TCEQ Interoffice Memorandum

To: Commissioners

Thru: Bridget Bohac, Chief Clerk
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From: Kim Wilson, Director, Water Availability Division

Date: October 13, 2017

Subject: **Evaluation of whether a Watermaster Program should be appointed in the following basins: Upper Brazos River, San Jacinto-Brazos Coastal, Colorado River, Brazos-Colorado Coastal, and Colorado-Lavaca Coastal**

The Texas Commission on Environmental Quality (TCEQ) currently has four watermaster programs in 10 of Texas' 23 river basins[1] that actively manage water[2]. The Executive Director (ED) is required by statute[3] to evaluate basins *without* a watermaster at least every five years[4] to determine if a watermaster should be appointed. The ED's evaluation is based on the criteria and risk factors determined by the Commission. The ED is required to report the findings of that evaluation and make recommendations to the Commission. The Commission then includes those evaluation findings in the TCEQ's biennial report to the Texas Legislature.

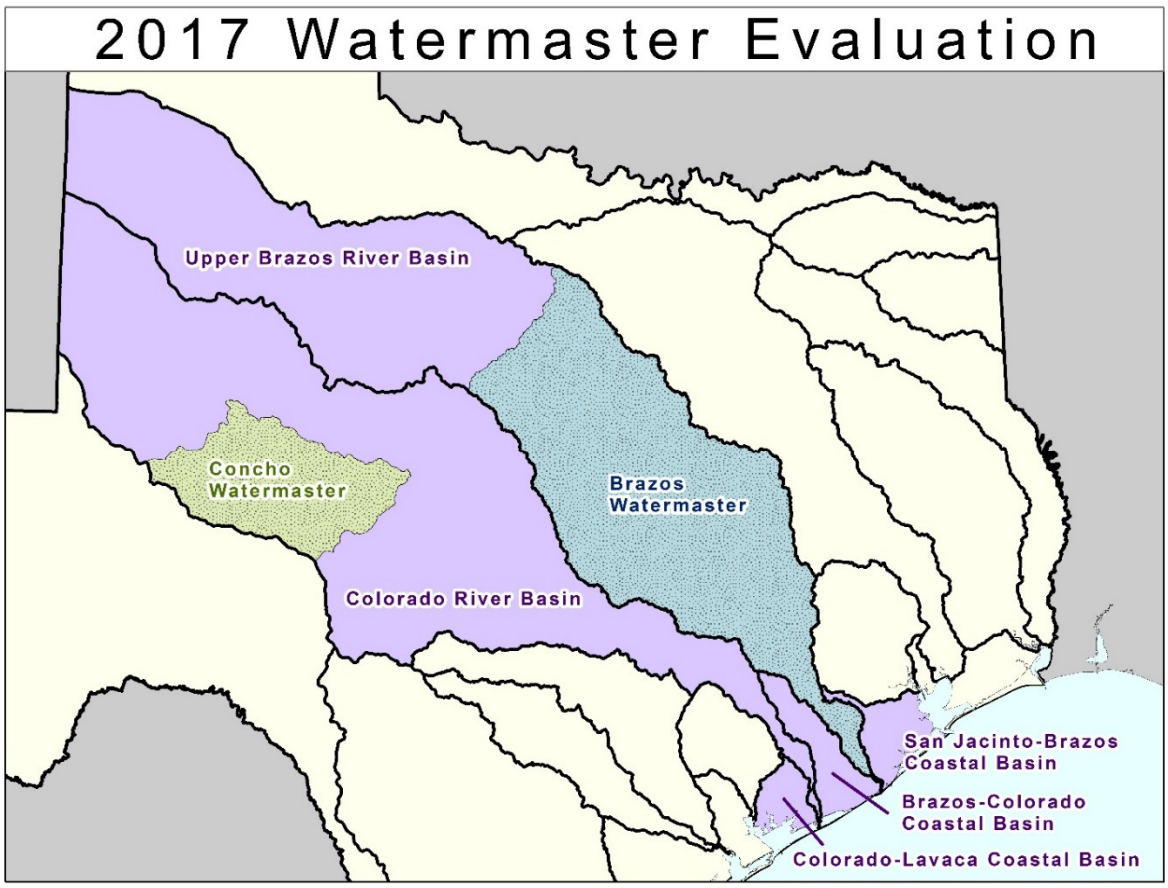
2017 Basin Evaluations

In 2017, the ED evaluated the Upper Brazos (that portion of the Brazos River Basin upstream of Possum Kingdom Lake) and Colorado River Basins and the San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal Basins for the five year period

[1] See Appendix A: Watermaster Programs
[2] See Appendix B: Current Water Rights Management
[3] Texas Water Code (TWC) § 11.326
[4] See Appendix C: Basin Evaluation Schedule.

of Fiscal Years (FY) 2012-2016. The total estimated cost for the ED's 2017 evaluation activities is $172,341.52.[5] This is the second evaluation of these basins by the ED. The previous evaluation of these basins occurred in 2012.[6] This memorandum begins with a general discussion of the evaluation criteria and the evaluation process followed by the evaluations of the specific basins.

Figure 1. Map of the Upper Brazos and Colorado River Basins and the San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal Basins



[5] See Appendix D: 2017 Watermaster Evaluation Costs. This cost includes all 2017 evaluation basins: Upper Brazos and Colorado River Basins and San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal Basins.

[6] The San Jacinto-Brazos Coastal Basin was evaluated in 2013. For the second evaluation cycle, the San Jacinto-Brazos Coastal Basin is being evaluated with the Upper Brazos River Basin because of the inter-relationships between water rights in this coastal basin and water rights in the Brazos River Basin.

Evaluation Criteria

The Commission outlined the following evaluation criteria in the September 28, 2011 Work Session:

1. *Is there a court order to create a watermaster?*
2. *Has a petition been received requesting a watermaster?*
3. *Have senior water rights been threatened, based on:*
    a. *either the history of senior calls or water shortages within the basin or*
    b. *the number of water right complaints received on an annual basis in each basin?*

Is There a Court Order to Create a Watermaster?

Court orders to create a watermaster are considered in the evaluation.

Has a Petition Been Received Requesting a Watermaster?

In evaluating this criteria, the ED considers petitions that meet statutory and rule requirements. Twenty-five or more holders of water rights in a river basin or segment of a river basin may submit a petition to TCEQ requesting that a watermaster be appointed.[7]

Who may Petition the Commission Requesting a Watermaster?

Holders of water rights that have been determined and adjudicated may petition for the creation of a watermaster, whereas domestic and livestock users (D&L) may not. D&Ls are individuals that "directly divert and use water from a stream or watercourse for domestic and livestock purposes . . . without obtaining a permit".[8] While D&Ls are protected in watermaster areas because they are considered to be superior to appropriated water rights, they are not required to register with the Commission and are not assessed a watermaster fee.[9] This is because only holders of water rights that have been "determined or adjudicated and are to be administered by the watermaster"

[7] TWC § 11.451
[8] 30 Tex. Admin. Code (TAC) § 297.21(a)
[9] *See* TWC § 11.329(a) and 30 TAC § 297.21(a)

are required to reimburse the Commission for the compensation and expenses of a watermaster - and D&Ls are not "determined or adjudicated" rights.[10]

How are Undivided Water Rights Considered?

The term "water right holder" is defined as "[a] person or entity that owns a water right. In the case of divided interests, this term will apply to each separate owner".[11] Accordingly, for undivided water rights, the term "water right holder" does not grant a right separately to each owner. Therefore, each owner of an undivided water right should not be counted as a separate petitioner. For example, a married couple who owns an undivided water right should be counted as one water right holder, not as two separate water right holders.

Have Senior Water Rights Been Threatened?

Definition of a Threatened Water Right

A definition for "threat" is required in order to evaluate whether senior water rights have been threatened. During the September 14, 2012 Commission work session discussing the watermaster evaluation process, the Commission directed the ED to utilize the definition of "threatened water right" from a 2004 Commission Order appointing a watermaster for the Concho River.[12] The 2004 Commission Order was issued in response to petitions for the appointment of a watermaster in the Concho River watershed. The Commission officially approved use of the definition in the ED's evaluations at the October 31, 2012 agenda. The definition adopted by the Commission is as follows:

> *"Threat" to the rights of **senior water rights holders** as used in Chapter 11, Subchapter I, of the Water Code implies a set of circumstances creating the possibility that **senior water rights holders** may be unable to fully exercise their rights – not confined to situations in which other people or groups convey an actual intent to harm such rights. Specifically, in time of water shortage, the*

[10] TWC § 11.329(a)
[11] 30 TAC § 304.3(18)
[12] Order Appointing a Watermaster for the Concho River Segment, TCEQ Docket No. 2000-0344-WR, Aug. 17, 2004.

> *rights of **senior water rights holders in the basin** are threatened by the situation of less available water than appropriated water rights; the disregard of prior appropriation by junior water rights holders; the storage of water; and the diversion, taking, or use of water in excess of the quantities to which other holders of water rights are lawfully entitled.*[13]

For purposes of determining whether a threat exists, the ED must consider to whom the definition should be applied. The definition of threat requires the ED to consider the rights of "senior water right holders", which does not include D&Ls. D&Ls are superior water rights[14] and are not considered "senior water right holders". The term "water right" is defined in Texas Water Code Section 11.002(5) as "a right acquired under the laws of this state to impound, divert, or use state water." The term "water right holder" is defined in TCEQ's Chapter 304 rules on watermaster operations as "(a) person or entity that owns a water right . . ."[15] As stated above, D&Ls are not "determined or adjudicated" and are not required to obtain a permit. Furthermore, D&Ls are excluded from the appropriation and permitting system and are not required to pay watermaster fees. Although, D&Ls are superior water rights and are protected by a watermaster (or by the regional offices absent a watermaster), D&Ls are not senior water rights in the first-in-time, first-in-right principle applied to adjudicated water rights. Under the Commission's watermaster operation rules discussing when available flow is not sufficient, the demands of "downstream senior rights" are considered a separate category from the "demands for domestic and livestock purposes *that are not included under any water right*".[16] Therefore, because D&Ls are not "senior water rights holders", the definition of threat or threatened memorialized in the Commission's 2004 Order appointing a watermaster for the Concho River segment does not apply to D&Ls.

[13] *Id.* (emphasis added).
[14] 30 TAC § 297.21(a)
[15] 30 TAC § 304.3(18)
[16] 30 TAC § 304.21(c) (emphasis added).

Evaluation Process

As part of the evaluation process, the Commission directed the ED to develop information (in addition to the evaluation criteria) to support implementation considerations. The Commission also directed the ED to involve stakeholders in the evaluation process. An explanation of the implementation considerations and stakeholder involvement follows.

Implementation Considerations

The Commission identified specific implementation considerations at the September 28, 2011 Work Session. These considerations include river compacts, environmental flows, the geographic reach of river basins, the number of permitted water rights within the basin, and cost factors for both current water management and potential watermaster programs. Implementation considerations specific to the basins in this evaluation are discussed in detail in later sections below. In this section, the development of the implementation criteria is discussed more generally.

There are five interstate river compacts: Canadian River Compact; Pecos River Compact; Red River Compact; Sabine River Compact; and Rio Grande Compact. None of these interstate river compacts apply to the basins considered in the evaluation. Therefore, they are not discussed further in the watermaster evaluations below.

TCEQ's adopted environmental flow standards apply to new appropriations of water.[17] Water rights for new appropriations of water in the basins covered in this evaluation will include permit special conditions that are adequate to protect the adopted standards.[18] A watermaster in basins with environmental flow standards administers permits with special conditions to protect environmental flow standards in the same manner as water rights are administered in non-watermaster basins. TCEQ has the authority to suspend or adjust water rights to provide sufficient flows to meet the needs of downstream water rights or domestic and livestock users when TCEQ is aware of those needs. Exercise of this authority could help maintain streamflow as water travels downstream to its intended user. However; TCEQ does not have authority to

[17] 30 TAC § 298.10
[18] 30 TAC §§ 298.230, 298.335, and 298.485

restrict diversions by water right holders to protect streamflow solely for the environment, unless the water right includes such a requirement.

The remaining implementation considerations: the geographic reach of river basins, the number of permitted water rights within the basin, and cost factors for both current water management and potential watermaster programs, are fully discussed in the specific watermaster evaluations later in this memorandum.

Stakeholder Involvement

The ED's evaluation included a robust stakeholder process consistent with Commission direction. Stakeholders included:

- all water right holders in the basins evaluated (including river authorities, cities, agricultural interests, and industries);
- county judges;
- county extension agents; and
- other interested parties in the basin (including environmental interests and domestic and livestock users that requested to participate in the evaluation).

The ED facilitated stakeholder activities and involvement with the following:

- **Webpages:** The ED maintained public webpages exclusively dedicated to the watermaster evaluation process. Webpages provided information about watermaster programs, the evaluation process, stakeholder letters, and other information developed during the evaluation.
- **Email Notifications:** stakeholders were provided the opportunity to sign-up to receive automated updates by email. These notifications included any updates to evaluation webpages, notices, and any other communications.
- **Outreach Letters:** initial outreach letters were sent to all stakeholders providing information about the evaluation process and seeking initial comments.
- **Stakeholder Meetings:** Stakeholder meetings were held at locations throughout the basins evaluated. Notification of stakeholder meetings were posted on the

evaluation webpage and mailed to all stakeholders. At stakeholder meetings, staff from the Office of Water and Office of Compliance and Enforcement presented information about water management practices, evaluation requirements, the evaluation process, the processes for establishing watermasters, the functions of a watermaster, evaluation options considered, and addressed stakeholder questions.

- **Public Comments:** Stakeholders were provided with the opportunity to provide comments at stakeholder meetings or submit comments in writing (including via Email) during the public comment period. The public comment period opened with the mailing of initial outreach letters on March 3, 2017. The comment period for this evaluation was extended from June 30, 2017 for an additional 31 days to July 31, 2017.

Evaluation of the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

The ED's evaluation findings for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin are discussed below, including the criteria established by the Commission, the implementation considerations, and a discussion of stakeholder involvement. The San Jacinto-Brazos Coastal Basin is being evaluated with the Upper Brazos River Basin because of the inter-relationships between water rights in this coastal basin and water rights in the Brazos River Basin.

History of Court Orders to Create a Watermaster

There are no court orders to create a watermaster in either the Upper Brazos River Basin or the San Jacinto-Brazos Coastal Basin.

History of Petitions Requesting a Watermaster

A petition for a watermaster was received on January 7, 2013 requesting a watermaster for the Brazos River Basin (that petition did not include the San Jacinto-Brazos Coastal Basin). The matter was referred to the State Office of Administrative Hearings (SOAH), who conducted a hearing. SOAH presented their proposal for decision to the Commission on April 9, 2014. On April 21, 2014, the Commission issued an order

partially granting the petition to create a watermaster in the Brazos River Basin. The Brazos Watermaster Program has jurisdiction over the Lower Brazos River Basin from Possum Kingdom Lake (including the lake) to the Gulf of Mexico. The Brazos Watermaster program began on June 1, 2015.

There have been no additional petitions for a watermaster in either the Upper Brazos River Basin or the San Jacinto-Brazos Coastal Basin.

Have Senior Water Rights been Threatened?

History of Priority Calls or Water Shortages

There were no priority calls received from FY2012 to FY2016.

History of Complaints

See the following tables for a summary of complaints by year.

Table 1. Summary of Complaints from FY 2012 to FY 2016

Basin	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total
Upper Brazos	7	2	8	7	2	**26**
San Jacinto-Brazos Coastal	2	3	2	0	0	**7**

From FY 2012 to FY 2016, the TCEQ Regional Offices received and investigated a total of 26 water rights complaints in the Upper Brazos River Basin and seven water rights complaints in the San Jacinto-Brazos Coastal Basin. Of the 26 complaints in the Upper Brazos River Basin, 16 resulted in no violations or enforcement actions. Of the remaining, 10 resulted in violations or enforcement actions that have since been resolved; and zero resulted in violations or enforcement actions that are currently still unresolved or pending.

Of the seven complaints in the San Jacinto-Brazos Coastal Basin, five resulted in no violations or enforcement actions. Of the remaining, two resulted in violations or enforcement actions that have since been resolved; and zero resulted in violations or enforcement actions that are currently still unresolved or pending. The graphs below summarize complaints in the Upper Brazos Basin and the San Jacinto-Brazos Coastal Basin.

Figure 2. Graph of Complaints Investigated in the Upper Brazos River Basin

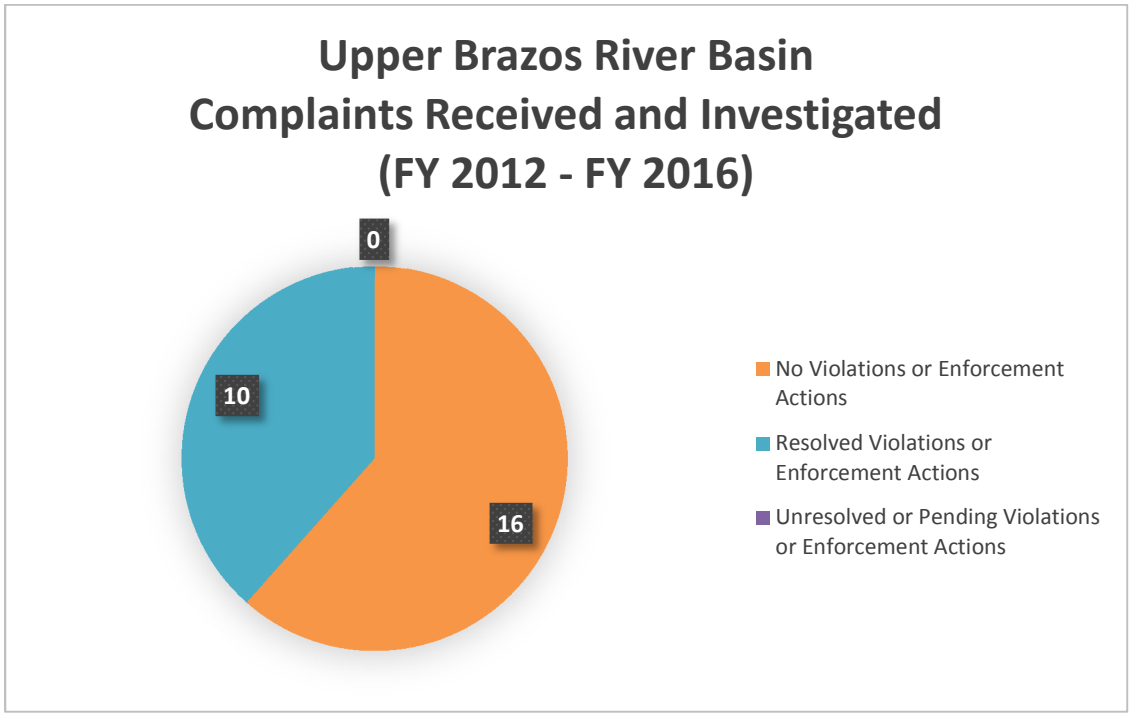


Figure 3. Graph of Complaints Investigated in the San Jacinto-Brazos Coastal Basin

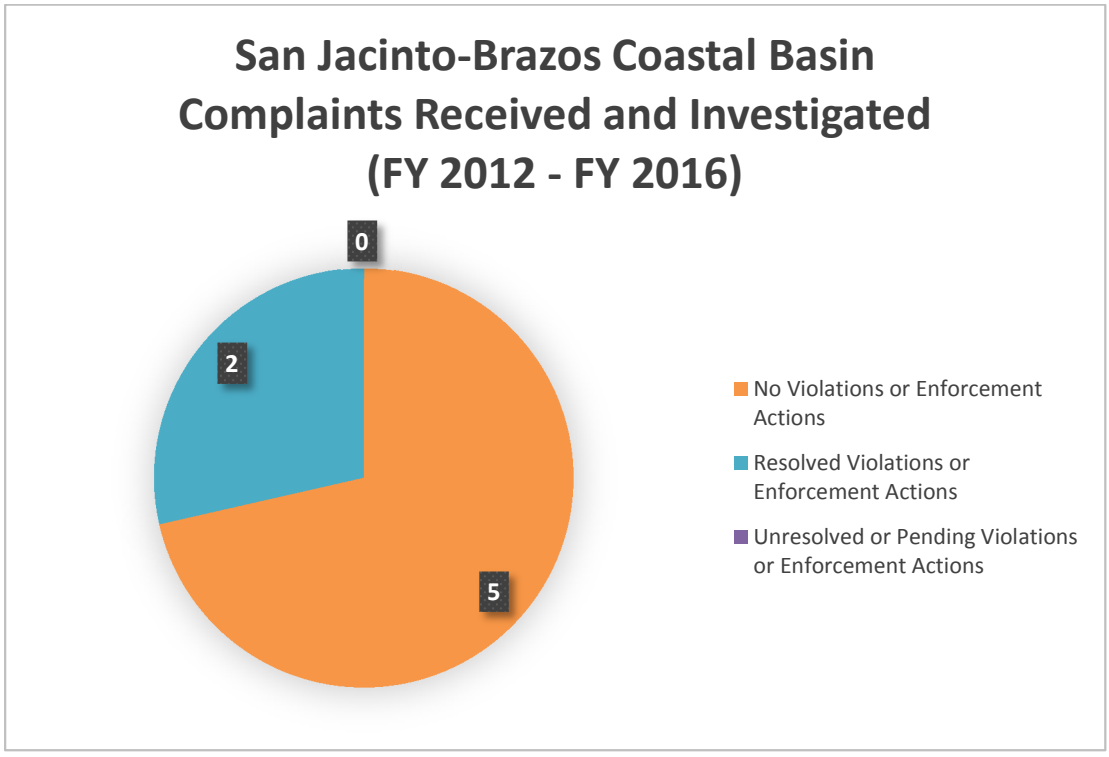


Table 2. Summary of Investigations* from FY 2012 to FY 2016

Basin	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total
Upper Brazos	12	7	12	16	5	**52**
San Jacinto-Brazos Coastal	2	3	3	6	0	**14**

*Investigation types include complaints, temporary permits, and compliance initiatives.

From FY 2012 to FY 2016, the TCEQ Regional Offices conducted a total of 52 water-rights related investigations in the Upper Brazos River Basin and 14 water-rights related investigations in the San Jacinto-Brazos Coastal Basin. Of the 52 investigations in the Upper Brazos River Basin, 48 resulted in no violations or enforcement actions. Of the remaining, four resulted in violations or enforcement actions that have since been resolved; and zero resulted in violations or enforcement actions that are currently still unresolved or pending.

Of the 14 investigations in the San Jacinto-Brazos Coastal Basin, 12 resulted in no violations or enforcement actions. Of the remaining, two resulted in violations or enforcement actions that have since been resolved; and zero resulted in violations or enforcement actions that are currently still unresolved or pending. The graphs below summarize investigations conducted in the Upper Brazos Basin and the San Jacinto-Brazos Coastal Basin.

Figure 4. Graph of Investigations Conducted in the Upper Brazos Basin

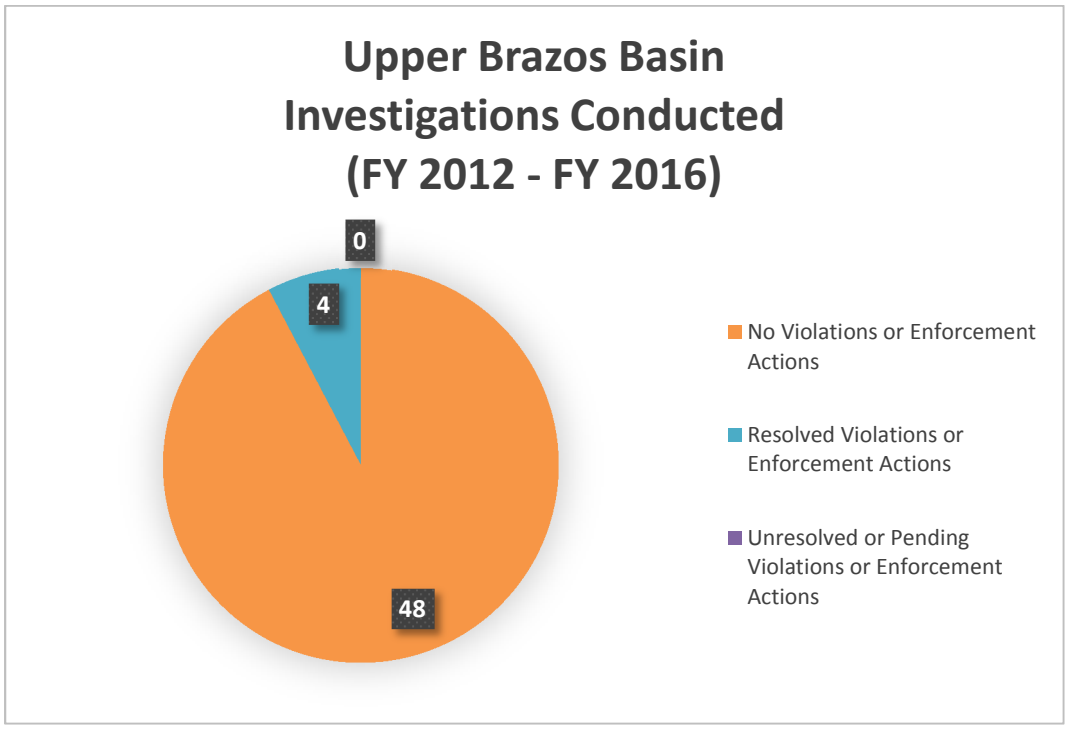
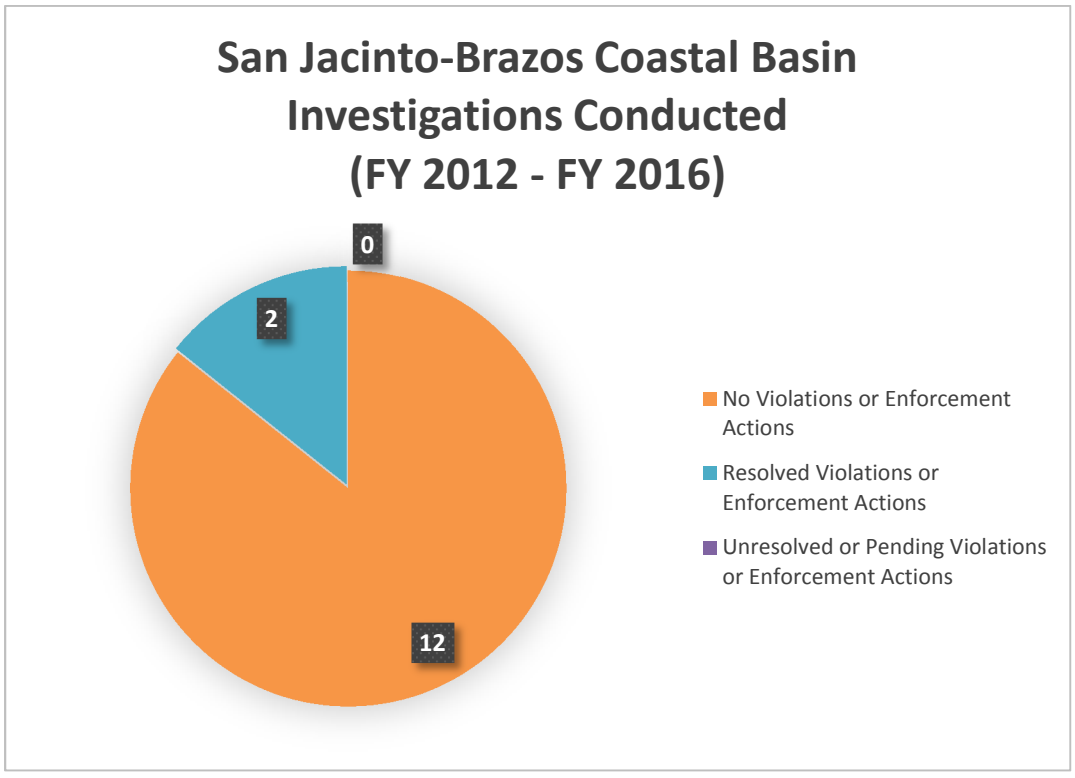


Figure 5. Graph of Investigations Conducted in the San Jacinto-Brazos Coastal Basin



Implementation Considerations

A summary of implementation considerations is provided below.[19]

Geographic Reach of the Basin and Water Right Information

The Upper Brazos River Basin includes all or a portion of 38 counties with 212 water rights. The San Jacinto-Brazos Coastal Basin includes all or a portion of 5 counties with 60 water rights.

Environmental Flows

TCEQ adopted environmental flow standards for the Brazos River Basin in 2014.[20] TCEQ adopted environmental flow standards for the San Jacinto-Brazos Coastal Basin in 2011.[21]

Cost Factors

The total estimated costs for the ED to manage water rights in the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin for FYs 2012 – 2016 are $23,854.58 and $3,941.62, respectively.

The ED considered three options when evaluating watermaster program costs for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin. These options were presented to stakeholders at meetings held throughout the basins. A more detailed discussion of costs is included in Appendix E.

Option 1: No watermaster recommended for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin.

Option 2: Extend the current Brazos Watermaster Program to include the Upper Brazos River Basin. Estimated costs reflect the amount required to operate the FY18

[19] See Appendix E: Implementation Considerations for Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin
[20] 30 TAC Chapter 298, Subchapter G
[21] 30 TAC Chapter 298, Subchapter B

Brazos Watermaster Program plus the addition of the Upper Brazos River Basin. Year 1 has an estimated cost of $1,032,208 with a cost of $957,368 for subsequent years.

Option 3: Extend the Brazos Watermaster Program to include the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin. Estimated costs reflect the amount required to operate the FY18 Brazos Watermaster Program plus the addition of the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin. Year 1 has an estimated cost of $1,196,910, with a cost of $1,067,284 for subsequent years.

Stakeholder Involvement

On March 3, 2017 the initial outreach letter was mailed to stakeholders initiating the comment period for the evaluation. On April 28, 2017, a letter announcing stakeholder meetings was mailed to the stakeholders. Stakeholder meetings were conducted in Abilene, Levelland, Waco, and Rosenberg between May 30, 2017 and June 14, 2017. On June 28, 2017, an email was sent (those who did not supply an email address were called if they provided a phone number) notifying stakeholders that the comment period for the evaluation was extended to July 31, 2017.[22] Written comments were received during the evaluation period. All comments received during the comment period were also made available on the TCEQ external web page.

Table 3. Summary of Written Comments for Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

	Comments Received				
		In Favor		Opposed	
Basin	Total	Water Right Holders	Other	Water Right Holders	Other
Upper Brazos	15	3	---	9	3
San Jacinto-Brazos Coastal	1	---	---	1	---

[22] See Appendix F: TCEQ Letters to Stakeholders

Evaluation of the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

The ED's evaluation findings for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins are discussed below beginning with the criteria established by the commission and followed by implementation considerations and a discussion of stakeholder involvement.

History of Court Orders to Create a Watermaster

There are no court orders to create a watermaster in either the Colorado River Basin or the Brazos-Colorado and Colorado-Lavaca Coastal Basins.

History of Petitions Requesting a Watermaster

There have been three petitions filed in the Colorado River Basin since 2001. All three were related to the San Saba River. In January 2001, a petition was filed by mostly domestic and livestock users requesting a watermaster for the San Saba River. The petition was subsequently withdrawn in January of 2004.

In September of 2012, the TCEQ received a petition requesting a watermaster for the San Saba River from domestic and livestock users. The petition did not move forward because it did not meet statutory criteria. In October of 2012, TCEQ received a third petition requesting a watermaster for the San Saba River from 30 domestic and livestock water users. Prior to being discussed at Commission agenda, the petitioners withdrew the petition.

Have Senior Water Rights been Threatened?

History of Priority Calls or Water Shortages

Due to extreme drought conditions from 2012 through 2016, the ED responded to eight priority calls in the upper Colorado River Basin. Seven of the calls were from a total of 29 individual domestic and livestock users on the San Saba River. The eighth call was from a water right holder on the Colorado River. In evaluating the priority calls, the ED considered streamflows and streamflow trends, overall drought conditions in the priority call area, all water rights in the area including their locations and authorized use, information from field investigations in the area of the call, and

the need for water by the individuals making the calls. The ED's response to the calls balanced whether curtailment of existing water right holders would maximize the beneficial use of water, minimize the impact on water right holders, and prevent the waste of water.

The ED did not suspend water rights in response to the call on the Colorado River. The ED also did not suspend water rights in response to six of the calls on the San Saba because any theoretical additional water in the stream resulting from such curtailment would either not have reached the location of the domestic and livestock users who made priority calls in sufficient quantities to be beneficially used (futile call) or there was still sufficient water in the river to meet the needs of the domestic and livestock users making the priority calls. The ED did suspend water rights in the San Saba River in response to one call in August of 2013. The Commission affirmed the ED's order suspending water rights on October 9, 2013.[23]

In the lower portion of the Colorado Basin, TCEQ issued nine emergency orders related to the Lower Colorado River Authority's (LCRA) Water Management Plan. These emergency orders are evidence of severe drought conditions in the basin during most of the evaluation period. The orders did not relate to or effect the priority of water rights or allocation of streamflow between water right holders. The purpose of the orders was to authorize LCRA to use its own water rights differently.

History of Complaints

See the following tables for a summary of complaints by year.

Table 4. Summary of Complaints from FY 2012 to FY 2016

Basin	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total
Colorado[+]	31	26	21	23	53	**154**
San Saba Watershed	23	12	7	6	40	**88**
Brazos-Colorado Coastal	2	1	0	0	0	**3**
Colorado-Lavaca Coastal	0	0	0	0	0	**0**

[+]This number includes the complaints received in the San Saba Watershed.

[23] Order Affirming an Order Granted by the Executive Director Suspending and Adjusting Water Rights on the San Saba River for a Senior Call; TCEQ Docket No. 2013-1762-WR; Oct. 15, 2013

From FY 2012 to FY 2016, the TCEQ Regional Offices received and investigated a total of 154 water rights complaints in the Colorado River Basin (88 of those in the San Saba Watershed), three water rights complaints in the Brazos-Colorado Coastal Basin, and zero water rights complaints in the Colorado-Lavaca Coastal. Of the 154 total complaints in the Colorado River Basin, 109 resulted in no violations or enforcement actions. Of the remaining, 37 resulted in violations or enforcement actions that have since been resolved; and eight resulted in violations or enforcement actions that are currently still unresolved or pending.

Of the 88 complaints in the San Saba Watershed, 61 resulted in no violations or enforcement actions; 20 resulted in violations or enforcement actions that have since been resolved; and seven resulted in violations or enforcement actions that are currently still unresolved or pending.

All three complaints in the Brazos-Colorado Coastal Basin resulted in no violations or enforcement actions. The graphs below summarize complaints in the Colorado River Basin, Brazos-Colorado Coastal Basin, and the Colorado-Lavaca Coastal Basin as well as the San Saba Watershed.

Figure 6. Graph of Complaints Investigated in the Colorado River Basin, Brazos-Colorado Coastal Basin, and Colorado-Lavaca Coastal Basin

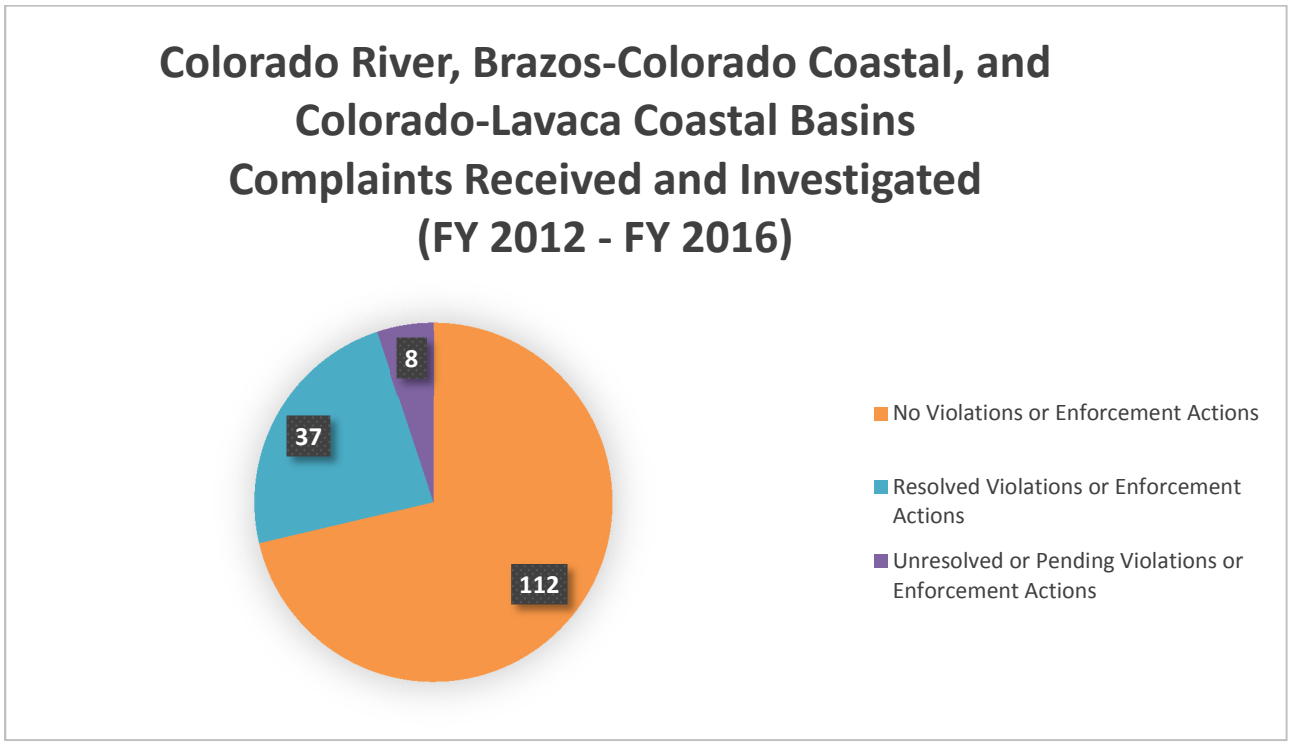


Figure 7. Graph of Complaints Investigated in the San Saba Watershed

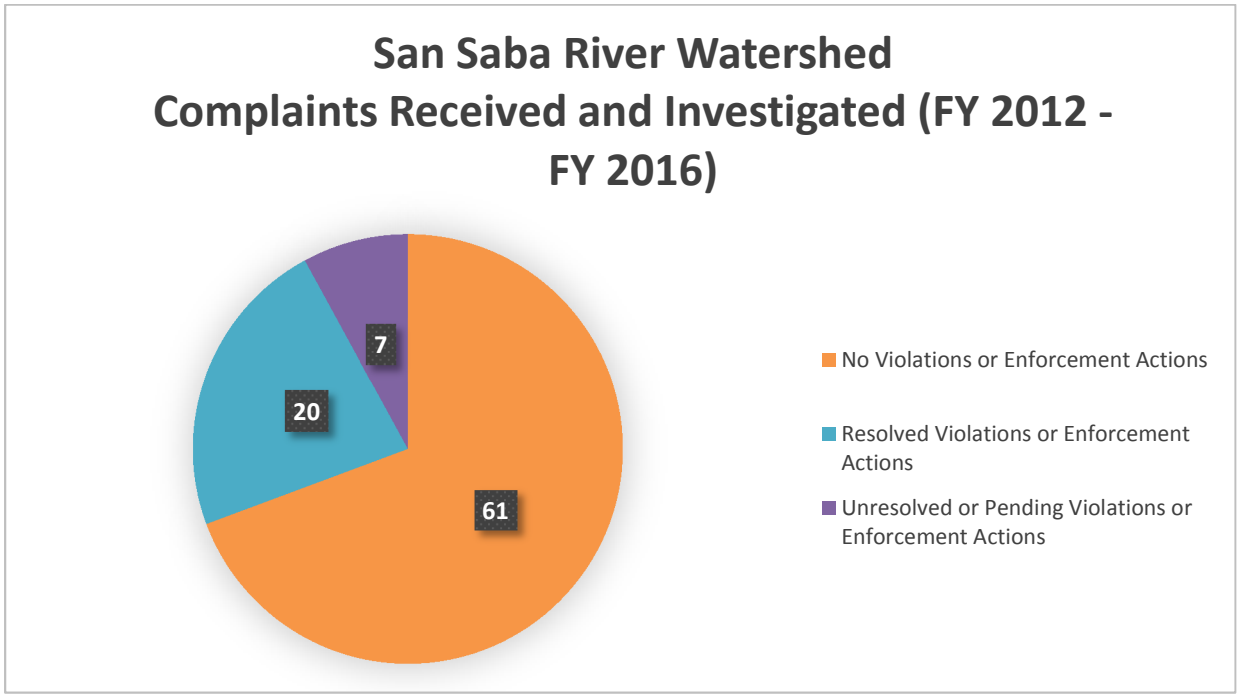


Table 5. Summary of Investigations from FY 2012 to FY 2016*

Basin	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Total
Colorado+	201	134	461	212	310	**1318**
San Saba Watershed	119	108	436	191	288	**1142**
Brazos-Colorado Coastal	3	3	2	0	1	**9**
Colorado-Lavaca Coastal	0	0	0	0	2	**2**

*Investigation types include complaints, temporary permits, and compliance initiatives.
+This number includes the investigations conducted in the San Saba Watershed.

From FY 2012 to FY 2016, the TCEQ Regional Offices conducted a total of 1,318 water-rights related investigations in the Colorado River Basin (1,142 of those in the San Saba Watershed), nine water-rights related investigations in the Brazos-Colorado Coastal Basin, and two water-rights related investigations in the Colorado-Lavaca Coastal Basin. Of the 1,318 total investigations in the Colorado River Basin, 1,270 resulted in no violations or enforcement actions. Of the remaining, 19 resulted in violations or enforcement actions that have since been resolved; and 29 resulted in violations or enforcement actions that are currently still unresolved or pending.

Of the 1,142 investigations in the San Saba Watershed, 1,129 resulted in no violations or enforcement actions; 10 resulted in violations or enforcement actions that have since been resolved; and three resulted in violations or enforcement actions that are currently still unresolved or pending.

All nine investigations in the Brazos-Colorado Coastal Basin resulted in no violations or enforcement actions. Both investigations in the Colorado-Lavaca Coastal Basin resulted violations or enforcement actions that have since been resolved. The graphs below summarized investigations conducted in these basins.

Figure 8. Graph of Investigations Conducted in the Colorado River Basin, Brazos-Colorado Coastal Basin, and Colorado-Lavaca Coastal Basin

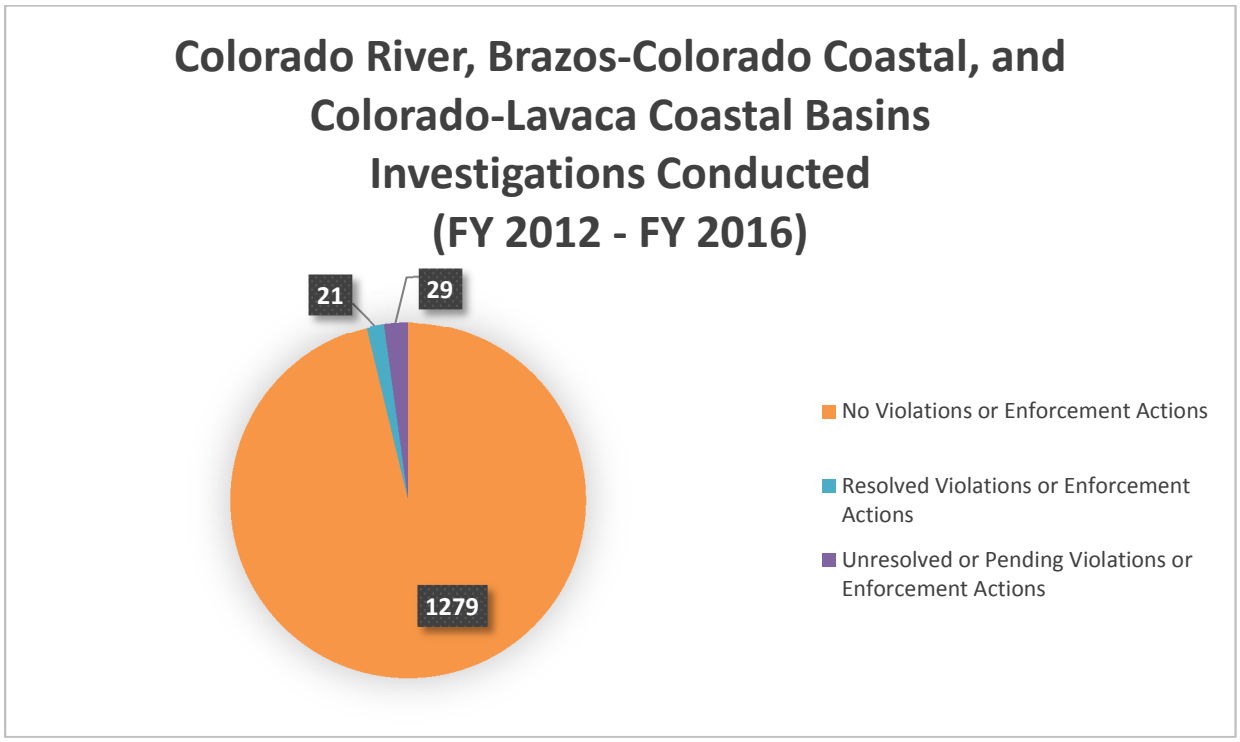
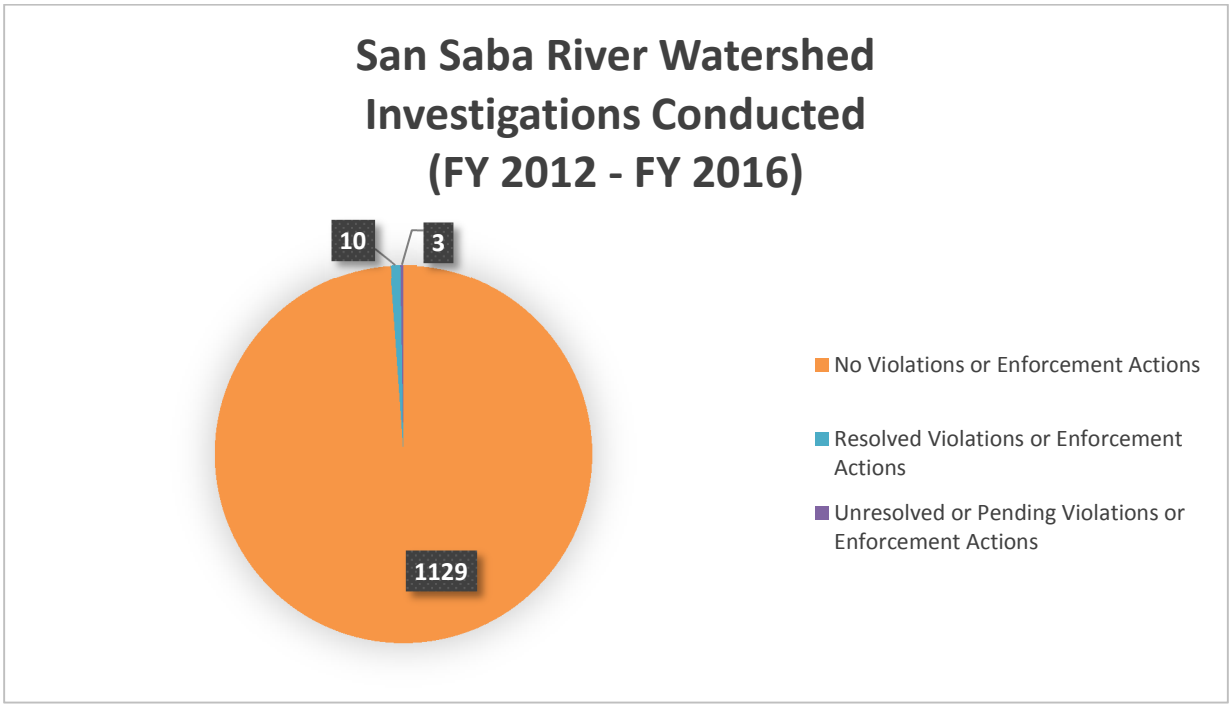


Figure 9. Graph of Investigations Conducted in the San Saba Watershed



Implementation Considerations

A summary of implementation considerations is provided below:[24]

Geographic Reach of the Basin and Water Right Information

The Colorado River Basin includes all or a portion of 63 counties with 1,218 water rights (with 222 of those water rights being located in the Concho River Watermaster program jurisdiction). The Brazos-Colorado Coastal includes all or a portion of 6 counties with 67 water rights. The Colorado-Lavaca Coastal Basin includes all or a portion of 4 counties with 30 water rights.

Environmental Flows

TCEQ adopted environmental flow standards for the Colorado River Basin and the Colorado-Lavaca Coastal Basin in 2012.[25] TCEQ adopted environmental flow standards for the Brazos-Colorado Coastal Basin in 2014.[26]

Cost Factors

The total estimated costs for the ED to manage water rights in the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins for FYs 2012 – 2016 is $374,627.50. Of the $374,627.50 in total costs, $329,754.51 were directly related to managing water rights in the San Saba watershed. The total estimated costs for managing priority calls in the San Saba were an additional $107,947.47.

The ED considered three options (numbered 4, 5, and 6, below) when evaluating watermaster program costs for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins. These options were presented to stakeholders at meetings held throughout the basins. At the request of stakeholders, an additional option (Option 7) was developed and costs associated with that option were posted to the TCEQ's website on July 20, 2017 with email notification provided that same day. A more detailed discussion of costs is included in Appendix G.

[24] See Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins.
[25] 30 TAC Chapter 298, Subchapter D
[26] 30 TAC Chapter 298, Subchapter G

Option 4: No watermaster recommended for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins.

Option 5: Appoint a watermaster for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins. Estimated costs reflect the amount required to operate the FY18 Concho Program plus the addition of the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins. Year 1 has an estimated cost of $1,307,734 with a cost of $1,045,549 for each subsequent year.

Option 6: Appoint a watermaster for the San Saba River. Year 1 has an estimated cost of $377,400 and a cost of $299,053 for subsequent years.

Option 7: Appoint a watermaster for the San Saba River above the confluence with Brady Creek and the San Saba River. Year 1 has an estimated cost of $336,335 and a cost of $257,935 for subsequent years.

Stakeholder Involvement

On March 3, 2017 the initial outreach letter was mailed to stakeholders initiating the comment period for the evaluation. On April 28, 2017, a letter announcing stakeholder meetings was mailed to the stakeholders. Stakeholder meetings were conducted in Big Spring, San Angelo, San Saba, Boling, and Fredericksburg between May 30, 2017 and June 14, 2017. On June 28, 2017, an email was sent (those who did not supply an email addresses were called if they provided a phone number) notifying stakeholders that the comment period for the evaluation was extended to July 31, 2017[27]. Written comments were received during the evaluation period for the Colorado River Basin. No comments were received for the Brazos-Colorado and Colorado-Lavaca Coastal Basins. All comments received during the comment period were also made available on the TCEQ external web page.

[27] See Appendix F: TCEQ Letters to Stakeholders

Table 6. Summary of Written Comments for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Basin	Comments Received				
	Total	In Favor		Opposed	
		Water Right Holders	Other	Water Right Holders	Other
Colorado River*	107	1	27	45	33
San Saba River	72	1	24	27	20
Brazos-Colorado Coastal	0	-	-	-	-
Colorado-Lavaca Coastal	0	-	-	-	-

*This includes the comments received for the San Saba River Basin.

The majority of the comments supporting a watermaster program in the San Saba watershed were received from domestic and livestock users. As discussed above in the document, these users would not be assessed fees to support a watermaster program.

Stakeholders identified several additional issues in written comments that are outside the scope of the evaluation criteria. Appendix H provides limited discussion of those issues.[28]

Executive Director's Recommendation

As detailed in this document, the ED considered the evaluation criteria outlined by the Commission in the September 28, 2011 work session and addressed implementation considerations for the establishment of a watermaster. For the evaluated basins, there were no court orders to create a watermaster and no valid petitions from water right holders requesting a watermaster. There were no priority calls in the Upper Brazos River Basin, San Jacinto-Brazos, Brazos-Colorado, or Colorado-Lavaca Coastal Basins. In the Colorado River Basin, the ED suspended water rights in response to one priority call from domestic and livestock users on the San Saba River above the confluence with Brady Creek in 2013. Complaints and investigations in the Upper Brazos River Basin, San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal

[28] See Appendix H: Additional Issues

Basins were relatively few in number and most did not result in violations or enforcement action. In the Colorado River Basin, complaints and investigations were more numerous. The majority of those complaints and investigations occurred within the San Saba River watershed. The majority (61 of 88) of complaints investigated in this area did not result in violations or enforcement action. Most of those resulting in violations or enforcement action have been resolved (20), with seven remaining unresolved or pending. The TCEQ regional office proactively monitored conditions in the San Saba River watershed, resulting in an increased number of investigations (1,142). However, only 10 of those investigations resulted in violations or enforcement actions – three of which are still unresolved or pending. Complaints and investigations in the remainder of the Colorado River Basin were relatively few in number and most did not result in violations or enforcement action.

The Executive Director does not believe that the criteria for recommending the creation of a watermaster have been met. Additionally, as discussed in this evaluation document, the definition of threat or threatened memorialized in the Commission's 2004 Order appointing a watermaster for the Concho River segment does not include domestic and livestock users. As a result, at this time the ED does not recommend that the Commission move forward on its own motion with the creation of a watermaster program for the Upper Brazos and Colorado River Basins and the San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal Basins.

Twenty-five or more holders of water rights in a river basin or segment of a river basin may petition the Commission to appoint a watermaster. The Commission may refer a valid petition to the State Office of Administrative Hearings for a complete administrative hearing and recommendation to the Commissioners for consideration.

While the statute requires the ED to evaluate the need for a watermaster at least every five years; there is no prohibition against evaluating a basin sooner, on an as needed basis, if threats to senior water rights occur. The ED can also consider stakeholder input, and the ED is always open to additional information from stakeholders. It is important to have stakeholder support in articulating the threat and the need to establish a new program as water right holders will be responsible for paying a new fee to support the new regulatory program.

List of Appendices

Appendix A: Watermaster Programs

Appendix B: Current Water Rights Management

Appendix C: Basin Evaluation Schedule

Appendix D: 2017 Watermaster Evaluation Costs

Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Appendix F: TCEQ Letters to Stakeholders

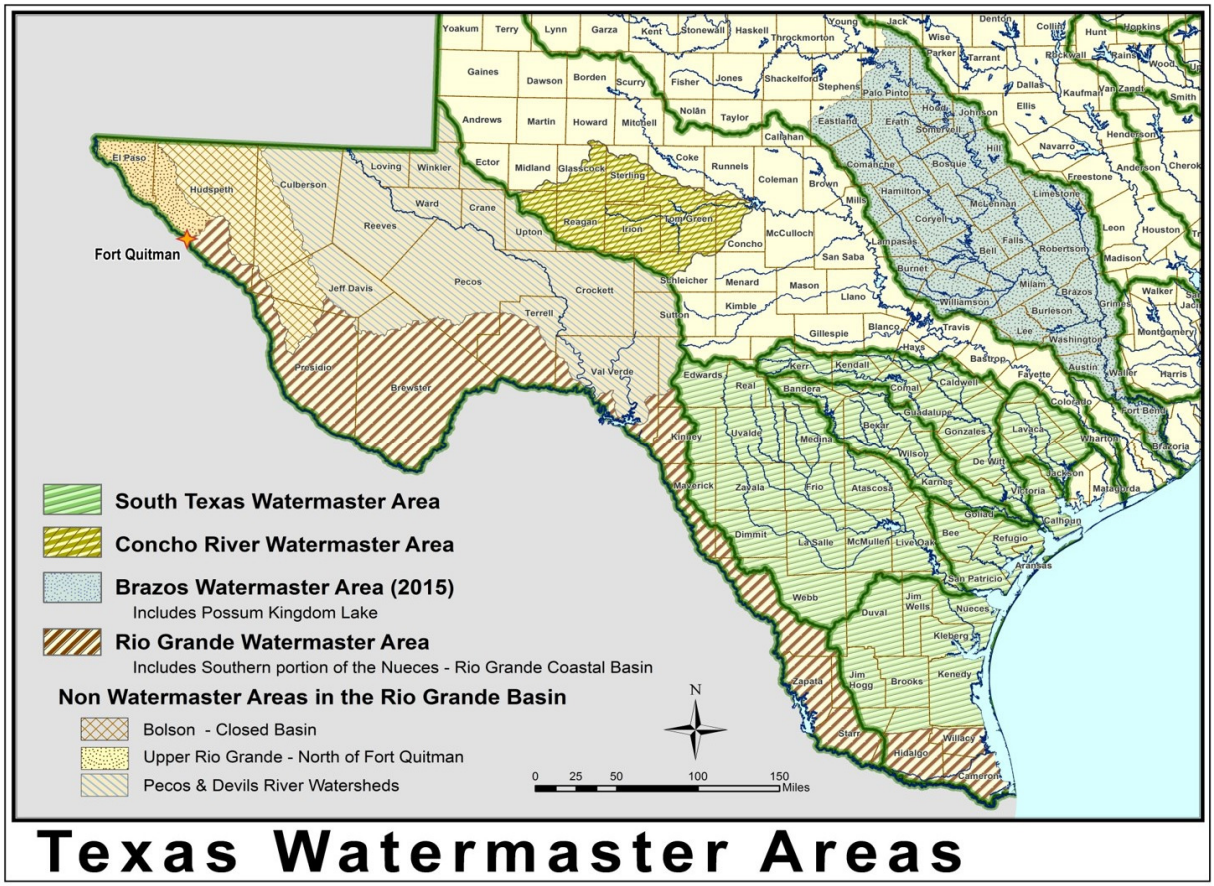
Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Appendix H: Additional Information

Appendix A: Watermaster Programs

There are four watermaster programs in Texas:

1. **Rio Grande**, which serves the Rio Grande Basin below Fort Quitman, Texas (excluding the Pecos and Devils Rivers).
2. **South Texas**, which serves the Nueces, San Antonio, Lavaca, and Guadalupe River Basins, as well as the adjoining coastal basins,
3. **Concho River**, currently a division of the South Texas Watermaster, which serves the Concho River segment of the Colorado River Basin, and
4. **Brazos**, which serves the Brazos River Basin, downstream of Possum Kingdom reservoir, including said reservoir.



Texas Watermaster Areas

Appendix B: Current Water Rights Management

Surface water rights are managed by the TCEQ either through an established watermaster program or through one of the 16 Regional Offices in non-watermaster areas. TCEQ is responsible for protection of senior water rights regardless of whether a watermaster program has been established in the affected area.

Day-to-day Water Rights Management

Watermaster Areas

Watermasters proactively manage water rights in their areas and allocate available water according to water right priorities on a real-time operational basis. In a watermaster area, a water rights holder must notify the watermaster of how much water they plan to divert, before the water right holder diverts its authorized water. After receiving a declaration of intent (DOI) to divert water, the watermaster determines whether a diversion will remove water that rightfully belongs to another user. As needed, the watermaster will notify any users with more junior priority dates to reduce pumping, or to stop pumping altogether if necessary.

Day-to-day activities performed by watermaster staff include monitoring rivers, taking stream flow measurements, setting stream flow markers, meeting with water right holders and other interested persons, investigating complaints, writing notices of violations and in some cases notices of enforcement, collecting water use data, and recording their daily investigation activities.

Watermasters can respond quickly to identify and stop illegal diversions because of their real-time monitoring of local streamflow conditions. Also, because watermasters have information on which water is being diverted under a water right at any given time, they are able to better anticipate a shortage before it reaches a critical situation, thus enabling the watermaster and local users to work together to develop a strategy that will best meet everyone's water needs.

Appendix B: Current Water Rights Management

Non-Watermaster Areas

TCEQ regional offices conduct active water management activities in areas of the state outside the jurisdiction of a watermaster program to increase agency awareness of potential impacts to surface water and to provide information critical for the agency's evaluation and determination of priority calls for surface water. This water management includes monitoring United States Geological Survey (USGS) gages, using flow data from applicable TCEQ Surface Water Quality Monitoring sites, and coordinating with and reaching out to other TCEQ program areas and outside stakeholders.

The regional offices conduct water rights-related initiatives (including flow monitoring, stream assessments, and on-site investigations) when necessary. Other than these initiatives, water rights investigations are complaint driven, unless conducted to ensure compliance with a priority call.

Water Rights Management during Senior or Priority Calls

Watermaster Areas

When stream flows diminish, a watermaster allocates available water among the users according to priority dates, consistent with TWC §11.027. For domestic and livestock users (D&Ls), the watermaster will respond to a priority call or complaints. If a water right holder does not comply with the water right or with TCEQ rules, the Executive Director may direct a watermaster to adjust the water right holder's control works, including pumps, to prevent them from diverting, taking, storing, or distributing water until they comply.

Non-Watermaster Areas

In order to provide the best possible response to drought conditions and facilitate response to water right priority calls, the agency created the Drought Response Task Force. The Task Force includes staff with water rights expertise from multiple offices and is focused on responding to priority calls. The Task Force coordinates TCEQ response to priority calls and may recommend that water rights be suspended in response to a call.

Appendix B: Current Water Rights Management

Handling Illegal Diversions

Watermaster areas

Watermaster staff work in the field on a day-to-day basis checking on authorized diversions. This consistent presence enables the watermaster office to quickly identify potential illegal diversions. If found, watermaster offices handle illegal diversions by issuing field citations or notices of violation, or may refer the matter directly to enforcement based on the nature of the violation(s).

Non-Watermaster areas

Investigations of possible illegal diversions within non-watermaster areas occur most often as a result of complaints. Suspected illegal water diversions outside watermaster areas are currently addressed by the Office of Compliance and Enforcement (OCE) based on one of the following two scenarios:

1. **Normal Conditions** – No Suspension in Effect: Water diversions outside watermaster areas are currently addressed by regional field staff on a complaint response basis. No daily information on diversions are currently received or reviewed by OCE field staff. Investigations of water right holders are currently non-routine and are initiated only in response to reported conditions.
2. **Priority Call Conditions** – Suspension in Effect in Response to a Priority Call: Tools used by OCE during times of curtailment in response to a priority call include frequent tracking of available flow gages, observations by flyovers and "boots on the ground" to monitor river conditions, and coordination with sister agencies to obtain and track information. OCE tracks flow gages during these priority call conditions using the "follow the water" concept, and is able to identify specific segments of a river to more closely monitor for potentially illegal diversions. In doing so, staff may perform investigations of water right holders as well as non-permitted persons

Whether in normal conditions or in priority call conditions, OCE addresses potentially illegal diversions and may issue field citations or notices of violation and/or enforcement based on the nature of the violation(s).

Appendix C: Basin Evaluation Schedule

Texas Water Code (TWC) §11.326(g)(1) requires the Executive Director evaluate basins without a watermaster at least every five years to determine if a watermaster should be appointed. The Executive Director conducted the first cycle of evaluations from 2012 through 2016. The second cycle of evaluations began in 2017.

Cycle 1

Year	Basin
2012	Brazos River Basin Brazos-Colorado Coastal Basin Colorado River Basin Colorado-Lavaca Coastal Basin
2013	Trinity River Basin Trinity-San Jacinto Coastal Basin San Jacinto River Basin San Jacinto-Brazos Coastal Basin
2014	Sabine River Basin Neches River Basin Neches-Trinity Coastal Basin
2015	Canadian River Basin Red River Basin
2016	Cypress Creek Basin Sulphur River Basin

Cycle 2

Year	Basin
2017	Brazos River Basin (Upper Only) San Jacinto-Brazos Coastal Basin Brazos-Colorado Coastal Basin Colorado River Basin Colorado-Lavaca Coastal Basin
2018	Trinity River Basin San Jacinto River Basin Trinity-San Jacinto Coastal Basin Neches-Trinity Coastal Basin
2019	Sabine River Basin Neches River Basin
2020	Red River Basin Canadian River Basin
2021	Sulphur River Basin Cypress Creek Basin

Appendix D: 2017 Watermaster Evaluation Costs

The costs for the Executive Director's evaluation of the Upper Brazos and Colorado River Basins and the San Jacinto-Brazos, Brazos-Colorado, and Colorado-Lavaca Coastal Basins are summarized below.

Costs Associated to the Evaluation

Total Estimated Costs for TCEQ Evaluation Activity: $172,341.52

Office of Water Costs

- OW Staff time: $163,774.13
    - Eleven staff participated in this evaluation for a portion of their time, equating to 2.0 full time equivalents for the duration of the project.
    - Calculated salaries for 2.0 FTEs from December 2016 through September 2017 (10 months).
    - Assumed mid-level B23.
    - Fringe (35.00 % of base salary): $21.229.98
- Postage: $2,857.00
- Travel: $2,718.87
- Total: $169,350.00

Office of Legal Services Costs

- OLS staff time: $277.44
- Calculated staff attorney review time of 8 hours
- Total: $277.44

Office of Compliance and Enforcement Costs

- OCE staff time: $2,129.08
    - Time spent preparing information and attending meetings plus travel time, calculated using regular labor: 60 hours
- State equipment use (vehicle): $585.00
- Total: $2,714.08

Appendix D: 2017 Watermaster Evaluation Costs

Other Agency Programs

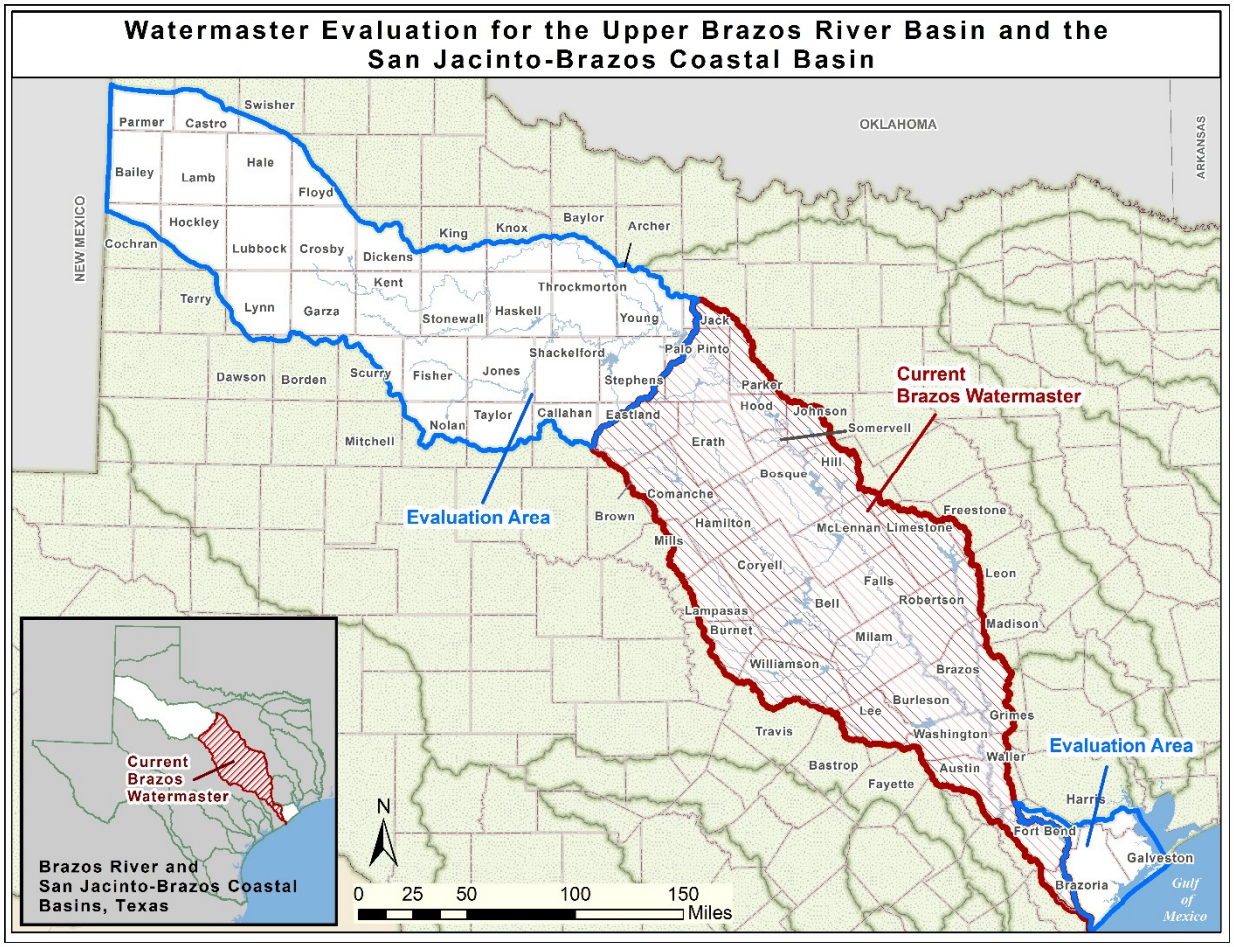
Other agency staff were provided an opportunity to participate, but no significant costs were associated with their involvement.

Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Geographic Reach of the Basins and Water Right Information

The Upper Brazos River Basin includes all or a portion of 38 counties and 212 water rights, and the San Jacinto-Brazos Coastal Basin includes all or a portion of 5 counties and 60 water rights (Table 1). The number of total water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties.

Figure 1. Brazos River Basin and San Jacinto-Brazos Coastal Basins



Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Table 1. Number of Permitted Water Rights by Basin and County.

Upper Brazos				*San Jacinto-Brazos*	
County	*No. of Water Rights*	*County*	*No. of Water Rights*	*County*	*No. of Water Rights*
Archer*	0	Kent	5	Brazoria*	44
Bailey	1	King*	2	Fort Bend*	7
Baylor*	4	Knox*	5	Galveston	9
Borden*	1	Lamb	0	Harris*	8
Callahan*	6	Lubbock	4	Waller	0
Castro*	6	Lynn*	1		
Cochran*	0	Mitchell*	0		
Crosby*	8	Nolan*	4		
Dawson*	0	Palo Pinto	0		
Dickens*	5	Parmer*	11		
Eastland*	2	Scurry*	0		
Fisher	13	Shackelford	10		
Floyd*	1	Stephens	24		
Garza*	5	Stonewall	3		
Hale*	15	Swisher*	0		
Haskell	6	Taylor*	23		
Hockley*	0	Terry*	0		
Jack*	2	Throckmorton	5		
Jones	29	Young*	18		

*Counties with an asterisk are located in multiple basins.

Watermaster Program Options and Costs

The ED considered three options (numbered 1, 2, and 3, below) when evaluating watermaster program costs for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin. These options were presented to stakeholders at meetings held throughout the basins.

Option 1: No watermaster recommended for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin.

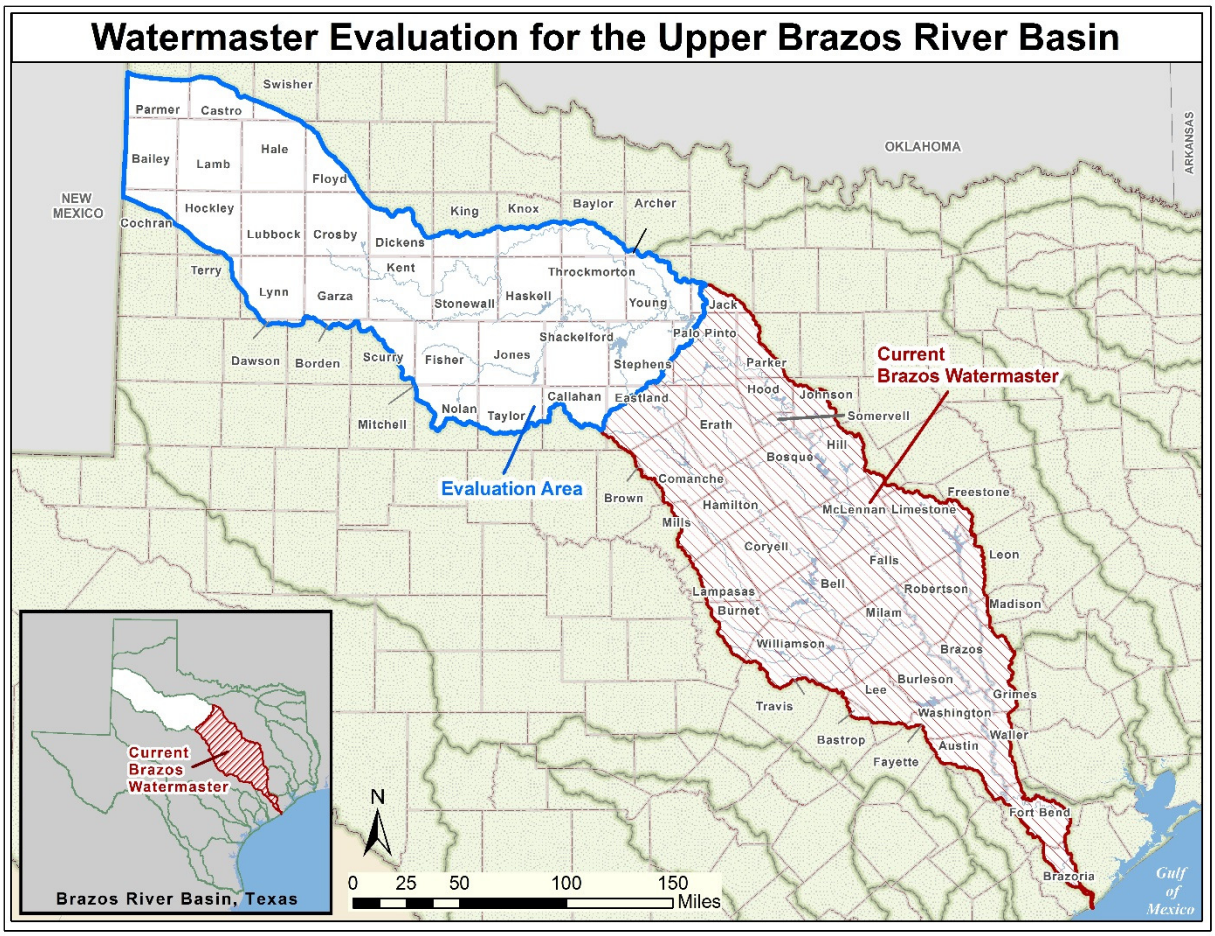
Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Option 2: Extend the current Brazos Watermaster Program to include the Upper Brazos River Basin.

Number of permitted water rights: 212

Counties: 38 (28 have permitted water rights)

Figure 2. Watermaster Program for the Brazos River Basin (Option 2)



Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Table 2. Number of Permitted Water Rights by County (Option 2)

County Name	*Number of Water Rights*	*County Name*	*Number of Water Rights*
Archer*	0	Kent	5
Bailey	1	King*	2
Baylor*	4	Knox*	5
Borden*	1	Lamb	0
Callahan*	6	Lubbock	4
Castro*	6	Lynn*	1
Cochran*	0	Mitchell*	0
Crosby*	8	Nolan*	4
Dawson*	0	Palo Pinto	0
Dickens	5	Parmer*	11
Eastland*	2	Scurry*	0
Fisher	13	Shackelford	10
Floyd*	1	Stephens	24
Garza*	5	Stonewall	3
Hale*	15	Swisher*	0
Haskell	6	Taylor*	23
Hockley*	0	Terry*	0
Jack*	2	Throckmorton	5
Jones	29	Young*	18

* The number of water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties. Counties with an asterisk are located in multiple basins.

Estimated costs reflect the amount required to operate the FY18 Brazos Watermaster Program, plus the addition of the Upper Brazos Basin. Year 1 has an estimated cost of $1,032,208 with a cost of $957,368 for each subsequent year. Actual assessments would vary based on the estimated expected return rate. Table 3 summarizes expected expenditures for Option 2.

Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Table 3. Cost Estimate (Option 2)

	Year 1	Year 2	Assumptions
Salaries			
Current Brazos Staff Salaries	$295,332	$305,373	
Assistant Watermaster	$55,184	$57,060	1 Assistant Watermaster (Watermaster Specialist V, B23)
Administrative Assistants	$32,976	$34,097	1 Administrative Assistant IV, A15 ($32,976/year with 3.4% increase by year 2)
Watermaster Specialist IV	$48,278	$49,919	1 Watermaster Specialist IV, B21
Watermaster Specialist II	$36,976	$38,233	1 Watermaster Specialist II, B17 ($36,976/year with 3.4% increase by year 2)
Watermaster Liaison	$34,617	$35,794	Liaison Salary determined by percentage of water rights among all watermaster programs. In this instance, assumption is 35% of all water rights.
Total Salaries	$503,363	$520,477	
Fringe	$176,177	$182,167	Agency Standard is 35% of Salaries
SORM fee	$1,200	$1,200	Based on RGWM FY17 Amount
SWCAP fee	$5,000	$5,000	Based on RGWM FY17 Amount
Professional/Temp Services	$75,000	$75,000	Higher in first two years to implement new accounting system for program.
Travel In-State	$30,000	$30,000	Based on RGWM and BWM programs.
Training	$11,000	$11,000	~$1,000 per employee; however, this amount assumes some employees will require more training than others.
Rent - Building	$25,000	$25,000	Based on STWM and RGWM
Postage	$3,500	$3,500	Based on BWM Amount
Phone/Utilities	$15,000	$15,000	Based on RGWM and BWM programs.
Supplies - Consumables	$2,000	$2,000	
Other Operating Expenses	$25,168	$26,024	Based on BWM program
Fuels/Lubricants	$40,000	$40,000	Based on BWM program
Rent - Machine & Other	$1,000	$1,000	
Facilities, Furniture, and Equipment	$30,000	$20,000	Equipment purchases
Capital Equipment - IT	$4,800		4 computers at $1,200
Capital - Vehicles	$84,000		3 vehicles at $28,000
Total	**$1,032,208**	**$957,368**	

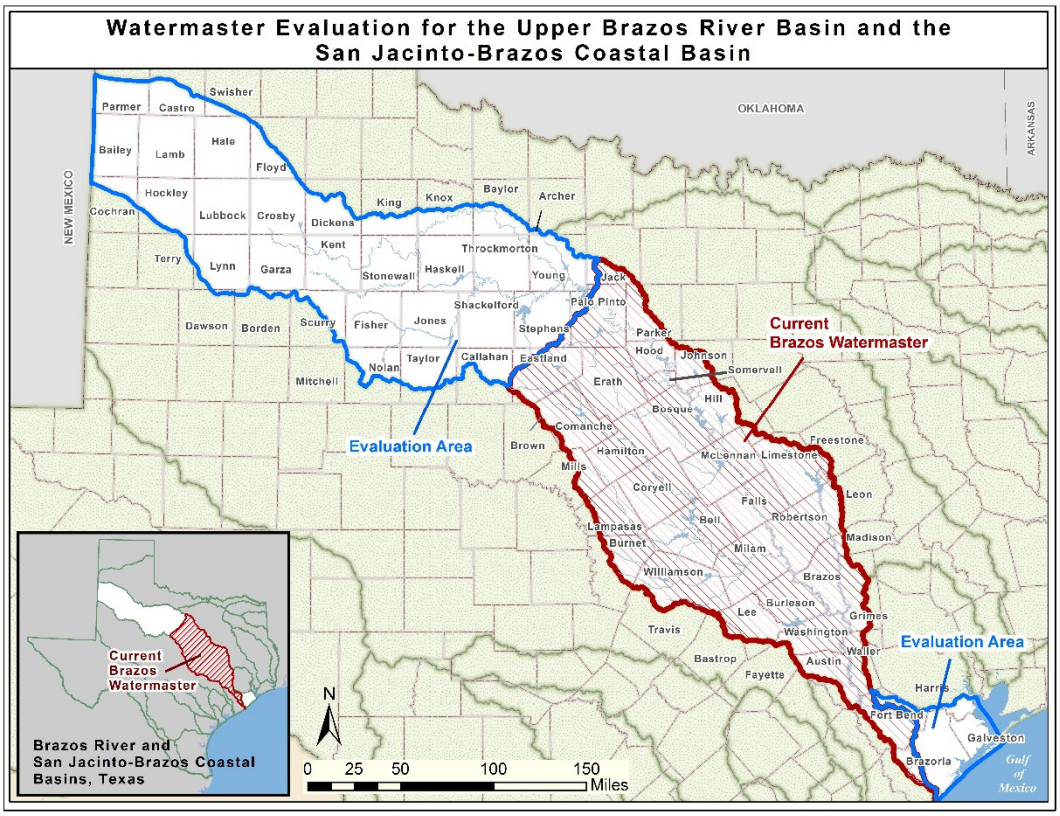
- Current Brazos Watermaster Program staff.
- One assistant watermaster and an administrative assistant in the TCEQ Waco Regional Office.
- Two watermaster specialists/field deputies (one of which would be a senior investigator) in the TCEQ Lubbock and Abilene Regional Offices.

Option 3: Extend the Brazos Watermaster Program to include the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin.

Number or permitted water rights: 272

Counties: 43 (32 have permitted water rights)

Figure 3. Watermaster Program for Brazos River Basin and the San-Jacinto-Brazos Coastal Basin (Option 3)



Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Table 4. Number of Permitted Water Rights by County (Option 3)

County Name	*Number of Water Rights*	*County Name*	*Number of Water Rights*
Archer*	0	Jones	29
Bailey	1	Kent	5
Baylor*	4	King*	2
Borden*	1	Knox*	5
Brazoria*	44	Lamb	0
Callahan*	6	Lubbock	4
Castro*	6	Lynn*	1
Cochran*	0	Mitchell*	0
Crosby*	8	Nolan*	4
Dawson*	0	Palo Pinto	0
Dickens*	5	Parmer*	11
Eastland*	2	Scurry*	0
Fisher	13	Shackelford	10
Floyd*	1	Stephens	24
Fort Bend*	7	Stonewall	3
Galveston	9	Swisher*	0
Garza*	5	Taylor*	23
Hale*	15	Terry*	0
Harris*	8	Throckmorton	5
Haskell	6	Waller*	0
Hockley*	0	Young*	18
Jack*	2		

* The number of water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties. Counties with an asterisk are located in multiple basins.

Estimated costs reflect the amount required to operate the FY18 Brazos Watermaster Program plus the addition of the Upper Brazos Basin and the San Jacinto-Brazos Coastal Basin. Year 1 has an estimated cost of $1,196,910 with a cost of $1,067,284 for each subsequent year. Actual assessments would vary based on the estimated expected return rate. Table 5 summarizes estimated expenditures for Option 3.

Appendix E: Implementation Considerations for the Upper Brazos River Basin and the San Jacinto-Brazos Coastal Basin

Table 5. Cost Estimate (Option 3)

	Year 1	Year 2	Assumptions
Salaries			
Current Brazos Staff Salaries	$295,332	$305,373	
Assistant Watermaster	$55,184	$57,060	1 Assistant Watermaster (Watermaster Specialist V, B23)
Administrative Assistants	$32,976	$34,097	1 Administrative Assistant IV, A15 ($32,976/year with 3.4% increase by year 2)
Watermaster Specialist IV	$48,278	$49,919	1 Watermaster Specialist IV, B21
Watermaster Specialist II	$110,928	$114,700	3 Watermaster Specialist II, B17 ($36,976/year with 3.4% increase by year 2)
Watermaster Liaison	$36,595	$37,839	Liaison Salary determined by percentage of water rights among all watermaster programs. In this instance, assumption is 37% of all water rights.
Total Salaries	$579,293	$598,989	
Fringe	$202,752	$209,646	Agency Standard is 35% of Salaries
SORM fee	$1,200	$1,200	Based on RGWM FY17 Amount
SWCAP fee	$5,000	$5,000	Based on RGWM FY17 Amount
Professional/Temp Services	$75,000	$75,000	Higher in first two years to implement new accounting system for program.
Travel In-State	$30,000	$30,000	Based on RGWM and BWM programs.
Training	$11,000	$11,000	~$1,000 per employee; however, this amount assumes some employees will require more training than others.
Rent - Building	$25,000	$25,000	Based on STWM and RGWM
Postage	$3,500	$3,500	Based on BWM Amount
Phone/Utilities	$15,000	$15,000	Based on RGWM and BWM programs.
Supplies - Consumables	$2,000	$2,000	
Other Operating Expenses	$28,965	$29,949	Based on BWM program
Fuels/Lubricants	$40,000	$40,000	Based on BWM program
Rent - Machine & Other	$1,000	$1,000	
Facilities, Furniture, and Equipment	$30,000	$20,000	Equipment purchases
Capital Equipment - IT	$7,200		6 computers at $1,200
Capital - Vehicles	$140,000		5 vehicles at $28,000
Total	**$1,196,910**	**$1,067,284**	

- Current Brazos Watermaster Program staff.
- One assistant watermaster and one administrative assistant in the TCEQ Waco Regional Office.
- Four watermaster specialists/field deputies, (one of which would be a senior investigator) located in the TCEQ Lubbock, Abilene and Houston Regional Offices, and the TCEQ Angleton Field Office.

Appendix F: TCEQ Letters to Stakeholders

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

March 3, 2017

Re: Watermaster Evaluation for the Upper Brazos River, San Jacinto-Brazos Coastal, Brazos-Colorado Coastal, Colorado River, and the Colorado-Lavaca Coastal Basins

Dear Stakeholder:

The Texas Commission on Environmental Quality (TCEQ) is currently evaluating the Upper Brazos River, San Jacinto-Brazos Coastal, Brazos-Colorado Coastal, Colorado River, and the Colorado-Lavaca Coastal Basins to determine whether there is a need to establish a watermaster. A watermaster currently exists in the Brazos Basin downstream of, and including, Possum Kingdom Reservoir. The evaluation of the Brazos Basin is limited to the Upper Brazos Basin upstream of Possum Kingdom. The purpose of this letter is to notify you and to seek written input on the process, which will help the agency to identify information that should be considered during our evaluation.

According to Subsections 11.326(g) and (h) of the Texas Water Code, the Executive Director (ED) must evaluate all river basins at least once every five years that do not currently have a watermaster to determine whether one should be appointed. The ED must report the findings from the evaluation and make recommendations to the TCEQ Commissioners. The Commissioners will direct the ED to move forward with the recommendation, revise the recommendation, or they may take no action on the recommendation. The evaluation findings and recommendations are to be included in the agency's Biennial Report to the Legislature.

In an effort to include the public and develop the best recommendations, we are soliciting input from stakeholders, including water right holders, domestic and livestock users, river authorities, agricultural, industrial and environmental organizations, the general public, and other interested parties. This request for written input is your first opportunity to participate in this process. As part of the evaluation, we plan to mail notifications of stakeholder meetings to all stakeholders within these five basins expected to be held in June. The input received from stakeholders will be discussed at the TCEQ Commissioners' Agenda tentatively scheduled for late summer.

As a stakeholder in these basins, you are being contacted during this initial outreach. If you are aware of any other person who might be interested but did not receive this initial outreach letter, please forward this information to them.

We will consider the following criteria when evaluating a basin:

(1) *Has there been a court order to create a watermaster?*

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(2) *Has TCEQ received a petition requesting a watermaster?*

(3) *Have senior water rights been threatened, based on either the history of senior calls or water shortages within the basin or the number of water right complaints received on an annual basis in each basin?*

If the establishment of a watermaster is recommended and approved, a budget would be established each year, and the watermaster program would be administered using fees collected from water right holders in the watermaster area. The enclosed fact sheet includes general information about the watermaster programs including the fees associated to a program. TCEQ requests and appreciates your input on this evaluation. In particular, we ask that you provide written input regarding the possible threat to senior water rights (item 3 above) as well as proposals for implementing a possible watermaster program.

Please include the following information in your letter:

1. The river or waterbody you are discussing.
2. Your affiliation (for example, a water right holder with a water right permit (including number if known), a domestic and livestock user, an adjacent landowner, an interested party, or environmental organization).

Please send written comments by March 24, 2017 to my attention at the following address: TCEQ, Water Availability Division, Watermaster Section, MC-160, P.O. Box 13087, Austin, Texas 78711-3087. You may also send an email to: watermaster@tceq.texas.gov.

If you have any questions or additional comments, please feel free to contact my staff in the Watermaster Section: Brooke McGregor at (512) 239-2025. In addition, you may sign up to receive email updates at: https://public.govdelivery.com/accounts/TXTCEQ/subscriber/new. Additional information on the evaluation process is available on TCEQ's website: www.tceq.texas.gov/goto/watermaster. We value your comments on the evaluation process, including the criteria being used, as well as information to assist the agency in its evaluation of your basin. Thank you for your participation.

Sincerely,

Amy Settemeyer

Amy Settemeyer, Watermaster Section Manager
Water Availability Division
Texas Commission on Environmental Quality

Enclosures

Appendix F: TCEQ Letters to Stakeholders

Watermaster Evaluation Fact Sheet - 2017

Background

On May 28, 2011, the Texas Legislature adopted the Texas Commission on Environmental Quality (TCEQ) Sunset legislation, HB 2694, which includes a requirement for the TCEQ to evaluate and issue a report for all river and coastal basins that do not have a watermaster. The report will assess whether or not there is a need to appoint a watermaster and is required at least once for every basin every five years. The TCEQ developed a schedule to consider several basins each year, resulting in the creation of a five-year cycle. The first cycle began in 2012 and was completed in 2016. In that five-year time, all basins that did not have a watermaster program were evaluated. The second cycle will begin this year in 2017, when the TCEQ will evaluate the Upper Brazos River Basin, San Jacinto-Brazos Coastal Basin, Brazos-Colorado Coastal Basin, Colorado River Basin, and the Colorado-Lavaca Coastal Basin.

What is a Watermaster Program?

Watermaster programs operate from field offices within their designated basin(s) and perform the following functions:

- A watermaster continuously monitors streamflows, reservoir levels, and water use within a basin.
- As needed, holders of impoundment rights may notify the watermaster when they plan to release sold water. The watermaster can then monitor usage downstream to ensure that the released water reaches the buyer.
- Before starting their pumps, opening their sluice gates, or starting to divert water in any other way, all water right holders must notify the watermaster and state how much water they plan to divert.
- The watermaster determines whether a diversion will remove water that rightfully belongs to another user and could notify a user with more junior water rights to reduce or stop pumping if needed.
- When streamflows diminish, the watermaster allocates available water among the water right holders according to each user's priority date.
- If a water-right holder does not comply with the water right or with TCEQ rules, the executive director may direct a watermaster to adjust the control works, including pumps, to prevent the owner from diverting, taking, storing, or distributing water until the water right holder complies.

There are currently four watermaster programs in Texas:

- The Rio Grande Watermaster coordinates releases from the Amistad and Falcon reservoir system.
- The South Texas Watermaster serves the Nueces, San Antonio, Guadalupe, and Lavaca river basins, as well as the adjacent coastal basins.
- The Concho Watermaster, currently a division of the South Texas Watermaster, serves the Concho River segment of the Colorado River Basin.
- The Brazos Watermaster, covers Possum Kingdom reservoir and areas downstream of the reservoir in the Brazos River Basin.

Advantages of a Watermaster Program

In addition to their monitoring of river conditions, TCEQ watermasters can provide valuable services to the water users in the basins they oversee:

- Watermasters can coordinate diversions in the basin, ensuring that all water users get the best overall value from the water available to them.
- With their real-time monitoring of local streamflows, watermasters can quickly identify and stop illegal diversions.
- Watermasters may be able to anticipate a shortage before it reaches the crisis point, thus enabling local users to work together to develop a strategy that will meet the users' most basic needs.
- When disputes arise among water users, the watermaster can often help the users settle the matter, thereby avoiding costly litigation.
- Watermasters can provide valuable technical assistance.
- A watermaster program affords a long-term solution for managing water rights in a river basin.

Program Costs and Fees

According to state law, water-right holders in a watermaster area must pay the costs associated with a watermaster program through an annual fee. Certain domestic and livestock uses are exempted from water rights permitting and any fees associated with the watermaster program.

The total amount assessed per water right holder is comprised of a $50 per account base fee and an annual use fee that is based on the volume of water that may be diverted for each authorized use. The use fee is calculated each year and is based on the proposed operating budget for each watermaster program.

In addition, users will be required to add a meter to their pumps, which may cost $400 or more (depending on the technology of the meter). However, by using a meter, the user might find that he or she had been running the unmetered pumps longer than necessary, which may lead to water savings.

Participating in the Process

We encourage your input in this process. If you are interested in the evaluation of the Upper Brazos River Basin, San Jacinto-Brazos Coastal Basin, Brazos-Colorado Coastal Basin, Colorado River Basin, or the Colorado-Lavaca Coastal Basin or if you have any questions on this process, please contact:

By Letter: Amy Settemeyer, Manager, Watermaster Section (MC-160), P.O. Box 13087, Austin, Texas 78711-3087

By Email: watermaster@tceq.texas.gov

By Phone: Call the Watermaster Program Liaison: Brooke McGregor at (512) 239-2025

Web Site: www.tceq.texas.gov/goto/watermaster

Appendix F: TCEQ Letters to Stakeholders

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Jon Niermann, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 28, 2017

Re: Stakeholder Meetings: Watermaster Evaluation for the Upper Brazos River, San Jacinto-Brazos Coastal, Brazos-Colorado Coastal, Colorado River, and the Colorado-Lavaca Coastal Basins

Dear Stakeholder:

Under Texas Water Code §11.326(g) and (h), the Texas Commission on Environmental Quality (TCEQ) must evaluate river basins without watermasters every five years to determine whether a watermaster should be appointed. In 2017, the TCEQ is evaluating the Upper Brazos River, San Jacinto-Brazos Coastal, Brazos-Colorado Coastal, Colorado River, and the Colorado-Lavaca Coastal Basins. Stakeholder input is an important part of this process and the TCEQ will be taking public comment through **5:00 p.m. on June 30, 2017**.

Stakeholder Meetings
The purpose of this letter is to invite you to attend stakeholder meetings where the TCEQ will provide additional information about this process and take public comment.

6:00 p.m. – May 30, 2017
West Central Texas Council of Governments
Large Conference Room
3702 Loop 322
Abilene, Texas 79602

6:00 p.m. – May 31, 2017
Mallet Event Center
2320 S Hwy. 385
Levelland, Texas 79336 (Lubbock area)

6:00 p.m. – June 1, 2017
Dora Roberts Community Center
Ballroom
100 Whipkey Drive
Big Spring, Texas 79720

6:00 p.m. – June 6, 2017
Concho Valley Council of Governments
Meeting Room
2801 W. Loop 306, Suite A
San Angelo, Texas 76904

6:00 p.m. – June 7, 2017
San Saba High School Cafeteria
104 South 8th Street
San Saba, Texas 76877

6:00 p.m. – June 8, 2017
City of Waco Operations Center
Training Room
1415 N. 4th Street
Waco, Texas 76707

Appendix F: TCEQ Letters to Stakeholders

6:00 p.m. – June 13, 2017
Boling Community Center
Main Auditorium
6839 County Rd 162
Boling, Texas (lower Colorado basin)

6:00 p.m. – June 14
Brazos Crossing Administrative Building
Lamar CISD Board Room
3911 Ave I
Rosenberg Texas, 77471

6:00 p.m. – June 15, 2017
Hill Country University Center
HEB Community Events Room
2818 E. U.S. Highway 290
Fredericksburg, Texas

Information about the Process
The TCEQ mailed letters on March 3, 2017, to all water right holders, county judges, extension agents, and other interested parties providing information about the process. Information about the process is also available on the TCEQ's website: www.tceq.texas.gov/goto/watermaster.

If you have any questions about the process, you contact myself or staff as follows:

- Amy Settemeyer (512) 239-2588
- Brooke McGregor (512) 239-2025
- Stephen Kinal (512) 239-4010

Additionally, you can sign up to receive email updates at: https://public.govdelivery.com/accounts/TXTCEQ/subscriber/new>.

Public Comment
The TCEQ will be taking public comment through **5:00 p.m. on June 30, 2017.** Please mail your comments to the Watermaster Section, MC 160, P.O. Box 13087, Austin, Texas 78711-3087 or by email to watermaster@tceq.texas.gov.

Stakeholder input is a very important part of the evaluation process and the TCEQ encourages your participation. Thank you for your participation as we go through this very important process.

Sincerely,

Amy Settemeyer

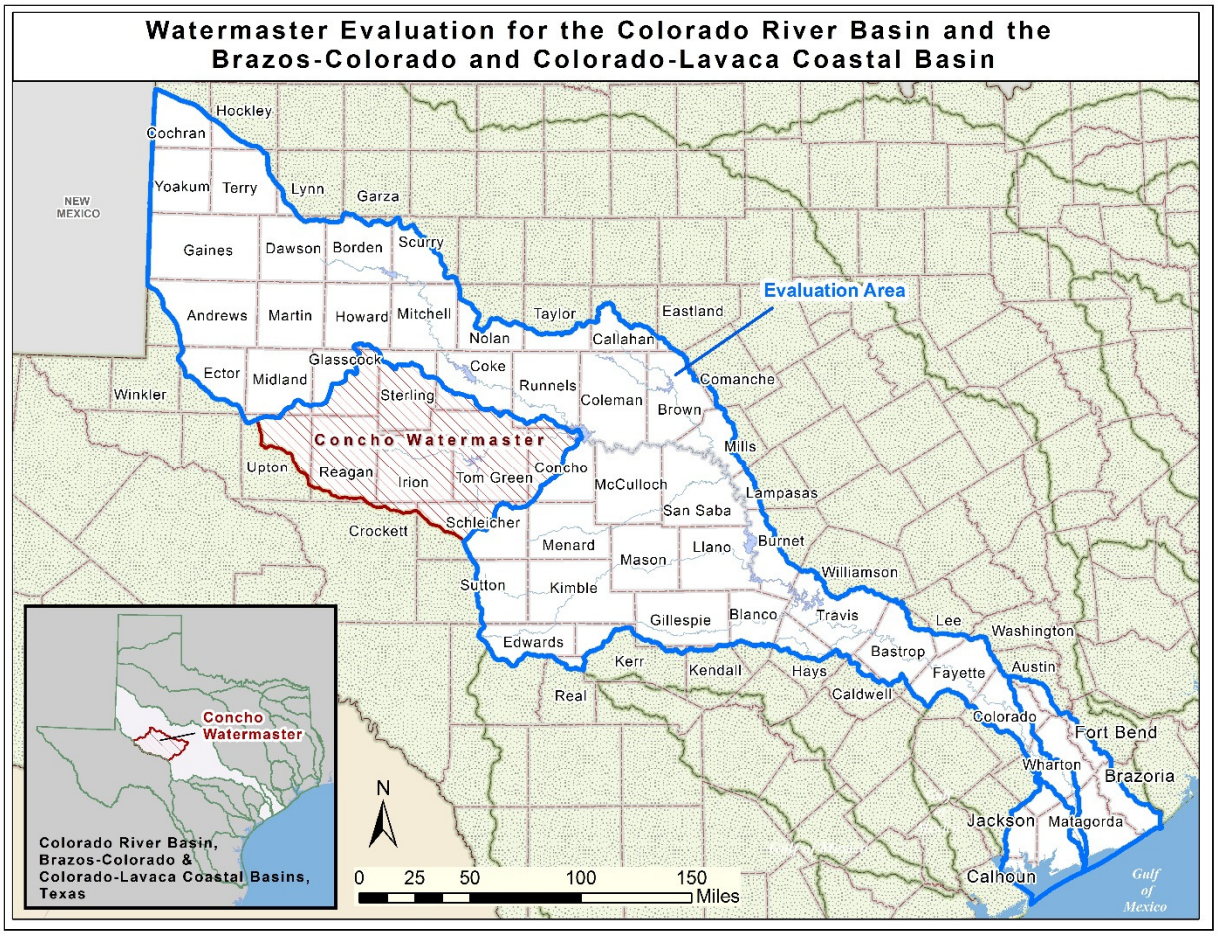
Amy Settemeyer, Manager
Watermaster Section, MC-160
Water Availability Division
Texas Commission on Environmental Quality

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Geographic Reach of the Basins and Water Right Information

The Colorado River Basin includes all or a portion of 63 counties and 1,218 water rights (with 222 of those water rights being located in the Concho River Watermaster program), the Brazos-Colorado Coastal includes all or a portion of 6 counties and 67 water rights, and the Colorado-Lavaca Coastal Basin includes all or a portion of 4 counties and 30 water rights (Table 1). The number of total water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties.

Figure 1. Colorado River Basin, and Brazos-Colorado Coastal, and Colorado-Lavaca Coastal Basins



Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 1. Number of Permitted Water Rights by Basin and County

Colorado				Brazos-Colorado		Colorado-Lavaca	
County	*No. of Water Rights*	*County*	*No. of Water Rights*	*County*	*No. of Water Rights*	*County*	*No. of Water Rights*
Andrews*	0	Lampasas	22	Austin*	0	Calhoun*	5
Austin	0	Lee*	3	Brazoria*	14	Jackson	4
Bastrop*	19	Llano	40	Colorado*	5	Matagorda*	12
Blanco*	11	Lynn*	0	Fort Bend*	2	Wharton	11
Borden*	2	Martin	1	Matagorda*	23		
Brown	46	Mason	12	Wharton*	25		
Burnet	30	Matagorda*	7				
Caldwell*	0	McCulloch	25				
Callahan*	17	Menard	76				
Cochran*	0	Midland	0				
Coke	16	Mills	52				
Coleman	54	Mitchell*	4				
Colorado*	7	Nolan*	3				
Comanche	0	Reagan*	0				
Concho	3	Real*	0				
Crockett*	0	Runnels	102				
Dawson*	2	San Saba	120				
Eastland*	1	Schleicher*	2				
Ector*	1	Scurry*	6				
Edwards*	3	Sterling	0				
Fayette*	17	Sutton*	4				
Gaines	0	Taylor*	18				
Garza*	0	Terry*	1				
Gillespie*	75	Tom Green	0				
Glasscock	0	Travis*	62				
Hays*	10	Upton*	0				
Hockley*	0	Washington	0				
Howard	10	Wharton*	4				
Irion	0	Williamson	0				
Kendall*	2	Winkler	0				
Kerr*	0	Yoakum	0				
Kimble	137						

*Counties are located in multiple basins.

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Watermaster Program Options and Costs

The ED considered three options (numbered 4, 5, and 6, below) when evaluating watermaster program costs for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins. These options were presented to stakeholders at meetings held throughout the basins.

At the request of stakeholders, an additional option (Option 7) was developed. Although there were priority calls from domestic and livestock users in the upper portion of the San Saba watershed during the evaluation period, none of these priority calls originated downstream of the Brady Creek confluence. Therefore, Option 7, evaluates a watermaster program for the San Saba River upstream of its confluence with Brady Creek. Option 7 is analogous to the Brazos Watermaster program, where a hydrologic control (the confluence of Brady Creek and the San Saba River) separates the watermaster and non-watermaster areas. Costs associated with that option were posted to the TCEQ's website on July 20, 2017 with email notification provided that same day.

Option 4: No watermaster recommended for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins.

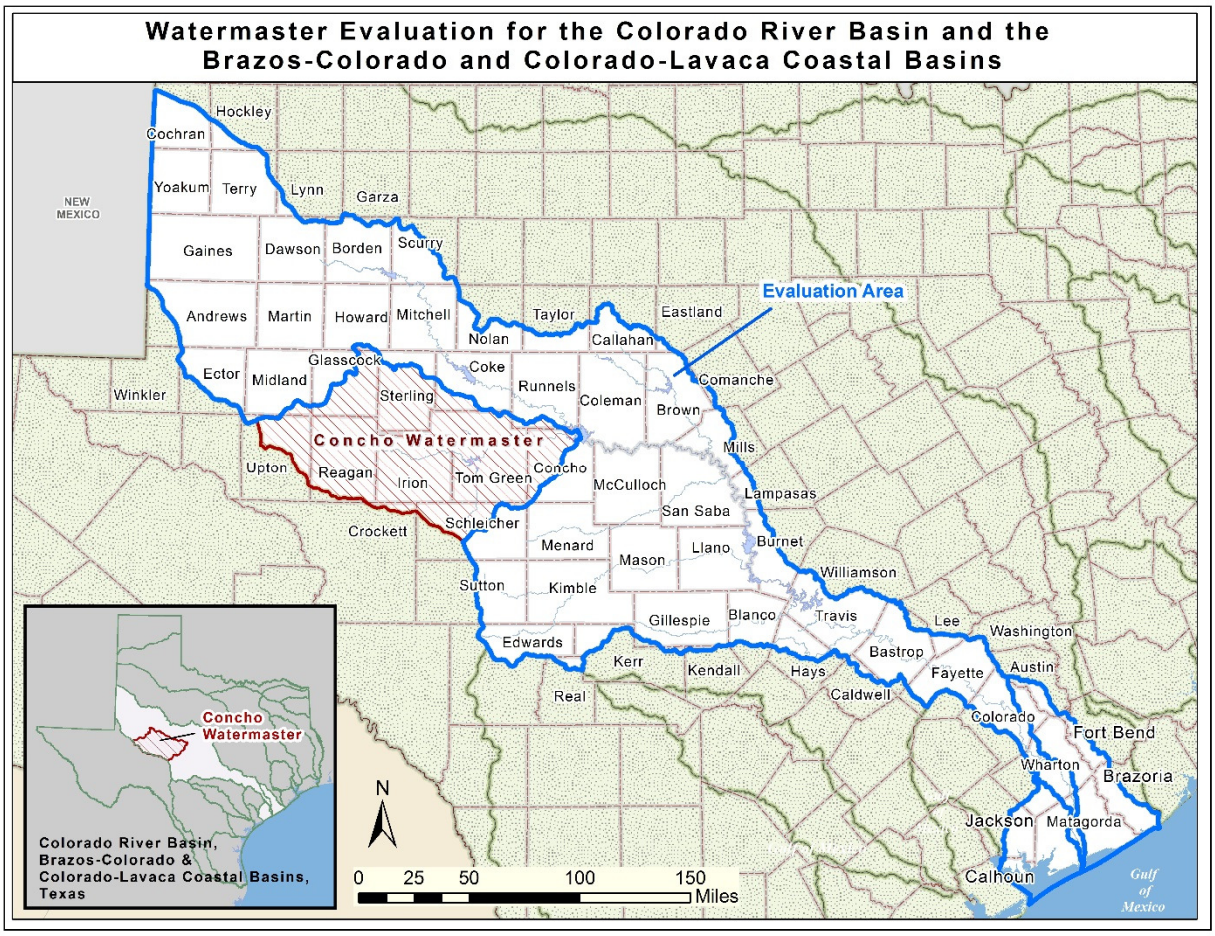
Option 5: Appoint a watermaster for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins.

Number of permitted water rights: 1315

Counties: 67 (44 have permitted water rights)

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Figure 2. Watermaster Program for Colorado River Basin and the Colorado-Lavaca and Brazos-Colorado Coastal Basins (Option 5)



Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 2. Number of Permitted Water Rights by County (Option 5)

County Name	*Number of Water Rights*	*County Name*	*Number of Water Rights*
Andrews*	0	Kerr*	0
Austin*	0	Kimble	137
Bastrop*	19	Lampasas	22
Blanco*	11	Lee*	3
Borden*	2	Llano	40
Brazoria*	14	Lynn*	0
Brown	46	Martin	1
Burnet	30	Mason	12
Caldwell*	0	Matagorda*	42
Calhoun	5	McCulloch	25
Callahan*	17	Menard	76
Cochran*	0	Midland	0
Coke	16	Mills	52
Coleman	54	Mitchell*	4
Colorado*	12	Nolan*	3
Comanche	0	Real*	0
Concho	3	Runnels	102
Dawson*	2	San Saba	120
Eastland*	1	Schleicher*	2
Ector*	1	Scurry*	6
Edwards*	3	Sterling	0
Fayette*	17	Sutton*	4
Fort Bend*	2	Taylor*	18
Gaines	0	Terry*	1
Garza*	0	Travis*	62
Gillespie*	75	Upton*	0
Glasscock	0	Washington	0
Hays*	10	Wharton*	40
Hockley*	0	Williamson	0
Howard	10	Winkler	0
Jackson	4	Yoakum*	0
Kendall*	2		

* The number of water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties. Counties with an asterisk are located in multiple basins.

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Estimated costs reflect the amount required to operate the FY18 Concho River Watermaster Program plus the addition of the Colorado River Basin, Brazos-Colorado Coastal Basin, and Colorado-Lavaca Coastal Basins. Year 1 has an estimated cost of $1,307,734 with a cost of $1,045,549 for each subsequent year. Actual assessments would vary based on the estimated expected return rate. Table 3 summarizes expected expenditures for Option 5 which includes already established expenditures for the Concho River Watermaster Program.

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 3. Cost Estimate (Option 5)

	Year 1	Year 2	Assumptions
Salaries			
Current Concho Staff Salaries	$89,407	$92,447	
Watermaster	$63,104	$65,250	1 Watermaster (Program Supervisor VI, B25)
Assistant Watermaster	$55,184	$57,060	1 Assistant Watermaster (Watermaster Specialist V, B23)
Administrative Assistants	$59,308	$61,324	1 Administrative Assistant IV, A15 ($32,976/year with 3.4% increase by year 2) and 1 Administrative Assistant II, A11 ($26,332/year with 3.4% increase by year 2)
Watermaster Specialist IV	$48,278	$49,919	1 Watermaster Specialist IV, B21
Watermaster Specialist II	$184,880	$191,166	5 Watermaster Specialist II, B17 ($36,976/year with 3.4% increase by year 2)
Watermaster Liaison	$31,650	$32,726	Liaison Salary determined by percentage of water rights among all watermaster programs. In this instance, assumption is 32% of all water rights across all watermaster programs.
Total Salaries	$531,810	$549,892	
Fringe	$186,134	$192,462	Agency Standard is 35% of Salaries
SORM fee	$1,200	$1,200	Based on RGWM FY17 Amount
SWCAP fee	$5,000	$5,000	Based on RGWM FY17 Amount
Professional/Temp Services	$80,000	$80,000	Higher in first two years to implement new accounting system for program.
Travel In-State	$25,000	$25,000	Based on RGWM and BWM programs.
Training	$13,500	$12,000	~$1,000 per employee; however, this amount assumes some employees will require more training than others.
Rent - Building	$61,000	$61,000	Includes current rent for Concho staff plus estimates another $50,000 for other employees to be housed either in TCEQ regional offices or satellite offices.
Postage	$3,500	$3,500	Based on BWM Amount
Phone/Utilities	$15,000	$15,000	Based on RGWM and BWM programs.
Supplies - Consumables	$2,000	$2,000	

Other Operating Expenses	$26,591	$27,495	Based on Agency Standard FTE Costs (5% of base salary)
Fuels/Lubricants	$30,000	$30,000	Based on BWM programs
Rent - Machine & Other	$1,000	$1,000	
Facilities, Furniture, and Equipment	$90,000	$40,000	Equipment Purchases
Capital Equipment - IT	$12,000		10 computers at $1,200
Capital - Vehicles	$224,000		8 vehicles at $28,000
Total	**$1,307,734**	**$1,045,549**	

Approximately 1315 Water Rights

- Current Concho River Watermaster Staff.
- One watermaster, an assistant watermaster, and an administrative assistant in the TCEQ Austin Regional Office.
- Five watermaster specialists/field deputies (one of which would be a senior investigator) in the TCEQ Midland, San Angelo, and Austin Regional Offices, and a field office in the lower portion of the basin.

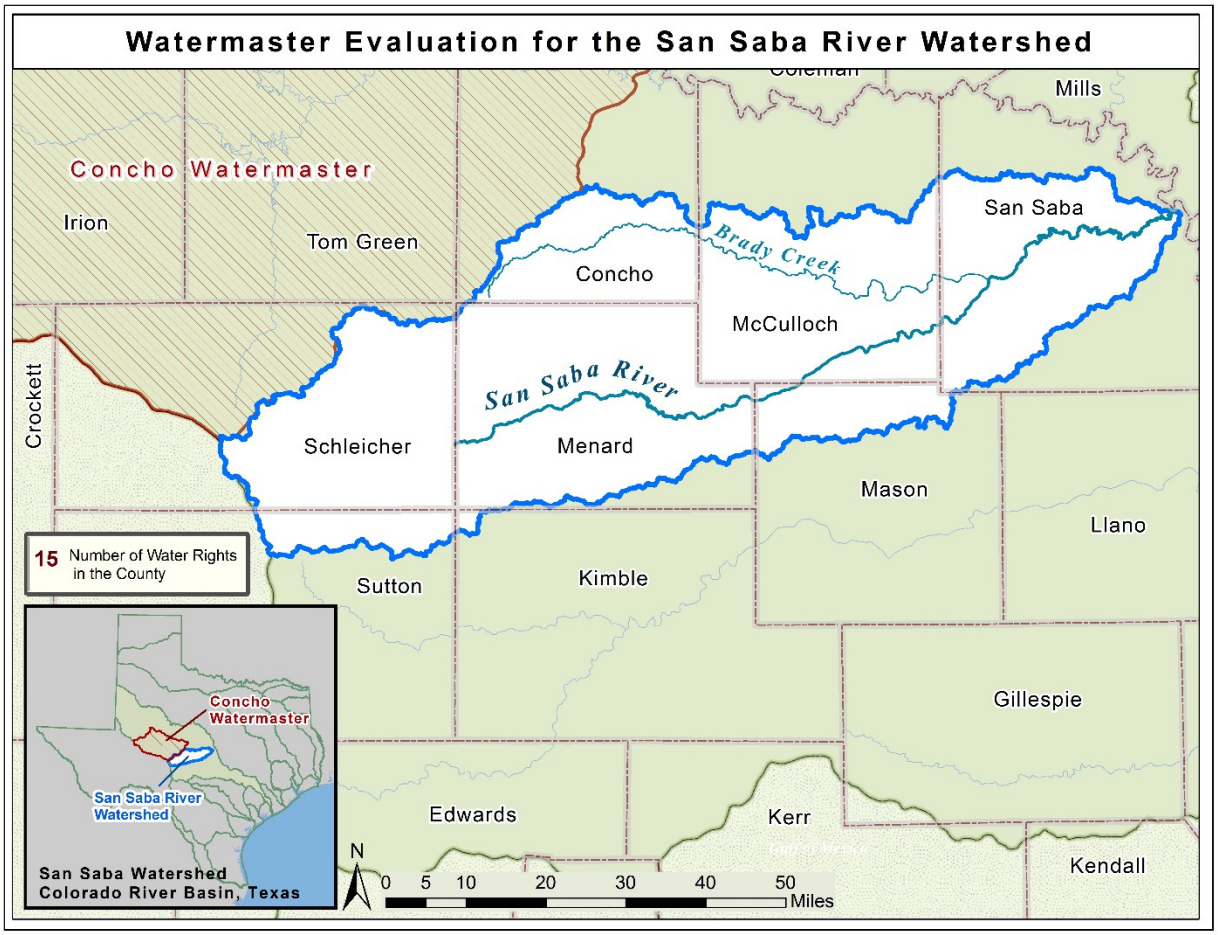
Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Option 6: Appoint a watermaster for the San Saba River.

Number of permitted water rights: 163

Counties: 8 (5 have permitted water rights)

Figure 3. Watermaster Program for the San Saba River Basin (Option 6)



Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 4. Number of Permitted Water Rights by County (Option 6)

County	*Number of Water Rights*
Concho	1
Kimble	0
Mason	0
McCulloch	10
Menard	76
San Saba	75
Schleicher*	2
Sutton*	0

* The number of water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties. Counties with an asterisk are located in multiple basins.

Year 1 has an estimated cost of $377,400 and a cost of $299,053 for subsequent years. Actual assessments would vary based on the estimated expected return rate. Table 5 summarizes expected expenditures for Option 6.

Table 5. Cost Estimate (Option 6)

	Year 1	Year 2	Assumptions
Salaries			
Watermaster	$63,104	$65,250	1 Watermaster (Program Supervisor VI, B25)
Administrative Assistant	$26,332	$27,227	1 Administrative Assistant II, A11 ($26,332/year with 3.4% increase by year 2)
Watermaster Specialist II	$36,976	$38,233	1 Watermaster Specialist II, B17 ($36,976/year with 3.4% increase by year 2)
Watermaster Liaison	$4,945	$5,113	Liaison Salary determined by percentage of water rights among all watermaster programs. In this instance, assumption is 5% of all water rights.
Total Salaries	$131,357	$135,823	
Fringe	$45,975	$47,538	Agency Standard is 35% of Salaries
SORM fee	$500	$500	Based on CRWM Amount
SWCAP fee	$1,200	$1,200	Based on CRWM Amount
Professional/Temp Services	$40,000	$40,000	Higher in first two years to implement new accounting system for program.
Travel In-State	$6,000	$6,000	
Training	$3,000	$3,000	~$1,000 per employee

Rent - Building	$25,000	$25,000	
Postage	$1,200	$1,200	Based on CRWM Amount
Phone/Utilities	$4,000	$4,000	Based on CRWM Amount
Supplies - Consumables	$2,000	$2,000	
Other Operating Expenses	$6,568	$6,791	Based on Agency Standard FTE Costs (5% of base salary)
Fuels/Lubricants	$10,000	$10,000	Estimated based on CRWM and higher volume of driving
Rent - Machine & Other	$1,000	$1,000	
Facilities, Furniture, and Equipment	$40,000	$15,000	Equipment Purchases
Capital Equipment - IT	$3,600		3 computers at $1,200
Capital - Vehicles	$56,000		2 vehicles at $28,000
Total	**$377,400**	**$299,053**	

- One watermaster, one administrative assistant, and one watermaster specialist/field deputy all located in a field office in Brady or San Saba.

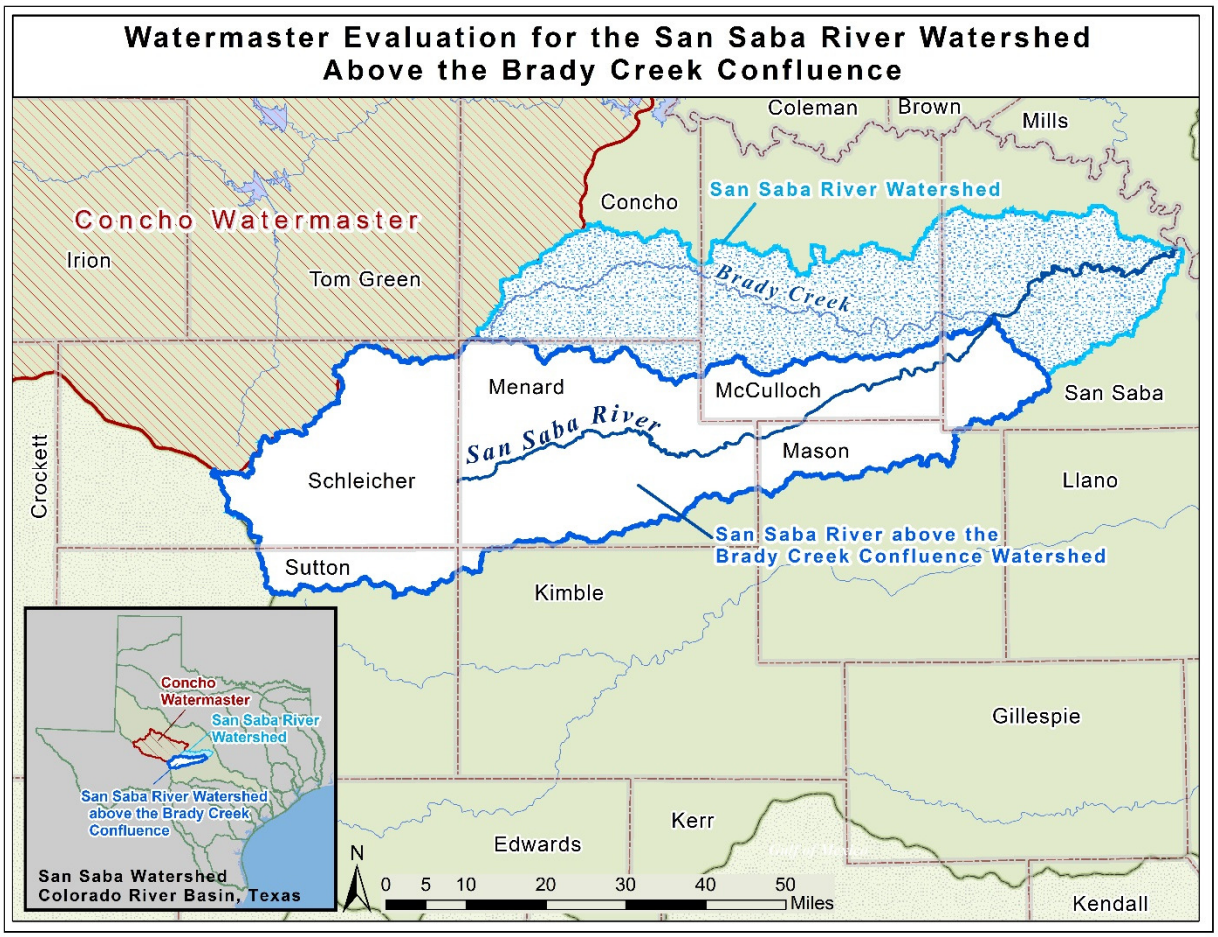
Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Option 7: Appoint a watermaster for the San Saba River above the confluence with Brady Creek and the San Saba River.

Number of permitted water rights: 85

Counties: 7 (4 have permitted water rights)

Figure 4. Watermaster Program for the San Saba River above Brady Creek



Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 6: Number of Permitted Water Rights by County (Option 7)

County	*Number of Water Rights*
Kimble	0
Mason	0
McCulloch	4
Menard	76
San Saba	1
Schleicher*	2
Sutton*	0

* The number of water rights compared to the water rights by county may differ slightly as some water rights are authorized in multiple counties. Counties with an asterisk are located in multiple basins.

Year 1 has an estimated cost of $336,335 and a cost of $257,935 for subsequent years.

Actual assessments would vary based on the estimated expected return rate.

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

Table 7 summarizes expected expenditures for Option 6.

Table 7. Cost Estimate (Option 7)

	Year 1	Year 2	Assumptions
Salaries			
Watermaster	$63,104	$65,250	1 Watermaster (Program Supervisor VI, B25)
Watermaster Specialist II	$36,976	$38,233	1 Watermaster Specialist II, B17 ($36,976/year with 3.4% increase by year 2)
Watermaster Liaison	$4,945	$5,113	Liaison Salary determined by percentage of water rights among all watermaster programs. In this instance, assumption is 5% of all water rights.
Total Salaries	$105,025	$108,596	
Fringe	$36,759	$38,009	Agency Standard is 35% of Salaries
SORM fee	$500	$500	Based on CRWM Amount
SWCAP fee	$1,200	$1,200	Based on CRWM Amount
Professional/Temp Services	$40,000	$40,000	Higher in first two years to implement new accounting system for program.
Travel In-State	$4,500	$4,500	
Training	$2,000	$2,000	~$1,000 per employee
Rent - Building	$25,000	$25,000	
Postage	$1,200	$1,200	Based on CRWM Amount
Phone/Utilities	$4,000	$4,000	Based on CRWM Amount
Supplies - Consumables	$1,500	$1,500	
Other Operating Expenses	$5,251	$5,430	Based on Agency Standard FTE Costs (5% of base salary)
Fuels/Lubricants	$10,000	$10,000	Estimated based on CRWM and higher volume of driving.
Rent - Machine & Other	$1,000	$1,000	
Facilities, Furniture, and Equipment	$40,000	$15,000	Equipment purchases
Capital Equipment - IT	$2,400		2 computers at $1,200
Capital - Vehicles	$56,000		2 vehicles at $28,000
Total	**$336,335**	**$257,935**	

- One watermaster and one watermaster specialist/field deputy both located in a field office.

Appendix G: Implementation Considerations for the Colorado River Basin and the Brazos-Colorado and Colorado-Lavaca Coastal Basins

In addition to the information provided in Tables 3, 5, and 7, staff evaluated and developed estimated municipal and irrigation rates in response to stakeholder requests. These rates are based on a high-level review of key water rights which would impact the municipal rate the greatest. Table 8 summarizes the assessments and rates estimated. Assessment amounts reflected are based on the operational budgets identified in Tables 3, 5, and 7.

Table 8. Estimated Assessments and Municipal/Irrigation Rates

Option	Year 1 Assessment*	Year 1 Municipal and Irrigation Rates	Year 2 Assessment**	Year 2 Municipal and Irrigation Rates
Option 5	$1,634,668	$0.2940 – Municipal $0.2352 – Irrigation	$1,161,721	$0.2043 – Municipal $0.1634 – Irrigation
Option 6	$471,750	$14.0200 – Municipal $11.2160 – Irrigation	$332,281	$9.7748 – Municipal $7.8198 – Irrigation
Option 7	$420,419	$40.9900 – Municipal $32.7920 – Irrigation	$286,594	$27.7580 – Municipal $22.2064 – Irrigation

*Year 1 rates are based on an assumption of 80% return and start-up costs, such as vehicles and other equipment.

**Year 2 rates are based on a 90% return rate and normal operational costs.

The rates are assessed per acre-foot of water authorized in a water right.

Appendix H: Additional Information

Throughout the evaluation process, the Executive Director reviewed and considered other information referenced by or identified by stakeholders directly related to the San Saba Watershed and factors that may impact surface water availability.

Recent Report Information

A Texas Water Development Board report evaluated declining flow trends in the Upper Colorado Basin (Evaluation of Rainfall/Runoff Patterns in the Upper Colorado River Basin, TWDB Contract No. 160000012011, Kennedy Resource Company and Others, June 2017 Draft). The report evaluated precipitation and streamflow data and potential causes for declining flow trends such as noxious brush, small reservoirs (both permitted and exempt), groundwater declines, and historic drought conditions. The authors were unable to determine specific causes of the declining flow trends. However, the authors note that in 2015 and 2016, flows are again trending upward. The authors suggest that the observed declines prior to 2015 may have been related to recent severe drought conditions.

Espey Consultants produced a report for Friends of the San Saba Inc. related to hydrology in the San Saba portion of the evaluation area. The July 2, 2013 report noted that drought conditions are more frequent in the Edwards Plateau Region than in other areas of Texas, with the exception of the Trans Pecos Region. The authors also noted that streamflows declined in parts of the San Saba River during drought conditions and higher water use.

Carollo Consultants produced a follow-up to the Espey report for Friends of the San Saba, Inc. that was completed October 12, 2015. The report concludes that precipitation for the previous ten year period had been almost two inches below the long term average, lake evaporation had been above average for the last ten years, and springflows showed declining trends. Further, the report evaluates alluvial wells in the area. The report concludes that the shallow groundwater being produced from the alluvial aquifer in Menard County is hydrologically connected to the San Saba River.

A hydrologic connection alone does not meet the Title 30 Texas Administrative Code §297.1(56) definition for underflow of a stream. “Underflow of a stream” is defined as “water in sand, soil, and gravel below the bed of the watercourse, together with the

water in the lateral extensions of the water-bearing material on each side of the surface channel, such that the surface flows are in contact with the subsurface flows, the latter flows being confined within a space reasonably defined and having a direction corresponding to that of the surface flow."

A watermaster can work to mitigate effects of, but has no control over, precipitation, evaporation, groundwater production that may be impacting spring discharges, and other non-water right related activities that may impact surface water availability.

Naturalized Flow Considerations

TCEQ's naturalized flows represent an approximation of what streamflows would be without the influence of permitted water use such as diversions and reservoir storage. These flows are part of the hydrologic inputs for TCEQ's water availability models (WAM), which are used by TCEQ to evaluate water rights applications. The starting point for developing naturalized flows are recorded streamflows at United States Geological Survey (USGS) gages. Streamflows recorded at USGS gages are reduced due to use of water by both permitted water right holders and domestic and livestock users. During the creation of the naturalized flows, the gage flows are adjusted by adding reported water use from permitted water right holders to the USGS gage flows. Water use for domestic and livestock users is not adjusted because these users are exempt from permitting requirements and are not required to report their water use. Therefore, the naturalized flows reflect what flows would be available to permitted water rights after use by domestic and livestock users is considered. This is consistent with the legal status of domestic and livestock users as superior to permitted water rights.

Watermasters and Water Availability Models (WAMs)

A Watermaster program does not affect the use of TCEQ's water availability models (WAM) to process water right applications. For example, the Concho Watermaster oversees a tributary of the Colorado River but not the entire basin, and the Brazos Watermaster oversees only the portion of the Brazos River Basin downstream of, and including, Lake Possum Kingdom. The presence of the Concho and Brazos Watermasters does not affect TCEQ's use of the WAM to process water rights permit

applications and the WAM TCEQ uses for permitting does not include any considerations related to the watermaster.

Endangered Species Act (ESA) Timelines and Determinations

Various petitions to list several species in Texas under the Endangered Species Act were submitted by WildEarth Guardians and others in 2007 – 2008. The Fish and Wildlife Service (FWS) has been actively reviewing the status of each species. Three species of mussels from portions of the Upper Brazos Basin and the Colorado River Basin have been designated as candidates, with a proposed listing determination expected in 2018:

- Texas fatmucket
- Texas pimpleback
- Texas fawnsfoot

The Texas Comptroller of Public Accounts has established work groups to provide guidance and direction on research activities and information collection efforts concerning candidate species under the Endangered Species Act. Research and information developed through the work groups will contribute to the scientific body of evidence to be considered by FWS during listing evaluations and species status assessments. Freshwater mussels are currently being discussed in a work group. FWS is developing species occurrence maps with updated scientific and survey information. A preliminary analysis of species status is scheduled to be discussed internally by FWS in fall 2017. Information may be released for stakeholder review in winter 2018.