. The District may authorize a document to be filed without a certificate of service but will require the certificate be served within three days thereafter.

§3.32 CONTINUANCES

(a) The hearings examiner may continue a contested case from time to time and from place to place.

(b) When continuing a contested case hearing, the hearings examiner shall provide notice to all parties of the times and places at which the hearing will be continued.

(c) If a contested case hearing is not concluded on the day it begins, the hearings examiner shall, to the extent possible, proceed with the hearing on each subsequent working day until the hearing is concluded.

(d) Parties to a contested case hearing, with the approval of the hearings examiner, may agree to modify any time limit prescribed by these rules related to conducting contested case hearings.

§3.33 DESIGNATION OF PARTIES

The following are parties in all contested cases:

(1) the General Manager;

(2) the applicant; and

(3) a person who is granted a contested case hearing by Board action.

§3.34 DISCOVERY

Discovery in contested case proceedings will be governed by Chapter 2001, Subchapter D, TEX. GOV'T CODE and Title 1, Section 155.31, TEX. ADMIN. CODE, as supplemented by this subchapter. Depositions in a contested case shall be governed by TEX. GOV'T CODE §§ 2001.096-2001.102.

§3.35 EXPENSES OF WITNESS OR DEPONENT

(a) A witness or deponent in a contested case who is not a party and who is subpoenaed or otherwise compelled to attend a hearing or a proceeding to give a deposition or to produce books, records, papers, or other objects that may be necessary or proper for the purposes of the contested case, is entitled to receive:

(1) 10 cents for each mile for going to and returning from the place of the hearing or deposition if the place is more than 25 miles from the person's place of residence and the person uses the person's personally owned or leased motor vehicle for the travel;

(2) reimbursement of the transportation expenses of the witness or deponent for going to and returning from the place where the hearing is held or the deposition is taken, if the place is more than 25 miles from the person's place of residence and the person does not use the person's personally owned or leased motor vehicle for the travel;

(3) reimbursement of the meal and lodging expenses of the witness or deponent while going to and returning from the place where the hearing is held or deposition is taken, if the place is more than 25 miles from the person's place of residence; and

(4) $10 for each day or part of a day that the person is necessarily present.

(b) Amounts required to be reimbursed or paid shall be reimbursed or paid by the party at whose request the witness appears or the deposition is taken.

(c) The District may directly pay a commercial transportation company for the transportation expenses or a commercial lodging establishment for the lodging expenses of a witness or deponent if this section otherwise requires the District to reimburse the witness or deponent for those expenses.

(d) The District may not pay a commercial transportation company or commercial lodging establishment or reimburse a witness or deponent for transportation, meal, or lodging expenses at a rate that exceeds the maximum rates provided by law for state employees. The District may not adopt rules that provide for payment or reimbursement rates that exceed those maximum rates.

(e) In this section:

(1) "**Commercial lodging establishment**" means a motel, hotel, inn, apartment, or similar entity that offers lodging to the public in exchange for compensation.

(2) "**Commercial transportation company**" means an entity that offers transportation of people or goods to the public in exchange for compensation.

§3.36 EVIDENTIARY MATTERS

(a) Evidence that is irrelevant, immaterial, or unduly repetitious shall be excluded.

(b) The rules of privilege recognized by law shall be given effect.

(c) An objection to an evidentiary offer may be made and shall be noted in the record.

(d) Evidence may be received in writing if:

(1) it will expedite the hearing; and

(2) the interests of the parties will not be substantially prejudiced.

(e) A copy or excerpt of documentary evidence may be received if an original document is not readily available. On request, a party shall be given an opportunity to compare the copy or excerpt with the original document.

(f) A party may conduct cross-examination required for a full and true disclosure of the facts.

(g) Witnesses shall be sworn and their testimony taken under oath.

(h) Official notice may be taken of:

(1) all facts that are judicially cognizable; and

(2) generally recognized facts within the area of the District's specialized knowledge. Each party shall be notified either before or during the hearing, or by reference in a preliminary report or otherwise, of the material officially noticed, including staff memoranda or information. Each party is entitled to an opportunity to contest material that is officially noticed. The special skills or knowledge of District staff may be used in evaluating the evidence.

§3.37 DEPOSITIONS AND SUBPOENAS

(a) On the written request of a party, and on deposit of an amount that will reasonably ensure payment of the estimated total amount, the Board will issue a commission, addressed to the officers authorized by statute to take a deposition, requiring that the deposition of a witness be taken for a contested matter pending before it. Requests for issuance of commissions requiring deposition or subpoenas in a contested case will be in writing and directed to the Board.

(b) A party requesting the issuance of a commission requiring deposition or a subpoena will file an original of the request with the District. District staff will arrange for the request to be presented to the Board at its next meeting.

(c) In the case of a deposition, the Board will issue a commission addressed to the officer authorized by statute to take a deposition, requiring that the deposition of a witness be taken. The commission shall authorize the issuance of any subpoena necessary to require that the witness appear and produce, at the time the deposition is taken, books, records, papers or other objects that may be necessary and proper for the purpose of the proceeding. Additionally, the commission will require the officer to whom it is addressed to examine the witness before the officer on the date and at the place named in the commission; and take answers under oath to questions asked the witness by a party to the proceeding, the District, or an attorney for a party or the District. The commission will require the witness to remain in attendance from day to day until the deposition is begun and completed.

(d) In the case of a hearing, if good cause is shown for the issuance of a subpoena, and if an amount is deposited that will reasonably ensure payment of the amounts estimated to accrue, the District will issue a subpoena addressed to the sheriff or to a constable to require the attendance of a witness or the production of books, records, papers or other objects that may be necessary or proper for the purpose of the proceeding.

§3.38 EX PARTE COMMUNICATIONS

(a) For applications for which there is a right to a contested case hearing, a member of the Board may not, at any time after a contested case hearing request regarding the application has been filed and before the Board has taken final action, communicate, directly or indirectly, about any issue of fact or law with any representative of the District or other designated party to the application, except on notice and opportunity for all parties to participate.

(b) Subsection (a) does not apply if:

(1) the Board member abstains from voting on a matter in which he or she engaged in ex parte communications;

(2) the communications are by and between members of the Board consistent with the Texas Open Meetings Act;

(3) the communications are with District staff who have not participated in any hearing in the contested case for the purpose of using the special skills or knowledge of the staff in evaluating the evidence; or

(4) the communications are with legal counsel representing the Board of Directors.

§3.39 REMAND TO BOARD

(a) A hearings examiner may remand an application to the Board as follows:

(1) all timely hearing requests have been withdrawn;

(2) all parties to a contested case reach a settlement so that no facts or issues remain controverted; or

(3) the party or parties requesting the hearing defaults.

(b) After remand, the application will be uncontested, and the applicant will either be deemed to have agreed to the action proposed by the General Manager or, if the parties have reached a settlement agreement, the agreement will be presented to the Board for its consideration. District staff will set the application for consideration at a Board meeting.

§3.40 INFORMAL DISPOSITIONS AND ALTERNATIVE DISPUTE RESOLUTION

(a) An informal disposition of a contested case may be made by:

(1) stipulation;

(2) agreed settlement;

(3) consent order; or

(4) default.

(b) The hearings examiner may require the parties enter into mediation or other alternative dispute resolution process. The hearings examiner may also determine how the costs of the alternative dispute procedure shall be apportioned among the parties and appoint an impartial third party as provided by Section 2009.053, Government Code, to facilitate that procedure.

§3.41 CERTIFIED QUESTIONS

(a) At any time during a contested case proceeding, on a motion by a party or on the hearings examiner's own motion, the hearings examiner may certify a question to the Board.

(b) Issues regarding District policy, jurisdiction, or the imposition of any sanction by the hearings examiner that would substantially impair a party's ability to present its case are appropriate for certification. Policy questions for certification purposes include, but are not limited to:

(1) the District's interpretation of its rules and applicable statutes;

(2) the portion of the Act, the District Rules, or other statutes that are applicable to a proceeding; and

(3) whether District policy should be established or clarified as to a substantive or procedural issue of significance to the proceeding.

(c) If a question is certified, the hearings examiner shall submit the certified issue to the District. District staff will place the certified issue on the agenda of a meeting of the Board. The District will give the hearings examiner and parties 30 day notice of the meeting at which the certified question will be considered. Within ten days after the certified question is filed with the District, parties to the proceeding may file briefs. Within ten days of the filing of such briefs, parties may file responses. Briefs and responses shall be filed with the District with copies served on the hearings examiner. The District will provide copies of the certified questions and any briefs and responses to the Board. The hearings examiner may abate the hearing until the District answers the certified question, or continue with the hearing if the hearings examiner determines that no party will be substantially harmed.

(d) The Board will take action and issue a written decision on the certified issue and provide copies to the parties and the hearings examiner. A decision on a certified issue is not subject to a motion for rehearing, appeal or judicial review prior to the issuance of the District's final decision in the proceeding.

§3.42 SCHEDULING OF A MEETING OF THE BOARD

(a) After receiving the proposal for decision or other disposition from the hearings examiner, District staff shall schedule the presentation of the proposal to the Board. The District shall provide 10 day notice to the parties of the date of the final hearing before the Board at which the proposal will be presented and considered. The Board may reschedule the presentation of the proposal. The District will send notice of the rescheduled meeting date to the parties no later than 10 days before the rescheduled meeting.

(b) Any party to the contested case hearing may make an oral presentation at the Board meeting in which the proposal for decision in that case is presented to the Board.

(c) On the written request of a party to a contested case, the oral proceedings before the Board at which the proposal for decision is presented and oral presentations are made, may be transcribed by a court reporter. The costs will be equally divided between all parties requesting a transcript. If the District desires a transcript it will bear the costs.

§3.43 REOPENING THE RECORD

The Board, on the motion of any party to a contested case or on its own motion, may order the hearings examiner to reopen the record for further proceedings on specific issues in dispute if the Board determines there is additional evidence that is highly significant and that there is sufficient reason for the failure to present it during the contested case hearing. The order shall include instructions as to the subject matter of further proceedings and the hearings examiner's duties in preparing supplemental materials or revised proposals based upon those proceedings for the Board's adoption.

§3.44 DECISION IN A CONTESTED CASE

(a) The decision, if adverse to any party, must be in writing or stated in the record and will include findings of fact and conclusions of law separately stated.

(b) Findings of fact may be based only on the evidence and on matters that are officially noticed. If set forth in statutory language, findings of fact must be accompanied by a concise and explicit statement of the underlying facts supporting the findings.

(c) If a contested case is presided over by a majority of the Board, then the Board's decision shall be rendered not later than the 60th day after the date on which the hearing is finally closed. If the Board refers a contested case to SOAH, then the Board's decision will be rendered no more than 60 days after the date that the proposal for decision is presented at a final hearing, unless the Board determines that there is good cause for extending the deadline.

(d) District staff will notify all parties in a contested case of any decision or order.

(e) District staff will send a copy of the decision in a contested case to attorneys of record, or the parties.

(f) A party or attorney of record notified by mail is presumed to have been notified on the third day after the date on which the notice is mailed.

SUBCHAPTER C: REQUIREMENTS OF WELL OWNERS AND WELL OPERATORS

§3.45 REPORTS

(a) **Pumpage and Export Reports.**

(1) Each permit holder shall maintain records of monthly production from each permitted well, including all information required by Section 3.17(4).

(2) Each permit holder shall submit an "Annual Well Production Report" to the District on forms approved by the District within 30 days of the end of the District's pumpage reporting period. Reports received after the 30-day deadline will be considered late. If it has not already been provided to the District, the report shall include the driller's log, a description of the casing and pumping equipment, and the capacity of the well.

(3) Any entity holding a permit issued by the Railroad Commission of Texas under Texas Natural Resources Code Chapter 134 that authorizes the drilling of a water well shall report annually to the District:

(A) the total amount of water withdrawn each month;

(B) the quantity of water necessary for mining activities;

(C) the quantity of water withdrawn for other purposes; and

(D) the report shall include, if it has not already been provided to the District, the driller's log, a description of the casing and pumping equipment, and the capacity of the well.

(b) **Water Quality Reports.**

(1) All public water system permittees required by statute or regulation to conduct water quality analyses (including public water systems) shall, at the time of obtaining results of the analyses, submit a duplicate copy to the District.

(2) If a public water system is required by the TCEQ to notify its customers that water fails to meet TCEQ standards, the permittee shall immediately notify the District by submitting a copy of the TCEQ's report.

§3.46 FEES AND PAYMENT OF FEES

(a) **Application, Registration, and other Administrative Fees.** The Board shall establish a schedule of administrative fees by resolution. The Board will attempt to set fees at an amount that does not unreasonably exceed the cost to the District of performing the function for which the fees are charged. Such costs may include maintenance of a fund

balance for contingencies. Wells used by the District solely for monitoring purposes are exempt from application fees, registration fees, and well log deposits.

(b) **Export Fees.** The District may establish an export fee in accordance with Texas Water Code Chapter 36. The export fee rate will be established by Board resolution and the fee rate will be included in the District's fee schedule. Export fees will not be applied to:

(1) the export of groundwater from the District for incidental use as defined in Chapter 2 of these Rules;

(2) the export of groundwater for an agricultural operation that overlaps or is adjacent to the District boundary; or

(3) the export of groundwater that occurs as a result of the distribution of water within a single, aggregate system of a retail public water system that overlaps the District boundary.

(c) **Production Fees.** The District may establish a production fee in accordance with the Enabling Act and Texas Water Code Chapter 36. The Production Fee Rate will be established by Board resolution.

(d) **Payment of Fees.** All administrative fees are due at the time of application or registration unless otherwise specified by the Board. Export fees and production fees shall be paid upon receipt of a fee statement from the District. The validity of any permit is contingent upon payment of any applicable export or production fee, and if the fee is not paid within 45 days of the date of the fee statement, the permit may be cancelled by the Board. The Board, by resolution, may establish procedures for the payment of export or production fees in installments.

(e) **Alternate Fees.** The Board may, by resolution, establish fee rates for pumpage of water from different aquifers at variable fee rates in order to provide an incentive to make greater use of one aquifer over another aquifer.

(f) **Minimum Fees.** For fees that are based on amount of withdrawal, the Board may, by resolution, establish a minimum fee for small amounts of withdrawal.

(g) **Historical User Application Fee.** The Board may, by resolution, establish a fee for review of applications for historic user status that are received more than one year after the initial effective date of these Rules.

(h) **Inspection and Plan Review Fees.** The Board may, by resolution, establish fees for: the inspection of wells, meters, or other inspection activities; development plans, or other plan reviews; special inspection services requested by other entities; or other similar services that require significant involvement of District personnel or its agents. Fees may be based on the amount of the District's time and involvement, number of wells, well production, wellbore casing size, size of transporting facilities, or amounts of water exported.

(i) **Exceptions.** In unusual instances of hardship, the Board may establish a payment schedule.

(j) **Returned Check Fee.** The Board may, by resolution, establish a fee for checks returned to the District for insufficient funds, account closed, signature missing, or any other problem causing a check to be returned by the District's depository.

(k) **Well Log Deposit.** The Board may, by resolution, establish a Well Log Deposit to be held by the District for return to the depositor if well logs are submitted to the District within sixty (60) days following surface completion of the well.

CHAPTER 4. MEASURING METHODS

§4.1 MEASUREMENT OF WATER USE BY PERMITTED WELLS

(a) Except as provided in Subsection (b) of this section, each permitted well shall be equipped with a functioning water meter, meeting AWWA standards for line size, pressures, and flows.

(b) Wells drilled prior to January 1, 2013 and permitted for agricultural use may use an alternative measuring method or device as authorized and approved by the District.

(c) Well owner or well operator of a well exempt from permitting under Section 3.5(a)(3) shall equip the well with a meter meeting the specifications of this chapter and shall record monthly water use and report annually to the District:

(1) the total amount of water withdrawn during a month;

(2) the quantity of water necessary for mining activities; and

(3) the quantity of water withdrawn for other purposes.

(d) Reasonable periods of downtime for repair or replacement of meters is permitted, and the permittee may estimate the amount of water used during these periods. Water meters may be removed for repair and the well kept operational provided that the District is notified prior to removal, and the repairs are completed within 90 days. The readings on the meter must be recorded prior to removal and again upon reinstallation. The annual pumpage report must include an estimate of groundwater withdrawal during the period the meter was not installed and operating.

§4.2 METERING AGGREGATE WITHDRAWAL

Each well that is a member of an aggregate system is to be measured, however, where wells are permitted in the aggregate, one water meter may be used for the aggregate well system, if the water meter is installed so as to measure the groundwater production from all wells covered by the aggregate system and approval of aggregate metering installation is obtained from the District.

§4.3 VERIFICATION OF WATER MEASUREMENT

(a) Once every three (3) years the General Manager may require the well owner or well operator to test and calibrate, at the well owner's or well operator's expense, the water meter or alternative measuring method or device for each permitted well and provide the District with a certification in affidavit form of the test results and accuracy calibrations on a form provided by, or in a format approved by, the General Manager.

(b) At the District's expense and at any time, the District may also undertake random investigations for the purposes of verifying water measurement methods or devices and readings, acquiring data for alternate calculations of groundwater withdrawal, estimating the capability of a well, determining water levels, and acquiring such other information as may be helpful to the District in carrying out its goals under the Enabling Act.

(c) If the District's verification reveals that a water measuring method is not within an accuracy of plus or minus five percent (±5%), the District may require a permittee to reimburse the District for its cost of verification and undertake immediate repair, replacement, or correction of the water measurement method or device.

§4.4 VIOLATION OF METERING AND REPORTING REQUIREMENTS

False reporting or logging of water measurements or meter readings, intentionally tampering with or disabling a meter, or similar actions to avoid accurate reporting of groundwater use and pumpage shall constitute a violation of these Rules and shall subject the person performing the action, as well as the well owner, or the well operator who authorizes or allows that action, to penalties as provided in the Enabling Act and these Rules.

§4.5 WATER METER SEALS

If the General Manager finds it necessary, the District may, at its expense, seal by physical means those water meters required to be installed by these Rules and may red tag such water meters to indicate they have been sealed. The well owner or well operator shall report any alteration, damage, or removal of the water meter seal at once to the District and request repair of the seal. Tampering with, altering, damaging, or removing the water meter seal or red tag, or in any way violating the integrity of the seal or red tag shall constitute a violation of these Rules and shall subject the person performing the action, as well as any well owner or well operator who authorizes or allows that action, to penalties as provided in the Enabling Act and these Rules.

§4.6 WATER METER EXCEPTIONS

(a) The following wells may be excepted from the water meter requirements at the Board's discretion:

(1) wells five inches or less in casing diameter with estimated pumpage of five million gallons per year or less and are not connected with any other well; and

(2) wells in aggregate systems in which all wells are five inches or less in inside casing diameter and where the aggregate system has an estimated pumpage of five million gallons per year or less.

(b) If evidence is presented to the Board that indicates that the well or wells do not meet the casing diameter or pumpage requirements of these exceptions, or where there is no reasonable basis for determining the pumpage (such as wells serving ponds, irrigation, landscaping, or car washes), the Board may require that water meters be installed within a specified time period.

CHAPTER 5. GENERAL PROVISIONS AND PROHIBITIONS

§5.1 GENERAL PROHIBITION

Groundwater produced from within the District may not be used in such a manner or under such conditions as to constitute waste. No person may intentionally or negligently commit waste.

§5.2 SUBSURFACE POLLUTION

No person may pollute or harmfully alter the character of the groundwater reservoirs of the District by operating or constructing a well in a manner that causes or allows the introduction of salt water pollutants or other deleterious matter from another stratum, from the surface of the ground, or from the operation of a well.

§5.3 SURFACE POLLUTION

No person may pollute or harmfully alter the character of the groundwater reservoirs of the District by activities on the surface of the ground that cause or allow pollutants to enter the groundwater reservoirs through the well head or well bore.

§5.4 ORDERS TO PREVENT WASTE/POLLUTION

After providing notice to affected parties and opportunity for a hearing, the Board may adopt orders to prohibit or prevent waste or pollution. If the factual basis for the order is disputed, the Board shall direct that an evidentiary hearing be conducted prior to entry of the order. If the Board determines that an emergency exists, requiring the immediate entry of an order to prohibit waste or pollution and protect the public health, safety, and welfare, it may enter a temporary order without notice and hearing provided, however, the temporary order shall continue in effect for the lesser of fifteen (15) days or until a hearing can be conducted.

CHAPTER 6. REGULATION OF PRODUCTION

SUBCHAPTER A: GENERAL PROVISIONS

§6.1 PURPOSE

The purpose of this chapter is to achieve the District's statutory goals of conserving, preserving, protecting, and recharging the groundwater resources within the District by establishing aquifer management requirements consistent with Texas Water Code Chapter 36, and appropriate to the aquifer system.

§6.2 APPLICABILITY

All permitted wells are required to meet the well spacing and production regulations set forth in this chapter.

§6.3 BASIS FOR LIMITATION OF PRODUCTION

The requirements of this chapter are based on the District's statutory authority to regulate the spacing of water wells and the production of groundwater in order to minimize the drawdown of the water table or the reduction of artesian pressure, to control subsidence, to prevent interference between wells, to prevent degradation of water quality, or to prevent waste.

SUBCHAPTER B: PRODUCTION LIMITS

§6.10 PERMIT ALLOCATION

The maximum quantity of water that may be withdrawn during the permit term from a permitted well within the District shall be the amount authorized in the permit. The permit allocation shall be based on the amount of groundwater the Board determines can be reasonably put to a beneficial, non-wasteful use by the permittee and is subject to any production limits or other requirements imposed by the Board.

§6.11 MODELED AVAILABLE GROUNDWATER PRODUCTION LIMITS

(a) To accomplish the purposes of Texas Water Code Chapter 36, and to achieve the stated purposes and goals of the District, including managing the sustainability of the aquifers and preventing significant, sustained water-level declines within the aquifers, the District shall manage total groundwater production on a long-term basis to achieve the applicable desired future condition. The District may establish production limits on new regular permits or existing permits. All permits are issued subject to any future production limits adopted by the District.

(b) After the Texas Water Development Board issues the modeled available groundwater (MAG) amounts for this District, the Board will determine if production limits are necessary, and will consider:

(1) the modeled available groundwater determined by the executive administrator;

(2) the executive administrator's estimate of the current and projected amount of groundwater produced under exemptions granted by District Rules and Section 36.117, Water Code;

(3) the amount of groundwater authorized under permits previously issued by the District;

(4) a reasonable estimate of the amount of groundwater that is actually produced under permits issued by the District; and

(5) yearly precipitation and production patterns.

(c) The Board shall review the considerations in subsection (b) prior to renewing permits under Section 3.18. If the Board determines aquifer conditions require permit adjustments to achieve the desired future condition, the permits will be renewed according to the following schedule:

(1) if aquifer levels are more than one foot but less than two feet below the goal level:

(A) for historic users the portion of the permit that represents historic use shall be reduced by 5 percent from the prior permitted amount;

(B) for interim historic users, the portion of the permit that represents historic use shall be reduced by 10 percent from the prior permitted amount; and

(C) for a regular permit or any portion of a permit over and above the amount granted historic use, shall be reduced 20 percent from the prior permitted amount;

(2) if aquifer levels are more than two feet but less than four feet below the goal level:

(A) for historic users the portion of the permit that represents historic use shall be reduced by 10 percent from the prior permitted amount;

(B) for interim historic users, the portion of the permit that represents historic use shall be reduced by 20 percent from the prior permitted amount; and

(C) for a regular permit or any portion of a permit over and above the amount granted historic use, shall be reduced 40 percent from the prior permitted amount;

(3) if aquifer levels are more than four feet below the goal level:

(A) for historic users the portion of the permit that represents historic use shall be reduced by 20 percent from the prior permitted amount;

(B) for interim historic users, the portion of the permit that represents historic use shall be reduced by 40 percent from the prior permitted amount; and

(C) for a regular permit or any portion of a permit over and above the amount granted historic use, shall be reduced 80 percent from the prior permitted amount.

(d) Permit reductions implemented under subsection (c) may be restored when permits are next renewed if the Board determines aquifer conditions warrant allowing restoration. Permits will be restored to the maximum level the Board determines will achieve the desired future condition.

CHAPTER 7. DRILLING, EQUIPPING, CONSTRUCTION AND SPACING REQUIREMENTS

§7.1 APPLICABILITY

The requirements of this chapter are applicable to all wells drilled in the District, including exempt wells.

§7.2 RECORDS

(a) Complete records shall be kept and reports thereof made to the District concerning the drilling, equipping, and completion of all wells drilled in the District. Such records shall include an accurate driller's log, depth to water, any electric log that shall have been made, and such additional data concerning the description of the well, its discharge, and its equipment as may be required by the Board. Such records shall be filed with the District within sixty (60) days after drilling of the well.

(b) No person may operate any well drilled and equipped within the District, except operations necessary to the drilling and testing of such well and equipment, unless or until the District has been furnished an accurate driller's log, any special purpose log or data generated during well development, and a registration of the well correctly furnishing all available information required on the forms furnished by the District.

§7.3 DRILLING AND COMPLETION OF WELLS

(a) Drilling and completion of wells must satisfy all applicable requirements of the Texas Commission on Environmental Quality and the Texas Department of Licensing and Regulation, and any additional well construction standards adopted by the District.

(b) All wells must be completed in accordance with the well completion standards set forth under the requirements promulgated by the Texas Department of Licensing and Regulation and set forth under Title 16, Texas Administrative Code Chapter 76, Water Well Drillers and Pump Installers Rules.

§7.4 REPLACEMENT WELLS

(a) A well may be drilled to replace an existing well if:

(1) the original well that is being replaced is permanently plugged;

(2) the replacement well is drilled within 2,500 feet from the closed well; and

(3) the groundwater produced will be utilized for the same purpose of use as the original well.

(b) A replacement well shall retain historic user status so long as all the conditions of this rule are met.

(c) Replacement wells must still meet all applicable spacing limitations unless the new well is drilled within 100 feet of the original well. A replacement well must be screened as required by Rule 7.8.

§7.5 SUSPENSION

The General Manager or Board of Directors may suspend an authorization for a well registration or permit for failure to comply with the requirements of this chapter.

§7.6 DRILLING WELLS AT UNAPPROVED LOCATIONS PROHIBITED

It is a violation of these Rules for a well owner or well operator, or water well driller to drill a new well that does not comply with the spacing and location requirements of this subchapter.

§7.7 MINIMUM SPACING APPLICABLE TO ALL NEW WELLS

All new wells must comply with the spacing and location requirements promulgated by the Texas Department of Licensing and Regulation and set forth under Title 16, Texas Administrative Code Chapter 76, Water Well Drillers and Pump Installers Rules.

§7.8 SPACING AND SCREENING OF CERTAIN HIGH PRODUCTION WELLS

(a) New wells shall meet all spacing and screening requirements based on their maximum annual permitted production shown in Table 1. The spacing of the well at the time it is drilled also creates a permanent, maximum permit amount, which will be recorded in the District's records for that well.

TABLE 1

Maximum Annual Production (Acre Feet/Year)	Minimum Spacing from Nearest Registered Well (Feet)	Minimum Depth To Begin Screening Well (Feet)
15-50	750	
51-100	1000	
101-250	1250	
> 250	1500	175

(b) The spacing and screening requirements of Subsection (a) do not apply to a replacement well that is drilled within 100 feet of the original well, or a water well authorized under a permit issued by the Railroad Commission of Texas under Natural Resources Code Chapter 134 if the well is exempt under Section 3.5(a)(3).

(c) The spacing requirements of Subsection (a) may be waived by the Board if the applicant obtains written permission from each affected well owner or landowner stating that the owner is agreeable to the applicant's proposed well location.

(d) The screening requirement of Subsection (a) may be modified by the Board if; i) the applicant demonstrates that groundwater of suitable quality for the applicant's type of use cannot be reasonably obtained at depths greater than 175 feet from the land surface; and ii) the applicant provides appropriate hydrogeologic data to support the applicant's request.

§7.9 ENFORCEMENT OF SPACING AND SCREENING REQUIREMENTS

After authorization to drill a well has been granted under a registration or permit, the well, if drilled, must be drilled within 50 feet of the location specified in the registration or permit. If the well should be commenced or drilled at a different location, or if any new well is drilled in violation of the spacing requirements or screening requirements of these Rules, the drilling or operation of such well may be enjoined by the Board pursuant to these Rules and Texas Water Code Chapter 36 and the District may seek civil penalties against the well driller and well owner or well operator.

CHAPTER 8. ABANDONED, OPEN AND UNCOVERED WELLS

§8.1 REGISTRATION AND SEALING

(a) Any owner or lessee of land, on which an open or uncovered well or an abandoned well is located, must register the well with the District.

(b) Any well not registered with the District shall be classified as abandoned.

§8.2 MINIMUM STANDARDS

(a) **Capping of Open or Uncovered Wells.**

(1) At a minimum, open or uncovered wells must be capped in accordance with these Rules and in accordance with the standards set forth in the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Chapter 76, Texas Administrative Code.

(2) The owner or lessee shall keep the well capped with a water tight covering capable of sustaining weight of at least 400 pounds except when the well is in actual use. The covering for a capped well must be constructed with a water tight seal to prevent entrance of surface pollutants into the well itself, either through the wellbore or well casing.

(b) **Plugging of Abandoned Wells.**

(1) All abandoned wells must be plugged in accordance with standards set forth in the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Chapter 76, Texas Administrative Code.

(2) Prior to plugging a well, the well owner or well operator shall notify the General Manager in writing of their plans to plug the well. It is a violation of these Rules for any water well driller or pump installer to plug an abandoned well for which the District has not received prior written notice. The General Manager may require the well owner or well operator to take a water sample and have a water quality analysis conducted as part of, or prior to, the plugging operation at the well owner's or well operator's expense.

(3) A copy of any plugging report required by Texas Department of Licensing and Regulation shall be submitted to the District.

§8.3 ENFORCEMENT

If the owner, lessee or operator of a well fails or refuses to cap or plug a well in compliance with this rule and District standards after being requested to do so in writing by an officer, agent, or employee of the District, then, upon Board approval, any person, firm or corporation employed by the District may go onto the land (pursuant to Texas Water Code Section 36.118) and plug or cap the well safely and securely.

§8.4 LIEN FOR RECOVERY OF EXPENSES INCURRED BY DISTRICT

(a) Reasonable expenses incurred by the District in plugging or capping a well will be assessed to the landowner and shall constitute a lien on the land on which the well is located.

(b) The District shall perfect the lien by filing in the deed records of the county where the well is located an affidavit, executed by any person conversant with the facts, stating the following:

(1) the existence of the well;

(2) the legal description of the property on which the well is located;

(3) the approximate location of the well on the property;

(4) the failure or refusal of the owner or lessee, after notification, to close the well after the notification;

(5) the closing of the well by the District, or by an authorized agent, representative, or employee of the District; and

(6) the expense incurred by the District in closing the well.

§8.5 PENALTIES

Pursuant to Chapter 11 of these Rules, penalties shall be applicable in cases of failure or refusal to plug abandoned wells or cap wells not currently in use.

CHAPTER 9. WATER CONSERVATION

§9.1 CONSERVATION POLICY

The District may implement conservation policies through various programs initiatives and incentives including public education, technical assistance, special programs, through grants and loans, from support by various local, state, and federal programs, industries, foundations, non profits, public and private individuals, corporations, partnerships, and other interest groups that will further the District's goals of cost-effective water conservation, pollution prevention, and waste prevention of the District's water resources.

§9.2 WATER CONSERVATION PLANS

Each permittee who is required to prepare, adopt, and implement a water conservation plan by another agency of the State of Texas or by any water wholesale provider shall submit a copy of that plan to the District for the District's files in order to assist the District in monitoring the success of water conservation efforts within the District.

CHAPTER 10. DROUGHT

§10.1 PURPOSE

The purpose of this chapter is to provide guidelines to well owners and well operators and water users within the District regarding groundwater availability and use in response to drought or other uncontrollable circumstances that have disrupted the normal availability of groundwater supplies, causing localized or regional water availability and water quality emergencies. This chapter establishes procedures intended to preserve the availability and quality of water during such conditions.

§10.2 APPLICABILITY

This chapter applies to all well owners and well operators and all other water users located within the District's jurisdictional area.

This chapter is directly applicable to water users of the Gulf Coast Aquifer. The District may apply these Rules to all groundwater aquifers and water-bearing formations located within its jurisdictional boundaries.

§10.3 DROUGHT CONDITION

The District shall define and declare drought and its specific stages according to the Palmer Drought Severity Index as published by the Texas Water Development Board or similar agency. The index ranges from 4 (Extremely Wet) to –4 (Extreme Drought) --- see Table 10.1 -- and takes into account hydrologic factors such as recent precipitation, evaporation, and soil moisture. Upon declaration of a drought stage of "Moderate drought" or worse, water well owners or well operators or users are encouraged to implement the corresponding drought measures stipulated in any drought plan of the owner, operator, or user.

Table 10.1 Palmer Drought Index Classifications

4.0 or more	extremely wet
3.0 to 3.99	very wet
2.0 to 2.99	moderately wet
1.0 to 1.99	slightly wet
0.5 to 0.99	incipient wet spell
0.49 to -0.49	near normal
-0.5 to -0.99	incipient dry spell
-1.0 to -1.99	mild drought
-2.0 to -2.99	**moderate drought**
-3.0 to -3.99	severe drought
-4.0 or less	extreme drought

§10.4 WATER QUALITY

The District may monitor groundwater quality of water supply wells along or near the saline water line or elsewhere in the District as it determines necessary.

§10.5 AQUIFER EMERGENCY WARNINGS

(a) When the concentration of Total Dissolved Solids (TDS) increases above Safe Drinking Water Standards in any groundwater well(s) within the District or other contamination or hazardous conditions affecting groundwater quality or groundwater quantity exist, an Aquifer Emergency Warning may be declared by the Board of Directors.

(b) During an Aquifer Emergency Warning the District may:

(1) initiate further detailed analysis to determine whether significant changes have occurred in the water quality;

(2) encourage permittees and other water users within the District to identify and implement measures to conserve water and reduce groundwater pumpage; and

(3) encourage the interconnection of public and private water systems to prevent health hazards and localized water shortages or depletions.

§10.6 DROUGHT MANAGEMENT PLANS

Each permittee who is required by another agency or political subdivision of the state to maintain a drought management plan shall submit a copy of the plan to the District for the District's files in order to assist the District in monitoring the success of drought management efforts within the District.

CHAPTER 11. ENFORCEMENT

§11.1 NOTICE AND ACCESS

Pursuant to Texas Water Code Section 36.123, any authorized officer, agent, employee, or representative of the District, when carrying out technical and other investigations necessary to the implementation of the Rules or the Enabling Act, and may enter upon private property for the purpose of inspecting and investigating conditions relating to the withdrawal, waste, water quality, pollution, or contamination of groundwater or other acts covered by the these Rules or the Texas Water Code.

§11.2 SHOW CAUSE ORDERS AND COMPLAINTS

The Board, either on its own motion or upon receipt of sufficient written protest or complaint, may at any time, after due notice to all interested parties, cite any person owning or operating a well within the District, or any person in the District violating the Enabling Act, these Rules, or an Order of the Board. Under the citation, that person is ordered to appear before the Board in a public hearing and require him to show cause why an enforcement action should not be initiated or why his operating authority or permit should not be suspended, cancelled, or otherwise restricted and limited, for failure to abide by the terms and provisions of the permit, these Rules, or the Enabling Act.

§11.3 CONDUCT OF INVESTIGATION

When investigations or inspections require entrance upon private property, such investigations and such inspections shall be conducted at reasonable times, and shall be consistent with all applicable rules and regulations concerning safety, internal security, and fire protection. The persons conducting such investigations shall identify themselves and present District identification upon request by the owner, operator, lessee, management in residence, or person in charge.

§11.4 SEALING OF WELLS

(a) The District may seal wells that are prohibited by the Enabling Act, Rules, or Board orders from withdrawing groundwater within the District when the General Manager, or his designated District employee, determines that such action is reasonably necessary to assure that a well is not operated in violation of the Enabling Act, Rules, or Board orders. This authorization to seal a well or to take other appropriate action to prohibit the withdrawal of groundwater extends to, but is not limited to, the following circumstances in which: (i) a permit has been granted, but the applicable fees have not been paid within the time period provided for payment; (ii) representations have been made by the well owner or well operator that no groundwater is to be withdrawn from a well during a particular period; (iii) no application has been made for a permit to withdraw groundwater from an existing well that is not excluded or exempted from the requirement that a permit be obtained in order to lawfully withdraw groundwater; (iv) the Board has denied, cancelled, or revoked a permit; (v) permit conditions have not been met; or (vi) a threat of, or potential for, contamination to the aquifer exists.

(b) The well may be physically sealed by the District, and if sealed by the District, the well shall then be red-tagged to indicate that the well has been sealed. Other appropriate action may be taken as necessary to preclude operation of the well or to identify unauthorized operation of the well.

(c) Tampering with, altering, damaging, or removing the seal or red tag of a sealed or red tagged well, or in any other way violating the integrity of the seal or red tag, or the pumping of groundwater from a well that has been sealed or red tagged shall constitute a violation of these Rules and shall subject the person performing that action, as well as any well owner or well operator who authorizes or allows that action, to such penalties as provided by the Enabling Act and these Rules.

§11.5 REQUEST FOR INJUNCTIVE RELIEF

If it appears that a person has violated, is violating, or is threatening to violate any provision of the Enabling Act or any Rule, permit, Board order, or other order of the District, the Board may institute and conduct a suit in the name of the District for injunctive relief, for recovery of a civil penalty, or for both injunctive relief and penalty.

§11.6 PENALTIES FOR LATE PAYMENT OF FEES

(a) **Failure to Make Production or Export Fee Payment.** Failure to make the production or export fee payment within the time period specified shall constitute grounds for the District to declare the permit void.

(b) **Late Payment Penalties.** Failure to make complete and timely payments of a fee will automatically result in a late payment penalty of 10 percent of the amount not paid. The fee payment plus the late payment fee must be made within thirty (30) days following the date the payment is due, otherwise the permit may be declared void by the Board.

(c) **Loss of Installment Payment Option.** The option of making payment of a production or export fee in installments may be made available by the District in order to avoid causing cash flow problems for permittees.

(d) **Further Enforcement.** After a permit is declared void for failure to make payment of production or export fees, all enforcement mechanisms provided by this Rule and the Enabling Act shall be available to prevent unauthorized use of the well, and may be initiated by the General Manager without further authorization from the Board.

§11.7 FAILURE TO REPORT PUMPAGE OR EXPORTED VOLUMES

The accurate reporting and timely submission of pumpage or exported volumes is necessary for the proper management of water resources. Failure of the permittee to submit complete, accurate, and timely pumpage, export and water quality reports, as required by Section 3.40 of these Rules, may result in forfeiture of the permit, civil penalties, or payment of increased meter reading and inspection fees as a result of District inspections to obtain current and

accurate pumpage or exported volumes and water quality reports. Each day the violation continues is a separate violation.

§11.8 EMERGENCY ORDERS

The District will develop Emergency Contingency Plans to deal with water quality or water quantity emergencies. Public hearings on Emergency Contingency Plans shall be conducted by the Board prior to adoption. To implement Emergency Contingency Plans, the Board, or the General Manager if specifically authorized by an Emergency Contingency Plan, may adopt emergency orders of either a mandatory or prohibitory nature, requiring remedial action by a permittee or other party responsible for the emergency condition.

§11.9 CIVIL PENALTIES

(a) The District may enforce these Rules by injunction or other appropriate remedy in a court of competent jurisdiction.

(b) Any person who violates any District Rule is subject to a civil penalty of up to $10,000 for each violation and for each day of continuing violation. Each day a violation continues may be considered a separate violation.

(c) All civil penalties recovered by the District shall be paid to the **Coastal Bend Groundwater Conservation District.**

(d) A penalty under this section may be enforced by complaints filed in the appropriate court of jurisdiction in Wharton County.

(e) A penalty under this section is in addition to penalties provided under the Enabling Act.

Appendix C
Estimated Historical Water Use
and
2012 State Water Plan Datasets

Estimated Historical Water Use And 2012 State Water Plan Datasets:

Coastal Bend Groundwater Conservation District

by Stephen Allen
Texas Water Development Board
Groundwater Resources Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
October 29, 2014

GROUNDWATER MANAGEMENT PLAN DATA:

This package of water data reports (part 1 of a 2-part package of information) is being provided to groundwater conservation districts to help them meet the requirements for approval of their five-year groundwater management plan. Each report in the package addresses a specific numbered requirement in the Texas Water Development Board's groundwater management plan checklist. The checklist can be viewed and downloaded from this web address:

http://www.twdb.texas.gov/groundwater/docs/GCD/GMPChecklist0113.pdf

The five reports included in part 1 are:

1. Estimated Historical Water Use (checklist Item 2)

   from the TWDB Historical Water Use Survey (WUS)

2. Projected Surface Water Supplies (checklist Item 6)
3. Projected Water Demands (checklist Item 7)
4. Projected Water Supply Needs (checklist Item 8)
5. Projected Water Management Strategies (checklist Item 9)

   reports 2-5 are from the 2012 Texas State Water Plan (SWP)

Part 2 of the 2-part package is the groundwater availability model (GAM) report. The District should have received, or will receive, this report from the Groundwater Availability Modeling Section. Questions about the GAM can be directed to Dr. Shirley Wade, shirley.wade@twdb.texas.gov, (512) 936-0883.

DISCLAIMER:

The data presented in this report represents the most up-to-date WUS and 2012 SWP data available as of 10/29/2014. Although it does not happen frequently, neither of these datasets are static so they are subject to change pending the availability of more accurate WUS data or an amendment to the 2012 SWP. District personnel must review these datasets and correct any discrepancies in order to ensure approval of their groundwater management plan.

The WUS dataset can be verified at this web address:

http://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates/

The 2012 SWP dataset can be verified by contacting Sabrina Anderson (sabrina.anderson@twdb.texas.gov or 512-936-0886).

For additional questions regarding this data, please contact Stephen Allen (stephen.allen@twdb.texas.gov or 512-463-7317) or Rima Petrossian (rima.petrossian@twdb.texas.gov or 512-936-2420).

Estimated Historical Water Use
TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2012. TWDB staff anticipates the calculation and posting of these estimates at a later date.

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WHARTON COUNTY

All values are in acre-fee/year

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2011	GW	7,350	150	38	0	181,384	1,111	190,033
	SW	0	0	6	0	189,870	343	190,219
2010	GW	6,005	153	54	0	118,336	1,145	125,693
	SW	0	0	8	0	115,667	351	116,026
2009	GW	6,557	231	55	0	121,315	1,188	129,346
	SW	0	0	8	0	132,175	396	132,579
2008	GW	6,354	241	56	0	129,867	1,077	137,595
	SW	0	0	8	0	124,697	357	125,062
2007	GW	5,749	208	0	0	80,464	1,047	87,468
	SW	0	3	0	0	71,439	349	71,791
2006	GW	6,538	183	0	0	108,100	1,082	115,903
	SW	0	0	0	0	119,240	358	119,598
2005	GW	6,531	149	0	0	88,120	997	95,797
	SW	0	0	0	0	192,600	331	192,931
2004	GW	5,926	148	0	0	104,910	204	111,188
	SW	0	0	0	0	211,125	1,082	212,207
2003	GW	6,267	112	0	0	127,806	199	134,384
	SW	1	0	0	0	139,700	1,054	140,755
2002	GW	6,196	53	0	0	127,888	194	134,331
	SW	0	0	0	0	118,051	1,033	119,084
2001	GW	6,293	133	0	0	131,934	193	138,553
	SW	0	0	0	0	193,310	1,025	194,335
2000	GW	6,324	486	0	0	125,055	750	132,615
	SW	0	0	0	0	115,613	499	116,112

Projected Surface Water Supplies
TWDB 2012 State Water Plan Data

WHARTON COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
K	IRRIGATION	BRAZOS-COLORADO	BRAZOS-COLORADO RIVER COMBINED RUN-OF-RIVER IRRIGATION	2,000	2,000	2,000	2,000	2,000	2,000
K	IRRIGATION	BRAZOS-COLORADO	COLORADO RIVER RUN-OF-RIVER	21,275	21,275	21,275	21,275	21,275	21,275
K	IRRIGATION	BRAZOS-COLORADO	COLORADO RIVER RUN-OF-RIVER	7,692	7,692	7,692	7,692	7,692	7,692
K	IRRIGATION	COLORADO	COLORADO RIVER COMBINED RUN-OF-RIVER IRRIGATION	7,650	7,650	7,650	7,650	7,650	7,650
K	IRRIGATION	COLORADO	COLORADO RIVER RUN-OF-RIVER	11,045	11,045	11,045	11,045	11,045	11,045
K	IRRIGATION	COLORADO	COLORADO RIVER RUN-OF-RIVER	3,994	3,994	3,994	3,994	3,994	3,994
K	IRRIGATION	COLORADO-LAVACA	COLORADO RIVER RUN-OF-RIVER	6,722	6,722	6,722	6,722	6,722	6,722
K	IRRIGATION	COLORADO-LAVACA	COLORADO RIVER RUN-OF-RIVER	2,430	2,430	2,430	2,430	2,430	2,430
K	LIVESTOCK	BRAZOS-COLORADO	LIVESTOCK LOCAL SUPPLY	149	149	149	149	149	149
K	LIVESTOCK	COLORADO	LIVESTOCK LOCAL SUPPLY	115	115	115	115	115	115
K	LIVESTOCK	COLORADO-LAVACA	LIVESTOCK LOCAL SUPPLY	74	74	74	74	74	74
K	MINING	BRAZOS-COLORADO	OTHER LOCAL SUPPLY	1,696	1,746	1,793	1,844	1,900	1,900
K	STEAM ELECTRIC POWER	BRAZOS-COLORADO	SAN BERNARD RIVER RUN-OF-RIVER	665	597	597	597	597	597
	Sum of Projected Surface Water Supplies (acre-feet/year)			**65,507**	**65,489**	**65,536**	**65,587**	**65,643**	**65,643**

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Projected Water Demands
TWDB 2012 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

WHARTON COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
K	EAST BERNARD	BRAZOS-COLORADO	277	285	286	282	279	276
K	WHARTON	BRAZOS-COLORADO	1,141	1,175	1,191	1,189	1,181	1,169
K	STEAM ELECTRIC POWER	BRAZOS-COLORADO	245	351	411	483	572	679
K	MANUFACTURING	BRAZOS-COLORADO	62	68	73	78	82	88
K	MINING	BRAZOS-COLORADO	724	766	791	815	836	856
K	IRRIGATION	BRAZOS-COLORADO	99,711	96,144	92,703	89,390	86,193	74,059
K	LIVESTOCK	BRAZOS-COLORADO	321	321	321	321	321	321
K	COUNTY-OTHER	BRAZOS-COLORADO	1,162	1,192	1,197	1,181	1,170	1,157
K	STEAM ELECTRIC POWER	COLORADO	2,300	2,300	2,300	2,300	2,300	2,300
K	MANUFACTURING	COLORADO	129	141	150	160	168	181
K	COUNTY-OTHER	COLORADO	439	450	451	446	441	436
K	IRRIGATION	COLORADO	51,772	49,921	48,135	46,413	44,753	38,454
K	LIVESTOCK	COLORADO	247	247	247	247	247	247
K	WHARTON	COLORADO	522	537	544	544	540	534
K	MINING	COLORADO	1	1	1	1	1	1
K	COUNTY-OTHER	COLORADO-LAVACA	235	241	241	238	236	234
K	MANUFACTURING	COLORADO-LAVACA	122	134	143	152	160	173
K	IRRIGATION	COLORADO-LAVACA	31,502	30,376	29,289	28,241	27,231	23,398
K	MINING	COLORADO-LAVACA	6	6	6	6	7	7
K	LIVESTOCK	COLORADO-LAVACA	160	160	160	160	160	160
P	EL CAMPO	COLORADO	277	287	290	290	288	285
P	EL CAMPO	COLORADO-LAVACA	1,632	1,690	1,713	1,709	1,698	1,680
P	MANUFACTURING	COLORADO-LAVACA	60	65	70	74	78	84
P	IRRIGATION	COLORADO-LAVACA	21,642	21,642	21,641	21,641	21,642	21,641
P	COUNTY-OTHER	LAVACA	426	437	438	433	428	424
P	LIVESTOCK	LAVACA	588	588	588	588	588	588
P	EL CAMPO	LAVACA	24	24	25	25	24	24
P	MINING	LAVACA	3	2	1	0	0	0
P	IRRIGATION	LAVACA	128,046	128,046	128,047	128,047	128,046	128,047
	Sum of Projected Water Demands (acre-feet/year)		**343,776**	**337,597**	**331,453**	**325,454**	**319,670**	**297,503**

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Projected Water Supply Needs
TWDB 2012 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

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WHARTON COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
K	COUNTY-OTHER	BRAZOS-COLORADO	4,430	4,392	4,386	4,406	4,420	4,436
K	COUNTY-OTHER	COLORADO	667	656	655	660	665	670
K	COUNTY-OTHER	COLORADO-LAVACA	64	58	58	61	63	65
K	EAST BERNARD	BRAZOS-COLORADO	0	0	0	0	0	0
K	IRRIGATION	BRAZOS-COLORADO	-42,928	-39,361	-35,920	-32,607	-29,410	-17,276
K	IRRIGATION	COLORADO	484	2,335	4,121	5,843	7,503	13,802
K	IRRIGATION	COLORADO-LAVACA	-15,290	-14,164	-13,077	-12,029	-11,019	-7,186
K	LIVESTOCK	BRAZOS-COLORADO	50	50	50	50	50	50
K	LIVESTOCK	COLORADO	39	39	39	39	39	39
K	LIVESTOCK	COLORADO-LAVACA	27	27	27	27	27	27
K	MANUFACTURING	BRAZOS-COLORADO	28	22	17	12	8	2
K	MANUFACTURING	COLORADO	206	194	185	175	167	154
K	MANUFACTURING	COLORADO-LAVACA	43	31	22	13	5	-8
K	MINING	BRAZOS-COLORADO	1,822	1,830	1,852	1,879	1,914	1,894
K	MINING	COLORADO	1,004	1,004	1,004	1,004	1,004	1,004
K	MINING	COLORADO-LAVACA	17	17	17	17	16	16
K	STEAM ELECTRIC POWER	BRAZOS-COLORADO	420	246	186	114	25	-82
K	STEAM ELECTRIC POWER	COLORADO	0	0	0	0	0	0
K	WHARTON	BRAZOS-COLORADO	4,495	4,461	4,445	4,447	4,455	4,467
K	WHARTON	COLORADO	18	3	-4	-4	0	6
P	COUNTY-OTHER	LAVACA	12	1	0	5	10	14
P	EL CAMPO	COLORADO	13	3	0	0	2	5
P	EL CAMPO	COLORADO-LAVACA	81	23	0	4	15	33
P	EL CAMPO	LAVACA	1	1	0	0	1	1
P	IRRIGATION	COLORADO-LAVACA	-1,490	-1,490	-1,489	-1,489	-1,490	-1,489
P	IRRIGATION	LAVACA	-61,196	-61,196	-61,197	-61,197	-61,196	-61,197
P	LIVESTOCK	LAVACA	0	0	0	0	0	0
P	MANUFACTURING	COLORADO-LAVACA	24	19	14	10	6	0
P	MINING	LAVACA	0	1	2	3	3	3
	Sum of Projected Water Supply Needs (acre-feet/year)		**-120,904**	**-116,211**	**-111,687**	**-107,326**	**-103,115**	**-87,238**

Projected Water Management Strategies
TWDB 2012 State Water Plan Data

WHARTON COUNTY

WUG, Basin (RWPG) All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
IRRIGATION, BRAZOS-COLORADO (K)							
AMENDMENT TO IRRIGATION WATER RIGHTS FOR MUNICIPAL AND INDUSTRIAL NEEDS	COLORADO RIVER RUN-OF-RIVER [WHARTON]	-5,351	-14,666	-16,394	-16,394	-18,554	-18,601
COA RETURN FLOWS	INDIRECT REUSE [TRAVIS]	44	87	131	174	217	261
CONJUNCTIVE USE OF GROUNDWATER - INCLUDES OVERDRAFTS	GULF COAST AQUIFER [WHARTON]	0	12,766	12,766	12,766	12,766	12,766
DEVELOPMENT OF NEW RICE VARIETIES	CONSERVATION [WHARTON]	0	13,293	13,293	13,293	13,293	13,293
DOWNSTREAM RETURN FLOWS	INDIRECT REUSE [TRAVIS]	0	0	1	4	9	13
HB 1437 ON-FARM CONSERVATION	CONSERVATION [WHARTON]	3,600	3,600	3,600	3,600	3,600	3,600
IRRIGATION DISTRICT CONVEYANCE IMPROVEMENTS	CONSERVATION [WHARTON]	0	16,303	16,303	16,303	16,303	16,303
IRRIGATION SUPPLY REDUCTION DUE TO LSWP	COLORADO RIVER RUN-OF-RIVER [WHARTON]	0	0	0	0	0	-15,709
LCRA WMP INTERRUPTIBLE WATER SUPPLY	COLORADO RIVER COMBINED RUN-OF-RIVER INTERRUPTIBLE [TRAVIS]	45,689	12,253	8,312	3,658	0	0
ON-FARM CONSERVATION	CONSERVATION [WHARTON]	0	8,803	8,803	8,803	8,803	8,803
IRRIGATION, COLORADO (K)							
AMENDMENT TO IRRIGATION WATER RIGHTS FOR MUNICIPAL AND INDUSTRIAL NEEDS	COLORADO RIVER RUN-OF-RIVER [WHARTON]	-575	-611	-683	-683	-773	-775
COA RETURN FLOWS	INDIRECT REUSE [TRAVIS]	2	4	6	7	9	11
CONJUNCTIVE USE OF GROUNDWATER - INCLUDES OVERDRAFTS	GULF COAST AQUIFER [WHARTON]	0	532	532	532	532	532
DEVELOPMENT OF NEW RICE VARIETIES	CONSERVATION [WHARTON]	0	144	144	144	144	144
DOWNSTREAM RETURN FLOWS	INDIRECT REUSE [TRAVIS]	0	0	0	0	1	1
HB 1437 ON-FARM CONSERVATION	CONSERVATION [WHARTON]	200	200	200	200	200	200
IRRIGATION DISTRICT CONVEYANCE IMPROVEMENTS	CONSERVATION [WHARTON]	0	2,518	2,518	2,518	2,518	2,518

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Projected Water Management Strategies
TWDB 2012 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
IRRIGATION SUPPLY REDUCTION DUE TO LSWP	COLORADO RIVER RUN-OF-RIVER [WHARTON]	0	0	0	0	0	-13,238
LCRA WMP INTERRUPTIBLE WATER SUPPLY	COLORADO RIVER COMBINED RUN-OF-RIVER INTERRUPTIBLE [TRAVIS]	3,528	6,079	3,021	152	0	0
ON-FARM CONSERVATION	CONSERVATION [WHARTON]	0	150	150	150	150	150
IRRIGATION, COLORADO-LAVACA (K)							
AMENDMENT TO IRRIGATION WATER RIGHTS FOR MUNICIPAL AND INDUSTRIAL NEEDS	COLORADO RIVER RUN-OF-RIVER [WHARTON]	-4,792	-5,092	-5,692	-5,692	-6,442	-6,459
COA RETURN FLOWS	INDIRECT REUSE [TRAVIS]	15	30	45	60	76	90
CONJUNCTIVE USE OF GROUNDWATER - INCLUDES OVERDRAFTS	GULF COAST AQUIFER [WHARTON]	0	4,433	4,433	4,433	4,433	4,433
DEVELOPMENT OF NEW RICE VARIETIES	CONSERVATION [WHARTON]	0	4,019	4,019	4,019	4,019	4,019
DOWNSTREAM RETURN FLOWS	INDIRECT REUSE [TRAVIS]	0	0	0	1	3	5
HB 1437 ON-FARM CONSERVATION	CONSERVATION [WHARTON]	200	200	200	200	200	200
IRRIGATION DISTRICT CONVEYANCE IMPROVEMENTS	CONSERVATION [WHARTON]	0	8,591	8,591	8,591	8,591	8,591
IRRIGATION SUPPLY REDUCTION DUE TO LSWP	COLORADO RIVER RUN-OF-RIVER [WHARTON]	0	0	0	0	0	-3,982
LCRA WMP INTERRUPTIBLE WATER SUPPLY	COLORADO RIVER COMBINED RUN-OF-RIVER INTERRUPTIBLE [TRAVIS]	23,338	10,019	4,845	1,870	0	0
ON-FARM CONSERVATION	CONSERVATION [WHARTON]	0	4,110	4,110	4,110	4,110	4,110
MANUFACTURING, COLORADO-LAVACA (K)							
EXPANSION OF GULF COAST AQUIFER	GULF COAST AQUIFER [WHARTON]	0	0	0	0	0	8
STEAM ELECTRIC POWER, BRAZOS-COLORADO (K)							
DEVELOPMENT OF GULF COAST AQUIFER	GULF COAST AQUIFER [WHARTON]	0	0	0	0	0	82
WHARTON, COLORADO (K)							
MUNICIPAL CONSERVATION	CONSERVATION [WHARTON]	41	29	18	8	4	4

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Projected Water Management Strategies
TWDB 2012 State Water Plan Data

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WUG, Basin (RWPG) All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
IRRIGATION, COLORADO-LAVACA (P)							
CONJUNCTIVE USE OF GROUNDWATER (TEMPORARY OVERDRAFT) - WHARTON COUNTY	GULF COAST AQUIFER [WHARTON]	1,490	1,490	1,489	1,489	1,490	1,489
IRRIGATION, LAVACA (P)							
CONJUNCTIVE USE OF GROUNDWATER (TEMPORARY OVERDRAFT) - WHARTON COUNTY	GULF COAST AQUIFER [WHARTON]	61,196	61,196	61,197	61,197	61,196	61,197
Sum of Projected Water Management Strategies (acre-feet/year)		**128,625**	**150,480**	**135,958**	**125,513**	**116,898**	**84,059**

Appendix D
GAM Run Addendum 10-008

GAM Run 10-008 Addendum

By Shirley C. Wade, Ph.D., P.G.
Texas Water Development Board
Groundwater Resources Division
(512) 936-0883
June 30, 2010

The seal appearing on this document was authorized by Shirley C. Wade, P.G. 525 , on June 30, 2010.

EXECUTIVE SUMMARY:

The groundwater availability model for the central part of the Gulf Coast Aquifer System was used with a constant specified annual pumpage for a 60-year predictive simulation using average recharge rates, evapotranspiration rates, and initial streamflows. A baseline pumping run results in an overall average drawdown of 11.4 feet with approximately 479,000 acre-feet per year of pumping in Groundwater Management Area 15. Additional model runs indicate that approximately 456,000, 471,000, and 488,000 acre-feet per year can be pumped from the Gulf Coast Aquifer in Groundwater Management Area 15 to achieve overall average drawdowns of 10, 11, and 12 feet respectively within GMA 15.

REQUESTOR:

This GAM Run Addendum is a follow-up to a run requested by Mr. Neil Hudgins of the Coastal Bend Groundwater Conservation District acting on behalf of Groundwater Management Area 15.

DESCRIPTION OF REQUEST:

In GAM Run 10-008 Mr. Neil Hudgins requested model runs using the groundwater availability model for the central part of the Gulf Coast Aquifer. In that model run and in the baseline run (Hutchison, 2010 and Anaya, 2010) the amount of pumping reported for Fayette County was less than the requested amount, 8,700 acree-feet per year, partly due to model cells going dry. Mr. David Van Dresar of the Fayette County Groundwater Conservation District requested that the amount of pumping for Fayette County in the model run be kept at 8,700 acre-feet per year. The baseline run (GAM Run 09-010; Anaya, 2010) and adjusted pumping runs (GAM Run 10-008; Hutchison, 2010) were repeated with the baseline pumping in Fayette County maintained at 8,700 acre-feet per year. The model runs are 60-year predictive simulations using initial water levels from the end of the 1999 historical calibration period and average recharge conditions.

METHODS:

Recharge, evapotranspiration rates, and initial streamflows were averaged for the historic calibration-verification runs, representing 1981 to 1999. These averages were then used for each year of the 60-year predictive simulation along with the requsted pumpage volumes.

For Fayette County, pumping was increased uniformly so that even with dry cells the amount would not be less than 8,700 acre-feet per year. In addition it was observed that 333 acre-feet per year of pumping in Fayette County is located in Groundwater Management Area 12 so it did not appear in the GMA 15 pumpage totals in the previous runs. The pumpage total for GMA 12 is listed separately for this run. The total GMA 15 and GMA 12 baseline pumping in Fayette County for this run is 8,710 acre-feet per year.

PARAMETERS AND ASSUMPTIONS:

The groundwater availability model for the central part of the Gulf Coast Aquifer was used for this model run. The parameters and assumptions for this model are described below:

- Version 1.01 of the groundwater availability model for the central part of the Gulf Coast Aquifer was used. This model assumes partial penetrating wells in the Evangeline Aquifer due to a lack of data for aquifer properties in the lower portion of the aquifer.

- See Chowdhury and others (2004) and Waterstone and others (2003) for assumptions and limitations of the groundwater availability model for the central part of the Gulf Coast Aquifer.

- The mean absolute error (a measure of the difference between simulated and actual water levels during model calibration) in the entire model for 1999 is 26 feet, which is 4.6 percent of the hydraulic head drop across the model area (Chowdhury and others, 2004).

- The model includes four layers representing: the Chicot Aquifer (Layer 1), the Evangeline Aquifer (Layer 2), the Burkeville Confining Unit (Layer 3), and the Jasper Aquifer (Layer 4).

- Recharge rates, evapotranspiration rates, and initial streamflows are averages from the 1981 to 1999 calibration and verification time period.

- With the exception of Fayette County, the pumpage distribution was specified for GAM Run 09-010 (Anaya, 2010) and the amounts were scaled uniformly to achieve the desired overall average drawdowns.

RESULTS:

Groundwater Management Area 15 overall drawdown is 11.4 feet for the revised baseline pumping run. The county-averaged groundwater level drawdowns are listed in Table 1 and the corresponding pumping amounts are listed in Table 2.

The county-averaged groundwater level drawdowns for the 10 feet average overall drawdown are listed in Table 3 and the corresponding pumping amounts are listed in Table 4. Ten feet of overall drawdown allows a total pumping amount of 455,679 acre-feet per year in the Gulf Coast Aquifer in Groundwater Management Area 15. The county-averaged groundwater level drawdowns for the 11 feet average overall drawdown are listed in Table 5 and the corresponding pumping amounts are listed in Table 6. Eleven feet of overall drawdown allows a total pumping amount of 471,492 acre-feet per year in the Gulf Coast Aquifer in Groundwater Management Area 15. The county-averaged groundwater level drawdowns for the 12 feet average overall drawdown are listed in Table 7 and the corresponding pumping amounts are listed in Table 8. Twelve feet of overall drawdown allows a total pumping amount of 487,567 acre-feet per year in the Gulf Coast Aquifer in Groundwater Management Area 15.

REFERENCES:

Anaya, R., 2010, GAM Run 09-010, Texas Water Development Board GAM Run Report, 30 p.

Hutchison, W.R., 2010, GAM Run 10-008, Texas Water Development Board GAM Run Report, 9 p.

Chowdhury, A.H., Wade, S., Mace, R.E., and Ridgeway, C., 2004, Groundwater Availability Model of the Central Gulf Coast Aquifer System: Numerical Simulations through 1999, Texas Water Development Board, unpublished report, 114 p.

Donnelly, A.C.A., 2007a, GAM Run 07-12, Texas Water Development Board GAM Run Report, 39 p.

Waterstone Engineering, Inc., and Parsons, Inc., 2003, Groundwater Availability of the Central Gulf Coast Aquifer: Numerical Simulations to 2050 Central Gulf Coast, Texas- Final Report: contract report to the Texas Water Development Board, 158 p.

Table 1 GMA 15 Baseline Drawdown in 60 years (in feet, 1999 Starting Conditions)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	-0.1	25.0	0.5	--	--	0.5	0.5
Bee	3.0	13.6	10.0	9.4	4.8	8.5	8.1
Calhoun	-1.0	9.1	1.9	2.6	--	1.9	1.9
Colorado	5.2	8.9	7.3	14.1	20.7	12.6	12.0
DeWitt	0.2	5.4	4.6	14.5	22.3	14.8	14.9
Fayette	--	13.8	13.8	41.6	48.4	41.4	41.4
Goliad	-1.3	3.4	2.4	7.2	9.1	5.8	5.2
Jackson	12.5	15.5	14.0	11.4	19.1	14.1	15.0
Karnes	--	-0.4	-0.4	15.7	15.4	13.9	13.4
Lavaca	4.7	5.1	5.0	14.1	28.7	15.5	16.0
Matagorda	3.2	17.7	7.6	14.4	--	8.2	7.6
Refugio	0.5	31.4	14.7	12.5	--	14.4	14.7
Victoria	-9.4	3.4	-2.7	3.2	7.4	0.6	-0.4
Wharton	11.7	3.8	7.7	18.4	21.1	13.5	11.8
Overall	**3.3**	**9.9**	**6.7**	**13.0**	**20.6**	**11.4**	**10.9**

Table 2 Baseline Pumping (AF/yr)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	1,826	--	1,826	--	--	1,826	1,826
Bee	3,635	5,321	8,956	17	283	9,256	9,239
Calhoun	2,881	62	2,943	--	--	2,943	2,943
Colorado	24,448	22,649	47,097	900	--	47,997	47,997
DeWitt	999	6,933	7,932	122	6,282	14,336	14,214
Fayette (GMA 15)	--	888	888	156	7,333	8,377	8,221
Fayette (GMA 12)	--	--	--	--	333	333	333
Goliad	700	10,375	11,075	300	100	11,475	11,175
Jackson	54,678	20,211	74,889	--	--	74,889	74,889
Karnes	--	103	103	244	2,713	3,060	2,816
Lavaca	3,034	12,399	15,433	138	4,408	19,979	19,841
Matagorda	35,673	9,327	45,000	--	--	45,000	45,000
Refugio	6,254	22,501	28,755	--	--	28,755	28,755
Victoria	7,999	26,999	34,998	--	--	34,998	34,998
Wharton	108,649	66,349	174,998	--	--	174,998	174,998
Overall	**250,776**	**204,117**	**454,893**	**1,877**	**21,452**	**478,889**	**476,912**

Table 3 GMA 15 10 feet scenario
Drawdown after 60 years (in feet, 1999 Starting Conditions)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	-0.1	23.7	0.5	--	--	0.5	0.5
Bee	2.0	12.3	8.8	8.7	4.2	7.6	7.1
Calhoun	-1.0	7.7	1.4	2.5	--	1.4	1.4
Colorado	3.8	6.7	5.4	12.6	19.1	10.9	10.9
DeWitt	-0.2	4.8	4.1	13.3	20.7	13.6	13.7
Fayette	--	13.0	13.0	39.5	46.3	39.5	39.5
Goliad	-1.6	2.9	2.0	6.8	8.6	5.3	4.7
Jackson	10.3	11.8	11.0	9.7	18.1	11.8	12.4
Karnes	--	-0.9	-0.9	15.0	14.8	13.3	12.8
Lavaca	3.5	4.0	3.8	13.0	26.8	14.1	14.6
Matagorda	2.8	14.6	6.4	13.4	--	7.1	6.4
Refugio	0.4	29.7	13.9	11.8	--	13.6	13.9
Victoria	-9.6	1.8	-3.7	2.3	6.5	-0.3	-1.3
Wharton	9.2	-1.0	4.1	16.4	20.0	10.9	9.0
Overall	**2.4**	**7.7**	**5.1**	**11.8**	**19.3**	**10.0**	**9.6**

Table 4 Pumping (AF/yr) for 10 feet scenario

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	1,741	--	1,741	--	--	1,741	1,741
Bee	3,465	5,073	8,538	16	270	8,824	8,808
Calhoun	2,746	59	2,805	--	--	2,805	2,805
Colorado	23,306	21,591	44,897	--	858	45,755	45,755
DeWitt	952	6,609	7,561	117	5,989	13,667	13,550
Fayette (GMA 15)	--	847	847	156	6,991	7,994	7,838
Fayette (GMA 12)	--	--	--	--	317	317	317
Goliad	667	9,890	10,557	286	95	10,938	10,652
Jackson	52,125	19,267	71,392	--	--	71,392	71,392
Karnes	--	98	98	240	2,678	3,016	2,776
Lavaca	2,892	11,820	14,712	134	4,202	19,048	18,914
Matagorda	34,007	8,891	42,898	--	--	42,898	42,898
Refugio	5,962	21,450	27,412	--	--	27,412	27,412
Victoria	7,625	25,738	33,363	--	--	33,363	33,363
Wharton	103,575	63,251	166,826	--	--	166,826	166,826
Overall (GMA 15)	**239,063**	**194,584**	**433,647**	**949**	**21,400**	**455,679**	**454,730**

Table 5 GMA 15 11 feet scenario
Drawdown after 60 years (in feet, 1999 Starting Conditions)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	-0.1	24.6	0.5	--	--	0.5	0.5
Bee	2.7	13.2	9.6	9.1	4.6	8.2	7.8
Calhoun	-1.0	8.7	1.8	2.5	--	1.8	1.8
Colorado	4.8	8.3	6.7	13.7	20.2	12.1	11.5
DeWitt	0.1	5.2	4.5	14.2	21.9	14.4	14.5
Fayette	--	13.6	13.6	41.1	47.8	40.9	40.8
Goliad	-1.4	3.3	2.3	7.1	8.9	5.7	5.0
Jackson	11.8	14.4	13.1	10.9	18.8	13.4	14.3
Karnes	--	-0.6	-0.6	15.6	15.2	13.8	13.2
Lavaca	4.4	4.8	4.6	13.8	28.1	15.1	15.6
Matagorda	3.1	16.8	7.2	14.1	--	7.9	7.2
Refugio	0.5	31.0	14.5	12.3	--	14.1	14.5
Victoria	-9.4	3.0	-3.0	2.9	7.1	0.3	-0.7
Wharton	11.0	2.4	6.7	17.9	20.8	12.8	11.0
Overall	**3.1**	**9.3**	**6.2**	**12.7**	**20.2**	**11.0**	**10.5**

Table 6 Pumping (AF/yr) 11 feet scenario

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	1,802	--	1,802	--	--	1,802	1,802
Bee	3,586	5,250	8,836	16	279	9,131	9,115
Calhoun	2,842	61	2,903	--	--	2,903	2,903
Colorado	24,120	22,345	46,465	--	888	47,353	47,353
DeWitt	986	6,840	7,826	121	6,198	14,145	14,024
Fayette (GMA 15)	--	876	876	157	7,235	8,268	8,111
Fayette (GMA 12)	--	--	--	--	328	328	328
Goliad	691	10,236	10,927	296	99	11,322	11,026
Jackson	53,946	19,940	73,886	--	--	73,886	73,886
Karnes	--	102	102	245	2,676	3,023	2,778
Lavaca	2,993	12,233	15,226	136	4,349	19,711	19,575
Matagorda	35,195	9,202	44,397	--	--	44,397	44,397
Refugio	6,170	22,199	28,369	--	--	28,369	28,369
Victoria	7,892	26,637	34,529	--	--	34,529	34,529
Wharton	107,193	65,460	172,653	--	--	172,653	172,653
Overall (GMA 15)	**247,416**	**201,381**	**448,797**	**971**	**22,052**	**471,492**	**470,521**

Table 7 GMA 15 12 feet scenario
Drawdown after 60 years (in feet, 1999 Starting Conditions)

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	0.0	25.6	0.6	--	--	0.6	0.6
Bee	3.3	14.2	10.5	9.7	5.1	8.9	8.5
Calhoun	-0.9	9.7	2.1	2.6	--	2.1	2.1
Colorado	5.9	9.8	8.1	14.7	21.3	13.3	12.8
DeWitt	0.3	5.6	4.8	15.0	23.0	15.3	15.4
Fayette	--	14.2	14.2	42.4	49.3	42.2	42.1
Goliad	-1.2	3.7	2.6	7.4	9.3	6.0	5.4
Jackson	13.4	17.1	15.2	12.1	19.6	15.1	16.1
Karnes	--	-0.2	-0.2	16.1	15.7	14.3	13.7
Lavaca	5.3	5.6	5.5	14.7	29.4	16.1	16.7
Matagorda	3.3	19.0	8.1	14.8	--	8.7	8.1
Refugio	0.6	32.2	15.1	12.8	--	14.7	15.1
Victoria	-9.2	4.1	-2.3	3.5	7.8	1.0	0.0
Wharton	12.7	5.8	9.3	19.3	21.6	14.7	13.1
Overall	**3.7**	**10.8**	**7.4**	**13.5**	**21.1**	**12.0**	**11.5**

Pumping (AF/yr) 12 feet scenario

County	Chicot	Evangeline	Chicot+ Evangeline	Burkeville	Jasper	Overall	Overall (without Burkeville)
Aransas	1,863	--	1,863	--	--	1,863	1,863
Bee	3,707	5,480	9,187	17	289	9,493	9,476
Calhoun	2,939	63	3,002	--	--	3,002	3,002
Colorado	24,937	23,102	48,039	--	918	48,957	48,957
DeWitt	1,019	7,071	8,090	128	6,408	14,626	14,498
Fayette (GMA 15)	--	906	906	157	7,408	8,490	8,314
Fayette (GMA 12)	--	--	--	--	339	339	339
Goliad	714	10,582	11,296	306	102	11,704	11,398
Jackson	55,772	20,615	76,387	--	--	76,387	76,387
Karnes	--	105	105	261	2,865	3,231	2,970
Lavaca	3,095	12,647	15,742	151	4,496	20,389	20,238
Matagorda	36,386	9,513	45,899	--	--	45,899	45,899
Refugio	6,379	22,951	29,330	--	--	29,330	29,330
Victoria	8,159	27,539	35,698	--	--	35,698	35,698
Wharton	110,822	67,676	178,498	--	--	178,498	178,498
Overall (GMA 15)	**255,792**	**208,250**	**464,042**	**1,039**	**22,486**	**487,567**	**486,528**

Appendix E
GAM Run 10-028 MAG

GAM Run 10-028 MAG

by Melissa E. Hill, Ph.D., P.G. and Wade Oliver

Edited and finalized by Shirley Wade to reflect statutory changes effective September 1, 2011

Texas Water Development Board
Groundwater Availability Modeling Section
(512) 936-0883
November 18, 2011

Cynthia K. Ridgeway, the Manager of the Groundwater Availability Modeling Section and Interim Director of the Groundwater Resources Division, is responsible for oversight of work performed by employees under her direct supervision. The seal appearing on this document was authorized by Cynthia K. Ridgeway, P.G. 471 on November 18, 2011.

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EXECUTIVE SUMMARY:

The modeled available groundwater for the Gulf Coast Aquifer as a result of the desired future conditions adopted by the members of Groundwater Management Area 15 is approximately 488,000 acre-feet per year. This is shown divided by county, regional water planning area, and river basin in Table 1 for use in the regional water planning process. Modeled available groundwater is summarized by county, regional water planning area, river basin, and groundwater conservation district in tables 2 through 5. The estimates were extracted from the simulation documented in Table 7 of Groundwater Availability Model Run 10-008 Addendum, which meets the desired future conditions adopted by Groundwater Management Area 15.

REQUESTOR:

Mr. Neil Hudgins of the Coastal Bend Groundwater Conservation District on behalf of Groundwater Management Area 15

DESCRIPTION OF REQUEST:

In a letter dated July 15th, 2010 and received July 30th, 2010, Mr. Neil Hudgins provided the Texas Water Development Board (TWDB) with the desired future condition (DFC) of the Gulf Coast Aquifer for Groundwater Management Area 15. The desired future condition for the Gulf Coast Aquifer, as described in Resolution 2010-01 and adopted July 14, 2010 by the groundwater conservation districts (GCDs) within Groundwater Management Area 15, are described below:

> *An average drawdown of the Gulf Coast Aquifer within the* [Groundwater Management Area] *15 boundary of 12 feet relative to year 1999 starting conditions in accordance with Table 7* of [Groundwater Availability Model] *Run 10-008 Addendum.*

In response to receiving the adopted future condition, the Texas Water Development Board estimated the modeled available groundwater for each groundwater conservation district within Groundwater Management Area 15.

METHODS:

Groundwater Management Area 15 lies within the domain of the groundwater availability model for the central portion of the Gulf Coast Aquifer in Texas. The location of Groundwater Management Area 15, the Gulf Coast Aquifer, and the groundwater availability model cells that represent the aquifer are shown in Figure 1. The Gulf Coast Aquifer System is comprised of the Chicot, Evangeline, and Jasper aquifers. The Burkeville Confining Unit lies between the Evangeline and Jasper aquifers (Waterstone Engineering Inc. and others, 2003).
The previously completed Groundwater Availability Model (GAM) Run 10-008 (Hutchison, 2010), its addendum GAM Run 10-008 Addendum (Wade, 2010), GAM Run 09-010 (Anaya, 2010), GAM Run 08-56 (Anaya, 2009), GAM Run 07-43 (Donnelly, 2008b), and GAM Run 07-42 (Donnelly, 2008a) document the model results reviewed by members of Groundwater Management Area 15 when developing the desired future condition. The results presented in this

report are based on the model simulation shown as the "12 foot scenario" shown in Table 7 of GAM Run 10-008 Addendum (Wade, 2010).

PARAMETERS AND ASSUMPTIONS:

The parameters and assumptions for the model run using the groundwater availability model for the central portion of the Gulf Coast Aquifer are described below:

- Version 1.01 of the groundwater availability model for the central portion of the Gulf Coast Aquifer was used for this analysis. See Chowdhury and others (2004) and Waterstone Engineering Inc. and others (2003) for assumptions and limitations of the groundwater availability model.
- The model includes four layers representing: the Chicot Aquifer and shallow surface alluvial deposits (layer 1), the Evangeline Aquifer (layer 2), the Burkeville Confining Unit (layer 3), and the Jasper Aquifer including portions of the Catahoula Formation (layer 4) as described in Waterstone Engineering Inc. and others (2003).
- The mean absolute error (a measure of the difference between simulated and measured water levels during model calibration) in the entire model for 1999 is 26 feet, which is 4.8 percent of the hydraulic head drop across the model area (Chowdhury and others, 2004).
- The recharge, evapotranspiration, and streamflows for the model run represent average conditions between 1981 and 1999 in the historical-calibration period of the model (Chowdhury and others, 2004).
- See Wade (2010) for a full description of the methods, assumptions, and results of the groundwater availability model run.

Modeled Available Groundwater and Permitting

As defined in Chapter 36 of the Texas Water Code, "modeled available groundwater" is the estimated average amount of water that may be produced annually to achieve a desired future condition. This is distinct from "managed available groundwater," shown in the draft version of this report dated November 10, 2010, which was a permitting value and accounted for the estimated use of the aquifer exempt from permitting. This change was made to reflect changes in statute by the 82nd Texas Legislature, effective September 1, 2011.

Groundwater conservation districts are required to consider modeled available groundwater, along with several other factors, when issuing permits in order to manage groundwater production to achieve the desired future condition(s). The other factors districts must consider include annual precipitation and production patterns, the estimated amount of pumping exempt from permitting, existing permits, and a reasonable estimate of actual groundwater production under existing permits. The estimated amount of pumping exempt from permitting, which the

Texas Water Development Board is now required to develop after soliciting input from applicable groundwater conservation districts, will be provided in a separate report

RESULTS:

The modeled available groundwater for the Gulf Coast Aquifer in Groundwater Management Area 15 consistent with the desired future conditions is approximately 488,000 acre-feet per year. This has been divided by county, regional water planning area, and river basin for each decade between 2010 and 2060 for use in the regional water planning process (Table 1).

The modeled available groundwater is also summarized by county (Table 2), regional water planning area (Table 3), river basin (Table 4), and groundwater conservation district (Table 5). Note that some small differences exist between the results shown in Table 2 of this report and Table 7 of Wade (2010) due to a re-assignment of grid cells to be more consistent with previous and known interpretations of political boundaries. The most significant of these adjustments is in Fayette County, where 339 acre-feet per year of pumping from the Gulf Coast Aquifer was previously reported as existing in Groundwater Management Area 12 (Wade, 2010). Since the groundwater management area boundary was originally delineated along the Gulf Coast Aquifer boundary in this area, this pumping is now associated with Groundwater Management Area 15.

In Table 5, the modeled available groundwater among all districts has been calculated both excluding and including areas outside the jurisdiction of a groundwater conservation district. Though a small portion of Corpus Christi Aquifer Storage and Recovery Conservation District falls within Groundwater Management Area 15, results are not shown for this area below because no model cells representing the Gulf Coast Aquifer fall within the district.

LIMITATIONS:

The groundwater model used in developing estimates of modeled available groundwater is the best available scientific tool that can be used to estimate the pumping that will achieve the desired future conditions. Although the groundwater model used in this analysis is the best available scientific tool for this purpose, it, like all models, has limitations. In reviewing the use of models in environmental regulatory decision-making, the National Research Council (2007) noted:

> "Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."

A key aspect of using the groundwater model to develop estimates of modeled available groundwater is the need to make assumptions about the location in the aquifer where future pumping will occur. As actual pumping changes in the future, it will be necessary to evaluate the amount of that pumping as well as its location in the context of the assumptions associated with

this analysis. Evaluating the amount and location of future pumping is as important as evaluating the changes in groundwater levels, spring flows, and other metrics that describe the condition of the groundwater resources in the area that relate to the adopted desired future condition(s).

Given these limitations, users of this information are cautioned that the modeled available groundwater numbers should not be considered a definitive, permanent description of the amount of groundwater that can be pumped to meet the adopted desired future condition. Because the application of the groundwater model was designed to address regional scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor future groundwater pumping as well as whether or not they are achieving their desired future conditions. Because of the limitations of the model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine the modeled available groundwater numbers given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future.

REFERENCES:

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Wade, S.C., 2010, GAM Run 10-008 Addendum: Texas Water Development Board GAM Run 10-008 Addendum Report, 8 p.

Waterstone Engineering, Inc., and Parsons, Inc., 2003, Groundwater availability of the central Gulf Coast Aquifer: numerical simulations to 2050 Central Gulf Coast, Texas-Final Report: contract report to the Texas Water Development Board, variously p.

Table 1. Modeled available groundwater for the Gulf Coast Aquifer in Groundwater Management Area 15. Results are in acre-feet per year and are summarized by county, regional water planning area, and river basin.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Aransas	N	San Antonio-Nueces	1,862	1,862	1,862	1,862	1,862	1,862
Bee	N	Nueces	30	30	30	30	30	30
		San Antonio-Nueces	9,484	9,484	9,460	9,460	9,408	9,408
Calhoun	L	Colorado-Lavaca	361	361	361	361	361	361
		Guadalupe	17	17	17	17	17	17
		Lavaca	2	2	2	2	2	2
		Lavaca-Guadalupe	2,574	2,574	2,574	2,574	2,574	2,574
		San Antonio-Nueces	41	41	41	41	41	41
Colorado	K	Brazos-Colorado	10,464	10,464	10,464	10,464	10,464	10,464
		Colorado	16,058	16,058	16,058	16,058	16,058	16,058
		Lavaca	22,431	22,431	22,431	22,431	22,431	22,431
Dewitt	L	Guadalupe	10,613	10,548	10,548	10,548	10,548	10,548
		Lavaca	2,932	2,932	2,926	2,915	2,912	2,912
		Lavaca-Guadalupe	417	417	417	417	417	417
		San Antonio	739	739	739	739	739	739
Fayette	K	Brazos	17	17	17	17	17	17
		Colorado	6,254	6,123	5,961	5,956	5,952	5,924
		Lavaca	2,933	2,933	2,927	2,922	2,917	2,915
Goliad	L	Guadalupe	4,417	4,417	4,417	4,417	4,417	4,417
		San Antonio	6,121	6,121	6,121	6,121	6,121	6,121
		San Antonio-Nueces	1,161	1,161	1,161	1,161	1,161	1,161
Jackson	P	Colorado-Lavaca	23,615	23,615	23,615	23,615	23,615	23,615
		Lavaca	41,927	41,927	41,927	41,927	41,927	41,927
		Lavaca-Guadalupe	10,844	10,844	10,844	10,844	10,844	10,844
Karnes	L	Guadalupe	12	12	12	12	12	12
		Nueces	78	78	78	78	78	78
		San Antonio	3,069	3,061	3,056	3,052	3,048	2,944
		San Antonio-Nueces	84	84	84	84	84	82
Lavaca	P	Guadalupe	41	41	41	41	41	41
		Lavaca	19,944	19,944	19,944	19,944	19,937	19,932
		Lavaca-Guadalupe	400	400	400	400	400	400
Matagorda	K	Brazos-Colorado	23,055	23,055	23,055	23,055	23,055	23,055
		Colorado	4,179	4,179	4,179	4,179	4,179	4,179
		Colorado-Lavaca	18,662	18,662	18,662	18,662	18,662	18,662
Refugio	L	San Antonio	1,522	1,522	1,522	1,522	1,522	1,522
		San Antonio-Nueces	27,806	27,806	27,806	27,806	27,806	27,806

Table 1. Continued.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Victoria	L	Guadalupe	14,617	14,617	14,617	14,617	14,617	14,617
		Lavaca	217	217	217	217	217	217
		Lavaca-Guadalupe	19,924	19,924	19,924	19,924	19,924	19,924
		San Antonio	936	936	936	936	936	936
Wharton	K	Brazos-Colorado	34,020	34,020	34,020	34,020	34,020	34,020
		Colorado	31,406	31,406	31,406	31,406	31,406	31,406
		Colorado-Lavaca	11,624	11,624	11,624	11,624	11,624	11,624
		Lavaca	1,690	1,690	1,690	1,690	1,690	1,690
	P	Colorado	441	441	441	441	441	441
		Colorado-Lavaca	11,549	11,549	11,549	11,549	11,549	11,549
		Lavaca	87,763	87,763	87,763	87,763	87,763	87,763
Total			**488,353**	**488,149**	**487,946**	**487,921**	**487,846**	**487,705**

Table 2. Modeled available groundwater for the Gulf Coast Aquifer summarized by county in Groundwater Management Area 15. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Aransas	1,862	1,862	1,862	1,862	1,862	1,862
Bee	9,514	9,514	9,490	9,490	9,438	9,438
Calhoun	2,995	2,995	2,995	2,995	2,995	2,995
Colorado	48,953	48,953	48,953	48,953	48,953	48,953
Dewitt	14,701	14,636	14,630	14,619	14,616	14,616
Fayette	9,204	9,073	8,905	8,895	8,886	8,856
Goliad	11,699	11,699	11,699	11,699	11,699	11,699
Jackson	76,386	76,386	76,386	76,386	76,386	76,386
Karnes	3,243	3,235	3,230	3,226	3,222	3,116
Lavaca	20,385	20,385	20,385	20,385	20,378	20,373
Matagorda	45,896	45,896	45,896	45,896	45,896	45,896
Refugio	29,328	29,328	29,328	29,328	29,328	29,328
Victoria	35,694	35,694	35,694	35,694	35,694	35,694
Wharton	178,493	178,493	178,493	178,493	178,493	178,493
Total	**488,353**	**488,149**	**487,946**	**487,921**	**487,846**	**487,705**

Table 3. Modeled available groundwater for the Gulf Coast Aquifer summarized by regional water planning area in Groundwater Management Area 15. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
K	182,793	182,662	182,494	182,484	182,475	182,445
L	97,660	97,587	97,576	97,561	97,554	97,448
N	11,376	11,376	11,352	11,352	11,300	11,300
P	196,524	196,524	196,524	196,524	196,517	196,512
Total	**488,353**	**488,149**	**487,946**	**487,921**	**487,846**	**487,705**

Table 4. Modeled available groundwater for the Gulf Coast Aquifer summarized by river basin in Groundwater Management Area 15. Results are in acre-feet per year.

Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	17	17	17	17	17	17
Brazos-Colorado	67,539	67,539	67,539	67,539	67,539	67,539
Colorado	58,338	58,207	58,045	58,040	58,036	58,008
Colorado-Lavaca	65,811	65,811	65,811	65,811	65,811	65,811
Guadalupe	29,717	29,652	29,652	29,652	29,652	29,652
Lavaca	179,839	179,839	179,827	179,811	179,796	179,789
Lavaca-Guadalupe	34,159	34,159	34,159	34,159	34,159	34,159
Nueces	108	108	108	108	108	108
San Antonio	12,387	12,379	12,374	12,370	12,366	12,262
San Antonio-Nueces	40,438	40,438	40,414	40,414	40,362	40,360
Total	**488,353**	**488,149**	**487,946**	**487,921**	**487,846**	**487,705**

Table 5. Modeled available groundwater for the Gulf Coast Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 15. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District.

Goundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Bee GCD	9,504	9,504	9,480	9,480	9,428	9,428
Calhoun County GCD*	2,995	2,995	2,995	2,995	2,995	2,995
Coastal Bend GCD	178,493	178,493	178,493	178,493	178,493	178,493
Coastal Plains GCD	45,896	45,896	45,896	45,896	45,896	45,896
Colorado County GCD	48,953	48,953	48,953	48,953	48,953	48,953
Evergreen UWCD	3,243	3,235	3,230	3,226	3,222	3,116
Fayette County GCD	9,204	9,073	8,905	8,895	8,886	8,856
Goliad County GCD	11,699	11,699	11,699	11,699	11,699	11,699
Lavaca County GCD*	20,385	20,385	20,385	20,385	20,378	20,373
Pecan Valley GCD	14,701	14,636	14,630	14,619	14,616	14,616
Refugio GCD	29,328	29,328	29,328	29,328	29,328	29,328
Texana GCD	76,386	76,386	76,386	76,386	76,386	76,386
Victoria County GCD	35,694	35,694	35,694	35,694	35,694	35,694
Total (excluding non-district areas)	**483,486**	**483,282**	**483,079**	**483,054**	**482,979**	**482,838**
No District	1,872	1,872	1,872	1,872	1,872	1,872
Total (including non-district areas)	**488,353**	**488,149**	**487,946**	**487,921**	**487,846**	**487,705**

*Lavaca County and Calhoun County GCDs are pending confirmation as of the date of this report

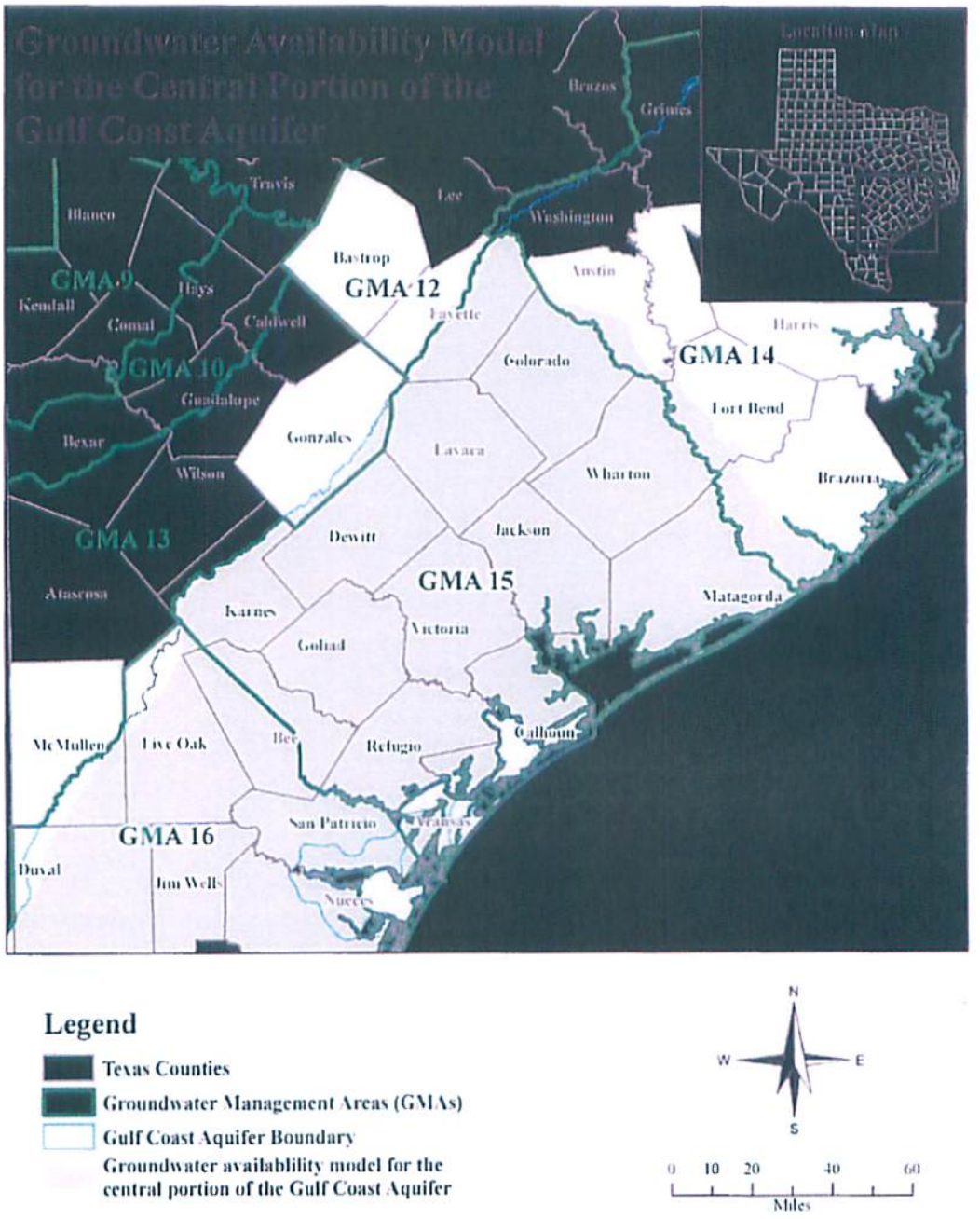

Figure 1. Map showing the areas covered by the groundwater availability model for the central portion of the Gulf Coast Aquifer in Groundwater Management Area 15.

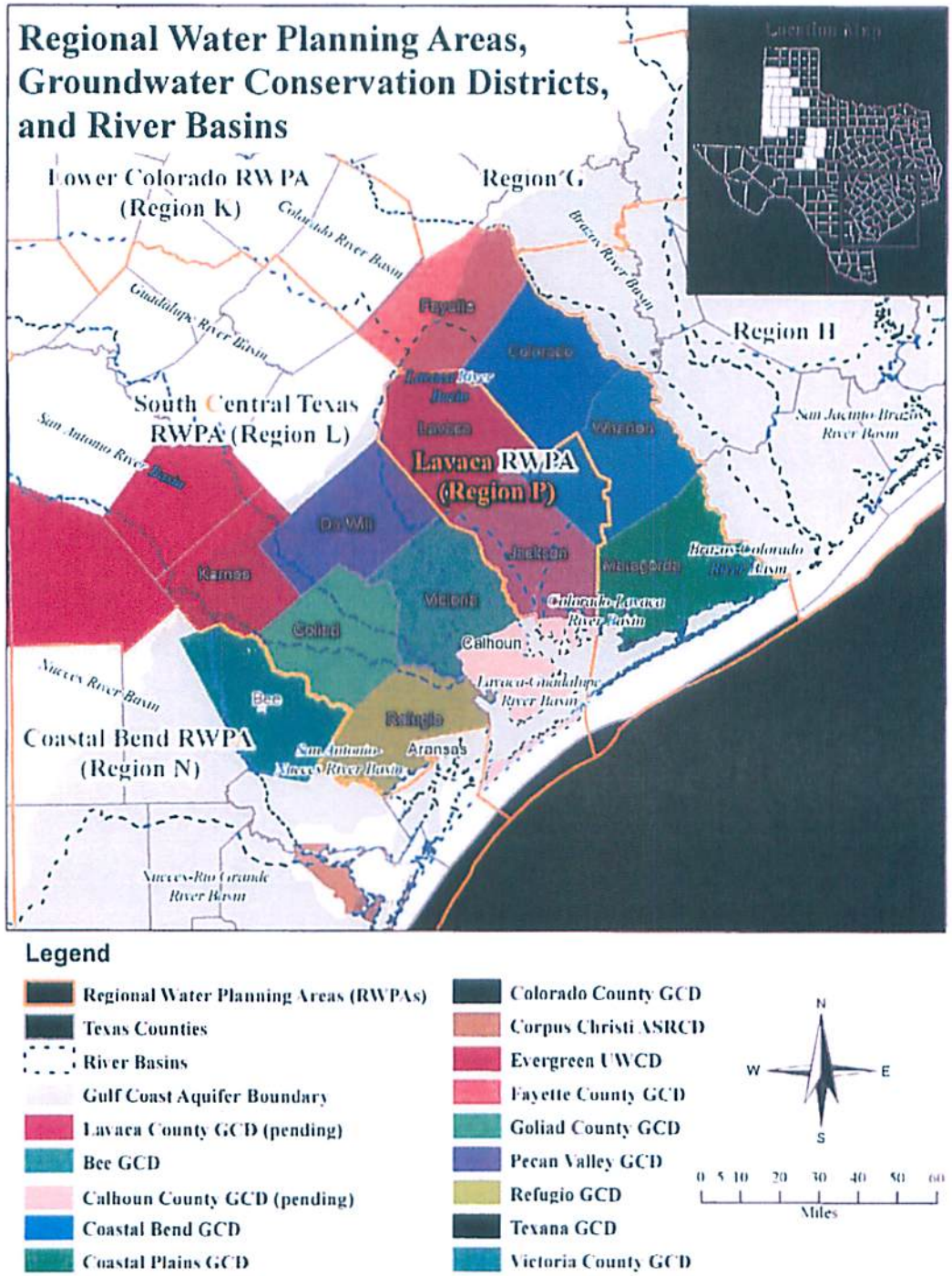

Figure 2. Map showing regional water planning areas, counties, river basins, and groundwater conservation districts (GCD) in and neighboring Groundwater Management Area 15.

Appendix F

GAM Run 13-025

GAM Run 13-025: Coastal Bend Groundwater Conservation District Management Plan

by Rohit Raj Goswami, Ph.D.
Texas Water Development Board
Groundwater Resources Division
Groundwater Availability Modeling Section
(512) 463-0495
December 13, 2013

Cynthia K. Ridgeway is the Manager of the Groundwater Availability Modeling Section and is responsible for oversight of work performed by Rohit Raj Goswami under her direct supervision. The seal appearing on this document was authorized by Cynthia K. Ridgeway, P.G. 471 on December 13, 2013.

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GAM Run 13-025: Coastal Bend Groundwater Conservation District Management Plan

by Rohit Raj Goswami, Ph.D.
Texas Water Development Board
Groundwater Resources Division
Groundwater Availability Modeling Section
(512) 463-0495
December 13, 2013

EXECUTIVE SUMMARY:

Texas State Water Code, Section 36.1071, Subsection (h) (Texas Water Code, 2011), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the executive administrator of the Texas Water Development Board (TWDB) in conjunction with any available site-specific information provided by the district for review and comment to the executive administrator. Information derived from groundwater availability models that shall be included in the groundwater management plan includes:

- the annual amount of recharge from precipitation to the groundwater resources within the district, if any;
- for each aquifer within the district, the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers; and
- the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

This report—Part 2 of a two-part package of information from the TWDB to Coastal Bend Groundwater Conservation District—fulfills the requirements noted above. Part 1 of the two-part package is the Historical Water Use/State Water Plan data report. The District will receive this data report from the TWDB Groundwater Technical Assistance Section. Questions about the data report can be directed to Mr. Stephen Allen, stephen.allen@twdb.texas.gov, (512) 463-7317.

The groundwater management plan for Coastal Bend Groundwater Conservation District should be adopted by the district on or before August 6, 2014 and submitted to the executive administrator of the TWDB on or before September 5, 2014. The current management plan for Coastal Bend Groundwater Conservation District expires on November 4, 2014.

This report discusses the methods, assumptions, and results from a model run using the groundwater availability model for the central portion of the Gulf Coast Aquifer System. This model run replaces the results of GAM Run 08-81 (Oliver, 2008). GAM Run 13-025 meets current standards set after the release of GAM Run 08-81. Table 1 summarizes the groundwater availability model data required by statute, and Figure 1 shows the area of the model from which the values in the table were extracted. If after review of the figure, Coastal Bend Groundwater Conservation District determines that the district boundaries used in the assessment do not reflect current conditions, please notify the Texas Water Development Board immediately.

Per statute, TWDB is required to provide the districts with data from the official groundwater availability models; however, the TWDB has also approved, for planning purposes, the fully penetrating alternative model for the central portion of the Gulf Coast Aquifer System. Coastal Bend Groundwater Conservation District is also included in the model area for the groundwater availability model for the northern portion of the Gulf Coast Aquifer System. Please contact the author of this report if a comparison report using one or both of these models is desired.

METHODS:

In accordance with the provisions of the Texas State Water Code, Section 36.1071, Subsection (h), the groundwater availability model for the central portion of the Gulf Coast Aquifer System was run for this analysis. Coastal Bend Groundwater Conservation District water budgets were extracted for the historical model period (1980 through 1999) using ZONEBUDGET Version 3.01 (Harbaugh, 2009). The average annual water budget values for recharge, surface water outflow, inflow to the district, outflow from the district, net inter-aquifer flow (upper), and net inter-aquifer flow (lower) for the portion of the aquifer located within the district is summarized in this report.

PARAMETERS AND ASSUMPTIONS:

Gulf Coast Aquifer System

- Version 1.01 of the groundwater availability model for the central portion of the Gulf Coast Aquifer System was used for this analysis. See Chowdhury and others (2004) and Waterstone and Parsons (2003) for assumptions and limitations of the groundwater availability model.
- The model for the central portion of the Gulf Coast Aquifer System assumes partially penetrating wells in the Evangeline Aquifer due to a lack of data for aquifer properties in the deeper section of the aquifer.
- This groundwater availability model includes four layers, which generally represent the Chicot Aquifer (Layer 1), the Evangeline Aquifer (Layer 2), the Burkeville Confining Unit (Layer 3), and the Jasper Aquifer including parts of the Catahoula Formation near the outcrop (Layer 4).
- The model was run with MODFLOW-96 (Harbaugh and McDonald, 1996).

RESULTS:

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the model results for the aquifers located within the district and averaged over the duration of the calibration and verification portion of the model run in the district, as shown in Table 1.

- Precipitation recharge—The areally distributed recharge sourced from precipitation falling on the outcrop areas of the aquifers (where the aquifer is exposed at land surface) within the district.
- Surface water outflow—The total water discharging from the aquifer (outflow) to surface water features such as streams, reservoirs, and springs.
- Flow into and out of district—The lateral flow within the aquifer between the district and adjacent counties.
- Flow between aquifers—The net vertical flow between the aquifer and adjacent aquifers or confining units. This flow is controlled by the relative water levels in each aquifer or confining unit and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs.

"Inflow" to an aquifer from an overlying or underlying aquifer will always equal the "Outflow" from the other aquifer.

It is important to note that sub-regional water budgets are not exact. This is due to the size of the model cells and the approach used to extract data from the model. To avoid double accounting, a model cell that straddles a political boundary, such as a district or county boundary, is assigned to one side of the boundary based on the location of the centroid of the model cell. For example, if a cell contains two counties, the cell is assigned to the county where the centroid of the cell is located.

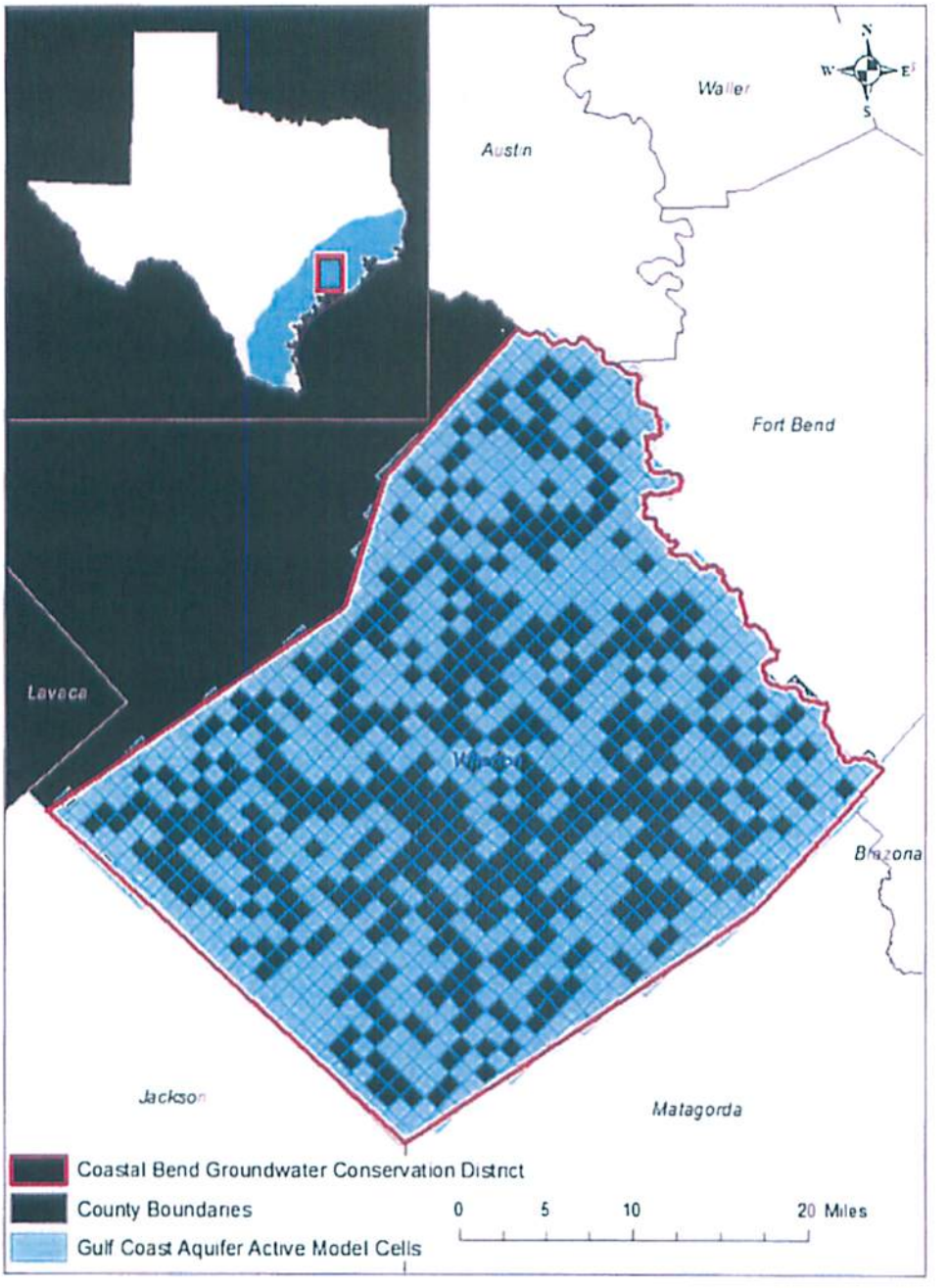
TABLE 1: SUMMARIZED INFORMATION FOR THE GULF COAST AQUIFER SYSTEM THAT IS NEEDED FOR COASTAL BEND GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.

Management Plan requirement	*Aquifer or confining unit*	*Results*
Estimated annual amount of recharge from precipitation to the district	Gulf Coast Aquifer System	20,109
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Gulf Coast Aquifer System	14,614[1]
Estimated annual volume of flow into the district within each aquifer in the district	Gulf Coast Aquifer System	55,548
Estimated annual volume of flow out of the district within each aquifer in the district	Gulf Coast Aquifer System	25,453
Estimated net annual volume of flow between each aquifer in the district	NA[2]	NA[2]

3
4

5a
5b
5c

[1] This total includes 146 acre-feet per year spring discharge and 14,468 acre-feet per year leakage to streams.
[2] NA stands for Not available because the base of the model assumes no-flow conditions.



gcd boundary date = 09 25 13 county boundary date = 02 20 11 glfc_c model grid date = 08 20 13

FIGURE 1: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE GULF COAST AQUIFER SYSTEM FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED (THE GULF COAST AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

LIMITATIONS:

The groundwater model(s) used in completing this analysis is the best available scientific tool that can be used to meet the stated objective(s). To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

> *"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate historic groundwater flow conditions includes the assumptions about the location in the aquifer where historic pumping was placed. Understanding the amount and location of historic pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and interaction with streams are specific to particular historic time periods.

Because the application of the groundwater models was designed to address regional scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations related to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor groundwater pumping and overall conditions of the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future. Historic precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

REFERENCES:

Chowdhury, Ali. H., Wade, S., Mace, R. E., and Ridgeway, C., 2004, Groundwater Availability Model of the Central Gulf Coast Aquifer System: Numerical Simulations through 1999- Model Report, 114 p., http://www.twdb.texas.gov/groundwater/models/gam/glfc_c/TWDB_Recalibration_Report.pdf.

Harbaugh, A. W., 2009, Zonebudget Version 3.01, A computer program for computing subregional water budgets for MODFLOW ground-water flow models, U.S. Geological Survey Groundwater Software.

Harbaugh, A. W., and McDonald, M. G., 1996, User's documentation for MODFLOW-96, an update to the U.S. Geological Survey modular finite-difference ground-water flow model: U.S. Geological Survey Open-File Report 96-485, 56 p.

National Research Council, 2007, Models in Environmental Regulatory Decision Making Committee on Models in the Regulatory Decision Process, National Academies Press, Washington D.C., 287 p., http://www.nap.edu/catalog.php?record_id=11972.

Oliver, W., 2008, GAM Run 08-81: Texas Water Development Board, GAM Run 08-81 Report, 5 p., http://www.twdb.texas.gov/groundwater/docs/GAMruns/GR08-81.pdf.

Texas Water Code, 2011, http://www.statutes.legis.state.tx.us/docs/WA/pdf/WA.36.pdf

Waterstone Environmental Hydrology and Engineering Inc. and Parsons, 2003, Groundwater availability of the Central Gulf Coast Aquifer: Numerical Simulations to 2050, Central Gulf Coast, Texas Contract report to the Texas Water Development Board, 157 p.

NOTICE OF PUBLIC HEARING

Coastal Bend Groundwater Conservation District
Monday, November 10, 2014
8:00 a.m.
Wharton County Extension Office
315 E. Milam, Wharton, TX 77488
(979) 531-1412

POSTED 12
10/16/14 @ 3.17 pm
CE

AGENDA

I. Open public hearing for comments on the District's Management Plan.
II. Public Comments / Announcements.
III. Adjournment.

NOTICE OF HEARING

Notice is hereby given that the Governing Body of the Coastal Bend Groundwater Conservation District, will meet at 8:00 a.m. on the 10th day of November 2014 at the Wharton County Extension Office, 315 E. Milam, City of Wharton, Texas 77488 for the purpose of:

See attached and above Agenda

CERTIFICATE

I certify that the above notice of this meeting was posted in compliance with the Texas Open Meetings Act on the bulletin board of the Wharton County Courthouse in the City of Wharton and at the entrance of El Campo City Hall of the City of El Campo and the front entrance of Wharton City Hall of the City of Wharton, on the 17th day of October 2014 by 5:00 p.m.

Jaime Bosch

Jaime Bosch, Recording Secretary

COASTAL BEND GROUNDWATER CONSERVATION DISTRICT

12

Fax

To:	Liz Staff	**From:**	Neil Hudgins
Fax:	979-543-0027	**Pages:**	2 (Including cover page)
Phone:		**Date:**	October 16, 2014
Re:		**CC:**	

☑ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:**

Please post the following notice.

Thank you,

Neil Hudgins

P.O. Box 341
109 E. Milam
Wharton, Texas 77488
(979) 531-1412 Fax: (979) 531-1002
thedistrict@cbgcd.com

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8:00 a.m.
Wharton County Extension Office
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Jaime Bosch

Jaime Bosch, Recording Secretary

Transmission Report

Date/Time 10-16-2014 03:30:18 p.m.
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Document size : 8.5"x11"

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COASTAL BEND GROUNDWATER CONSERVATION DISTRICT

Fax

To:	Liz Staff	From:	Neil Hudgins
Fax:	979-543-0027	Pages:	2 (including cover page)
Phone:		Date:	October 16, 2014
Re:		CC:	

☑ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

• Comments:

Please post the following notice.

Thank you,

Neil Hudgins

P.O. Box 341
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Wharton, Texas 77488
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Abbreviations:
HS: Host send
HR: Host receive
WS: Waiting send
PL: Polled local
PR: Polled remote
MS: Mailbox save
MP: Mailbox print
RP: Report
FF: Fax Forward
CP: Completed
FA: Fail
TU: Terminated by user
TS: Terminated by system
G3: Group 3
EC: Error Correct

PUBLIC NOTICE

Notice is hereby given that the Coastal Bend Groundwater Conservation District will hold a public hearing at **8:00 a.m. on Monday, November 10, 2014** at the Wharton County Extension Office, 315 E. Milam in the City of Wharton, Texas to approve the CBGCD Management Plan.

Wharton Journal-Spectator
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Thank you,
Helen Sevier
Classified Manager
979-532-8840

RESOLUTION 2014-11-10

Resolution Adopting and Approving the Coastal Bend Groundwater Conservation District Management Plan

WHEREAS, The Management Plan of the Coastal Bend Groundwater Conservation District has been developed for the purpose of conserving, preserving, and protecting the underground water in the District, and this action is taken under the District's authority to prevent waste and protect rights of owners of interest in groundwater;

WHEREAS, pursuant to the Texas Water Code §36.1072(e), the District must review and readopt the management plan at least once every five years; and,

WHEREAS, the prior Management Plan of the Coastal Bend Groundwater Conservation District was approved by resolution of the Board on November 4, 2009; and,

WHEREAS, a Notice of Hearing was posted at the District Office and Wharton County courthouse regarding a public hearing on the adoption of the Coastal Bend Groundwater Conservation District Management Plan on October 16, 2014 and on October 18, 2014, a Notice of Hearing was published in the Wharton Journal Spectator and El Campo Leader News; and,

WHEREAS, a public hearing was scheduled for November 10, 2014;

NOW THEREFORE BE IT RESOLVED THAT The Board of Directors of the Coastal Bend Groundwater Conservation District does hereby adopt and approve the Coastal Bend Groundwater Conservation District Management Plan and directs the submission of such Management Plan to the Executive Administrator of the Texas Water Development Board for review and approval.

CONSIDERED, PASSED, APPROVED, ADOPTED, RESOLVED, SIGNED AND DONE IN OPEN MEETING on this 10th day of November, 2014.

By: _____
Ronald Gertson, President

Attested by: _____
Edmund Weinheimer, Secretary

Neil Hudgins

13

From: Neil Hudgins [nhudgins@cbgcd.com]
Sent: Monday, December 01, 2014 2:18 PM
To: 'general.manager@lcra.org'
Subject: Coastal Bend GCD 2014 Management Plan
Attachments: CBGCD management plan 3.pdf; CBGCD management plan 2.pdf; CBGCD management plan 1.pdf

Lower Colorado River Authority
General Manager Phil Wilson,

On behalf of the Coastal Bend Groundwater Conservation District, I am submitting CBGCD's newly adopted Management Plan for LCRA's records. The scanned plan is attached in three pdf files. If you have any questions, please let me know.

Best Regards,

Neil Hudgins
Coastal Bend/Coastal Plains GCDs
(979) 531-1412 office
(979) 531-1002 fax

Neil Hudgins

From: Neil Hudgins [nhudgins@cbgcd.com]
Sent: Monday, December 01, 2014 11:15 AM
To: 'JohnEBurke@regionk.org'
Subject: Coastal Bend GCD 2014 Management Plan
Attachments: CBGCD management plan 3.pdf; CBGCD management plan 2.pdf; CBGCD management plan 1.pdf

13

Region K RWPG
Chairman John Burke,

On behalf of the Coastal Bend Groundwater Conservation District, I am submitting CBGCD's newly adopted Management Plan for Region K's records. The scanned plan is attached in three pdf files. If you have any questions, please let me know.

Best Regards,

Neil Hudgins
Coastal Bend/Coastal Plains GCDs
(979) 531-1412 office
(979) 531-1002 fax

13

Neil Hudgins

From: Neil Hudgins [nhudgins@cbgcd.com]
Sent: Monday, December 01, 2014 11:08 AM
To: 'harrisonstafford@att.net'; 'Karen Gregory'
Subject: Coastal Bend GCD 2014 Management Plan
Attachments: CBGCD management plan 3.pdf; CBGCD management plan 2.pdf; CBGCD management plan 1.pdf

Region P RWPG
Chairman Harrison Stafford,

I spoke with Karen Gregory earlier and let her know that I would be submitting the Coastal Bend Groundwater Conservation District's newly adopted Management Plan for Region P's records. The scanned plan is attached in three pdf files. If you have any questions, please let me know.

Best Regards,

Neil Hudgins
Coastal Bend/Coastal Plains GCDs
(979) 531-1412 office
(979) 531-1002 fax